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IMPLEMENTATION COMPLETION REPORT

REPUBLIC OF MALDIVES

THIRD FISHERIES PROJECT
(CR 2327-MAL)

June 10, 1998

Rural Development Sector Unit
South Asia Region.

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CURRENCY AND EQUIVALENT UNITS

Currency unit = Maldivian Rufiyaa (Rf)

At Appraisal (July 1991)

Rf 1.00 = US\$ 0.99

US\$1.00 = Rf 10.06

At Closing (December 1997)

Rf 1.00 = US\$ 0.085

US\$ 1.00 = Rf 11.77

WEIGHTS AND MEASURES SYSTEM - METRIC SYSTEM

1 millimeter (mm) = 0.038 inches (in)

1 meter (m) = 39.37 inches (in)

1 kilometer (km) = 0.62 miles (mi)

FISCAL YEAR OF BORROWER

January 1 - December 31

ABBREVIATIONS AND ACRONYMS

BITS	-	Swedish Agency for International Technical and Economic Cooperation
EEZ	-	Exclusive Economic Zone
EPCS	-	Economic Planning and Coordination Section (MOFA)
ERU	-	Environmental Research Unit
FAO	-	Food and Agricultural Organization
FAO/CP	-	FAO/World Bank Cooperative Program
FAO/TCP	-	FAO/Technical Cooperation Program
FFE	-	Fresh Fish Equivalent
FPID	-	Fisheries Projects Implementation Department
FTPP	-	Felivaru Tuna Processing Plant
GOM	-	Government of Maldives
KFC	-	Kooddoo Fisheries Complex
MIFCO	-	Maldives Industrial Fisheries Company
MOFA	-	Ministry of Fisheries and Agriculture
MPHRE	-	Ministry of Planning, Human Resources and Environment
MPW	-	Ministry of Public Works and Labor
MRS	-	Marine Research Section (MOFA)
MTI	-	Ministry of Trade and Industry
MTS	-	Ministry of Transport and Shipping
NDF	-	Nordic Development Fund
NORAD	-	Norwegian Agency for Development Cooperation
OPEC	-	Organization of Petroleum Exporting Countries
PCC	-	Project Coordinating Committee
PIU	-	Project Implementation Unit
PPF	-	Project Preparation Facility
SAR	-	Staff Appraisal Report
STO	-	State Trading Organization
UNDP	-	United Nations Development Organization

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IMPLEMENTATION COMPLETION REPORT

REPUBLIC OF MALDIVES

THIRD FISHERIES PROJECT
(CR 2327-MAL)

Preface

This is the Implementation Completion Report (ICR) for the Third Fisheries Project in the Republic of Maldives for which Credit Number 2327-MAL in the amount of SDR 7.6 million was approved on January 7, 1992 and made effective on April 20, 1992.

The credit was closed on December 31, 1997, at which time SDR 6.6 million had been disbursed. Final disbursement will take place by April 30, 1998. Any balance outstanding at that time will be canceled.

The ICR was prepared by Robert Hunt and Geeta Sethi (SASRD), and reviewed by Messrs. Ridwan Ali and Michael Baxter, SMU Co-managers. Comments received from the Borrower and co-financiers are appended to the ICR.

Preparation of this ICR was begun during the Bank's final supervision/completion mission. It is based on material in the project file. The Borrower contributed to the ICR by preparing its own ICR and commenting on the draft ICR. Copies of the Aide Memoir of final supervision/completion mission and the Borrower's ICR are attached as Appendices A and B respectively.

IMPLEMENTATION COMPLETION REPORT

REPUBLIC OF MALDIVES

THIRD FISHERIES PROJECT (CR 2327-MAL)

Evaluation Summary

Introduction

1. The Project was funded by IDA in response to a request by GOM for further assistance in the sector. It is the third in a series of IDA-supported fisheries projects beginning in 1979. The common theme was the modernization of the artisan fishing fleet and improvement in fish collection, processing and storage. In addition, support was provided throughout for key institutional developments. Supported by six co-financiers, this project developed a new harbor and freezer/cold store complex in a remote area, supported research and training in economic and statistics for fisheries, tuna stock assessment, environmental analysis, and restructuring of the fisheries public sector enterprise.

Project Objectives

2. These were to:

- (a) increase fish production, government revenue, and foreign exchange earnings at a lower processing cost;
- (b) increase the income of fishing households to alleviate relative poverty;
- (c) reduce migration to the capital, Male', through balanced regional growth; and
- (d) create the environment for increased private sector participation in the fisheries sector.

3. These remained unchanged throughout project implementation and continue to be appropriate sectoral development objectives. Major project components were aimed at achieving the project objectives, but without involving specific covenants.

Implementation Experience and Results

4. The overall outcome is assessed as satisfactory. Overall, implementation was very good and the specific objectives set for the project were achieved. Excellent consultant input to the procurement and construction supervision process ensured virtually trouble free implementation of major infrastructure development on a remote greenfield island site. Narrowly defined, sustainability of this, the major component, is very likely. Implementation of the technical assistance component was varied, as is also the likelihood of sustainability. Performance of the borrower and its agencies was satisfactory; overall, government actions were generally supportive, demonstrating full commitment to the project and sector. Bank performance, while generally satisfactory, was less so in identification and preparation, where the sector strategy adopted was suboptimal. Partial export liberalization in the sector, just prior to appraisal, insufficiently accounted for in project design, had a negative impact on the main project entity; but it vastly improved income generation for beneficiaries as well as overall sector efficiency. Positive lessons point to careful selection of consultants, as well as the prior in-country experience of these. Negative lessons point to the the problems which arise where the sector strategy is severely flawed, such as difficulty in achieving success in using commercial entities to implement policy-programs, as well as the ever more pressing need for government to take a longer-term, strategic approach to sector development policy, leading to a more competitive structure in the sector, and resulting improved efficiency. Also design of technical assistance should seek better matches between needs and capabilities.

IMPLEMENTATION COMPLETION REPORT

REPUBLIC OF MALDIVES

THIRD FISHERIES PROJECT

(CR 2327-MAL)

PART I Project Implementation Assessment

A. Statement/Evaluation of Objectives

1. The project's objectives were to:
 - (a) increase fish production, government revenue, and foreign exchange earnings at a lower processing cost; through: (i) expanding the capacity of the public sector enterprise directly involved to purchase, collect, process, and store fresh/frozen tuna for export, and (ii) supporting training and research in fisheries economics and statistics and tuna stock assessment.
 - (b) increase the income of fishing households to alleviate relative poverty; through expanding market access of artisan fishers;
 - (c) reduce migration to the capital, Male', through balanced regional growth; indirectly through expanding economic (investment and employment) opportunities in tuna fishing; and
 - (d) create the environment for increased private sector participation in the fisheries sector through corporatizing the tuna fisheries public sector enterprise and studying means of enhancing private sector participation in the sector.

2. The objectives are generally relevant to development activities in the sector, particularly the income generating and poverty alleviating elements. At present, the outer atolls contain about 75% of the population and 80% of the labor force. Tuna fishing remains the traditional, and often the sole, income-generating activity of inhabitants of the outer atolls. But fish catching represents only 11% of GDP. With fish catches leveling off, growth prospects here are poor. Fishing is supplemented by agriculture for home consumption, giving a total of 21% of GDP shared among 80% of the labor force. In this situation, poverty incidence is high and outmigration pressures great, giving continued relevance to the objectives. However, direct involvement by government in production of private goods and services as a means to obtain revenue and foreign exchange may not be an appropriate strategy. Due to reluctance of GOM, alternative strategies to achieving the objectives, such as addressing the broad-based structural issues, were not pursued during preparation. GOM felt monopoly state trading was necessary to ensure market access for all fishing atolls and the appraisal mission agreed with this (para 22).

B. Achievement of Objectives

- 3 Fish production did increase over the life of the project thus far. National fisheries statistics show total fish landings are now about 105 thousand tons annually; at appraisal these were around 75 thousand tons. In the project area, total landings were 26.6 thousand tons in 1996, up from about 15 thousand tons annually at appraisal. Over 90% of all landings are tuna. Yet nationwide, fisheries GDP is stagnant, growing by 5% only in 6 years. It's share of total GDP has declined from 15% at appraisal to about 10% in 1997.
Government revenue from fishing must come from MIFCO's (FPID's)¹ earnings, as there are effectively no resource rents charged to domestic fisheries. Although MIFCO has made occasional distributions to GOM as a sign of good faith, it remains unprofitable. Its high level of indebtedness and continued pressure on operating margins has produced a series of loss-making years, leaving it unlikely that MIFCO can contribute significantly to GOM revenues in the foreseeable future without substantial financial restructuring. Government receives some revenue from input taxes (on nets, engines, spare parts, and fuel), and royalties and licenses from deepwater fishing (in the EEZ over 75 miles off-shore). But this is minor and offset by subsidized credit for dhonis (fishing boats) and implicit (capital) subsidies to MIFCO, which in turn are offset to the extent that MIFCO is required to implement government's sectoral programs on a no-charge basis.

¹ MIFCO (Maldives Industrial Fisheries Company), the legal successor to FPID, was created under the project by incorporation of FPID.

Foreign exchange earnings from marine products exports increased in current terms by 76% from the time of appraisal, 1990, through 1997. In real terms, these exports increased by 4% (0.5% p.a.). At appraisal, MIFCO accounted for 77% of exports; in 1997, due to export liberalization in dried fish, its share fell to 58%.

Processing costs within MIFCO are seen to be declining. The ratio of the Cost of Good Sold to Total Sales declined from 89% at the time of appraisal to 79% in 1996 and is projected to drop to 75% in 1998. Over the same period, the ratio of Net Operating Profit to Total Sales increased from -2% at appraisal to 14% in 1996 and is projected to reach 19% in 1998. This reflects a combination of improved management in MIFCO, assisted by technical assistance under the project, the cost-reducing impact of the project's Kooddoo freezing and storage plant, and declining energy prices. Despite this, after accounting for financial charges, MIFCO's high level of indebtedness leaves it unprofitable.

4. The objective of increasing income of fishing households is focused on the main project area, i.e. the atolls in the location of the project-constructed harbor and freezing plant (Kooddoo). Although a slight increase in capacity was foreseen (SAR para 6.1), maintenance of capacity and reduction of MIFCO's processing cost was the main thrust of the project as designed). Since MIFCO has no export-market power and operates a base-point purchasing price system, income gains of fishers are limited to increase in purchased volumes.

5. At appraisal (1990) MIFCO purchased 11.5 thousand tons of tuna in the adjusted project area²; in 1997³ purchases totaled 19.1 thousand tons, an increase of 66%. The average price paid was Rf 3,397/ton compared to Rf 1,950/ton in 1990, an increase of 74%. Allowing for inflation, the 1997 price reduces to Rf 1544/ton, a decline of 21%. Over this period, export unit value of frozen tuna declined by 33% in constant terms. In current terms, total revenue to fishers increased by 133%; while in constant (1990) terms the increase was 6%. The real income increase was due to the 34% increase in catch offsetting the price decline. This income increase is confirmed in MOFA's 1997 update of a 1993 baseline survey for the Kooddoo area (Huvadhu Atoll). This shows fishing income (90-98% of total income) for boat owners and crew members to have increased by an average of 47% on G. Alif atoll (7% in 1993 terms), and 246% on G. Dhaal (153% in 1993 terms), or 106% overall (51% in 1993 terms)⁴. This compares to an appraisal estimate of a 32% increase.

6. An unexpected income-related issue emerging from the Base Line and Update Surveys, is the apparent sizable worsening of income distribution in the project area. Baseline and Update Survey data from the project area show that non-fishing households, comprising 50% of all project area households in 1993 and 61% in 1997, saw their incomes decline on average by 32% in G. Alif and decrease by 78% in G. Dhaal. Not only did the poor in the project area not benefit from the project, but actually became worse off, though not necessarily due to the project. The phenomenally high multiples of income of fishing to nonfishing households, and the increase in these from 1993 to 1997⁵, suggests that access to fishing, and particularly to boat-ownership, is the key to these huge differences in relative incomes. Export liberalization, increasing competition for supply of raw fish was the key action which permitted this key advantage to become reality. The resultant increase in the price of tuna, the basic food of islanders, added to the burden of the poor. An increase of over 70% in the price of the basic food good, combined with an over 70% decline in income is an enormous burden on a 7-8 person household with an income of \$100-150 per annum. Why the incomes of non-fishing families actually declined and, what the role of the project may be here, are unclear. Possibly providing greater market access has led to a perverse result, as it permitted a more commercial fishery to develop, leading to crowding out of less efficient artisan fishers. But perceived change in location of stocks to more distant waters possibly played a significant role.

7. The direct contribution of the project to the sizable income increases from fishing is small. In the original project area (Huvadhu Atoll, i.e. G. Alif and G. Dhaal), MIFCO's 1997 total fish collections were 13.8 thousand tons, which is about 85% of the total catch. This is in line with appraisal report estimates.⁶ But, in terms of sales to the project complex only, the volume change was from 11.4 thousand tons (Huvadhu Atoll, i.e. G. Alif and G. Dhaal, fresh fish sales to MIFCO at appraisal) to 11.9 thousand tons or 4%.⁷ The combination of this and the price change (Rf 1,950 to Rf 3,384 per ton) gives a gross income increase of 81%, or 6% in constant (1990) terms. Although from the fishers view, it is artificial, this is a

² The actual collection area, incorporating an additional two atolls, Adhu and Fuah Mula, is larger than foreseen at appraisal, comprising G. Alif and G. Daal only.

³ The first full year of operation.

⁴ 1993 fishing income and numbers of boats were much smaller on G.Daal; so much of the gain was catching up, as incomes are now almost equal and boat numbers have increased ninefold.

⁵ Doubling from 30/1 to 60/1 on G. Alif and going from 4/1 to 70/1 on G. Daal.

⁶ SAR projected sales (SAR Table 7.1) were 14.0 thousand tons.

⁷ The difference is accounted for by transfer sales within MIFCO from the Kooddoo area to Mandhoo and Felivaru.

definitive measure of the contribution of the project to the objective of income increases, and, in constant terms, it is relatively small. Also, the incremental employment contribution is small. Compared with, the appraisal estimate of 137, the Kooddoo Complex employs an incremental 200 persons from the local area. This is still only 0.9% of the Huvadhu Atoll population. In subsequent comments from Government, MIFCO notes this low level of employment is as expected, and the number may well decline with improved operating efficiency.

8. The difference between the changes in sector-wide fish catches and incomes and those due to the project are due to changes in trade policy, technology, and internal MIFCO operations. Total catch increased due to raw fish price increases following elimination of the public sector monopoly on dried tuna exports and the strong export demand from Sri Lanka. The installation of FADs (fish attracting devices) by MOFA, and development of motorized and larger fishing vessels, and the general upturn in tuna stocks in the south all contributed to greater supply response. With significant processing and storage capacity in its cannery at Felivaru, in the north, and its other freezing and cold store complex at Mandhoo, MIFCO diverted 14% of its collections in the original project area (20% of collections in the adjusted project area) to its other processing facilities. Had this all been processed at Kooddoo, the project facility would have shown a 35% volume increase and increase in fishers total incomes attributable to the project of 140% (41% in constant terms). In subsequent comments from Government, MIFCO indicates that these transfers were due to inadequate capacity in the Kooddoo collector vessel fleet, thus requiring diversion of raw fish collection away from Kooddoo. However, this information does not resolve the matter, as, by definition collected fish are already on a collector vessel and Kooddoo was the closest processing point.

9. Despite the SAR statement⁸ that “*the main constraint to fish production and export is inadequate fish collection and processing capacity*” capacity utilization aggregate fish processing and storage was an issue during appraisal and remains so. A covenant, included in the Credit Agreement, required consultation with IDA on any expansion in capacity at two locations. The location-specific nature of the covenant was unfortunate as Mandhoo was not included. Subsequently, the Mandhoo onshore freezing and cold storage facility, grant-financed by JICA, opened in June 1994. But relative profitability favored dried fish production and MIFCO has been unable to purchase adequate supplies of raw fish in the Mandhoo area.

10. Based on MIFCO's 1997 operations and on actual investment costs and duration for KFC, several FRRs and ERRs were re-estimated, reflecting first the SAR assumptions and then actual events. Mother vessel costs which MIFCO includes in its KFC operation accounts have been excluded from all re-estimates, as KFC does not benefit from these. The first set gives 21% and 10% rates, compared with SAR estimates of 27% and 24%. Differences in FRRs arise from a 1.5 year delay in start-up⁹ and a 2% increase in gross revenue¹⁰, as well as major increases in selling and distribution costs, primarily from higher than projected export expenses. The major decline in the ERR from the FRR is attributable to the cost of the port investment. The appraisal FRR estimate excludes port investment costs. But KFC is the sole beneficiary of these; which, when included reduces the FRR to 17%. If, as assumed in the SAR, total MIFCO fish collections in the KFC collection area were processed in KFC, the FRR and ERR increase to 24% and 19% respectively. The 3 and 9 percentage points difference in this FRR and ERR over appraisal estimates are measures of the costs of redirecting fish collections from KFC to the cannery at Felivaru and the cold storage at Mandhoo.

C. Major Factors Affecting the Project

External Factors

11. The overall economic climate remained stable and no major exogenous shocks occurred during implementation. The tuna export market remained relatively stable. No major swings in tuna stocks were encountered, and the trend of catches continued upwards. This trend is now seen as leveled off. Stock assessment under the project shows the Maldivian fishery has suffered declining catch rates and sizes. The causes are unknown but hypothesized as due either to excess local fishing effort, oceanographic influences, or to purse sein catches, in the western part of the Indian Ocean, of maturing young tuna which migrated from Maldivian waters, prior to their return to Maldives to spawn. To compensate, fishing has become progressively more capital intensive as boats grow larger and fish further away from land. Continuation of this growth in boat size seems inevitable. Already a few larger boats have come into operation in the project area, and still larger models are under design and construction by the private sector. Local professionals feel that the present fishing fleet of 1400

⁸ SAR, para 1.23.

⁹ Due to unfamiliarity with financiers procurement and disbursement arrangements.

¹⁰ At full development, due to a 24% increase in price and 18% decrease in volume).

authorized boats could be reduced to 300 to 400 and still catch the same quantity of fish. Based on indications from the project area surveys, the income distribution implications of this are likely to be highly skewed unless displaced labor can be speedily reallocated to viable alternative activities. This trend may already be underway, as much of the motorized fleet is said to be increasingly involved in transport and tourism, although the employment and income effects of this are unknown.

Government Actions

12. Major government actions impacting on the project were in trade policy, price policy and storage capacity investment. *Trade policy* changed in 1990, just prior to appraisal, liberalizing access to the dried (Maldives) fish export market. This allowed the private sector to compete directly with the public sector, MIFCO, in export of dried fish, but allowed the public sector to retain its monopoly on export of canned and frozen fish. An earlier attempt by Government to maintain a private sector presence in frozen and canned fish exports had failed. Because of this, at appraisal, Government was firm in its policy of maintaining a high degree of direct public sector presence in commercial activities in the sector. Apparently social and economic considerations were behind this. Social aspects related to supporting fisheries activities in marginal fishing grounds, while diversification of export outlets was the economic consideration. But the earlier failure was due to exogenous shock¹¹, and so not relevant to the domestic market issue. The full impact of the very recent liberalization of dried fish exports was not foreseen at appraisal. This, combined with a buoyant export demand from Sri Lanka, had a major impact on the sector. Constrained by government's fish price stabilization policy price policy, MIFCO was unable to compete for raw fish at many locations. Finally, GOM changed *price policy*, replacing its ceiling price policy for MIFCO purchases with a floor price. This allowed MIFCO to increase its raw fish prices significantly to compete with the private sector. Despite this, MIFCO lost almost its entire dried fish export business to the private sector. MIFCO claims this is due to private sector avoidance of Sri Lankan import tariffs. The impact of increased fish pricing is reflected in MIFCO's operating performance and in the increased incomes of fishers. A buoyant export market in recent years has meant that the floor price policy is as yet untested. A downturn in export prices will require negotiations between MIFCO and Treasury as to how any loss induced by a floor price policy is to be financed.

13. Government appears primarily responsible for the decision to *invest in capacity at Mandhoo* for cold storage (para 9). This is a locality traditionally strong in production of dried (Maldives) fish based on ready availability of firewood, making fish purchases by MIFCO prohibitive. MIFCO currently diverts fish from the KFC collection area to Mandhoo and the cannery at Felivaru to sustain operations in these, despite available capacity and higher unit profitability at KFC. The Mandhoo investment also may impact MIFCO's balance sheet. Grant financed, government proposes passing 50% of the cost on to MIFCO as a loan at 10%. Although resisting this financial arrangement, MIFCO, sanctioned by government, subsequently undertook a Kuwait Fund financed investment for an expansion of cold storage at Mandhoo. This opened in September 1996, at an estimated cost per ton of storage of about twice that of Kooddoo, which has had a significant negative impact on KFC. KFC's capacity utilization¹² in 1997 was reduced from a potential of 67%, in the absence of transfers of purchases from the KFC area, to an actual level of 54%. As well as reducing returns to the KFC investment, this high-cost excess capacity has put tremendous pressure on MIFCO's operating and overall financial performance.

14. Assisted by technical assistance provided under the project, the Fisheries Projects Implementation Department (FPID)¹³, the fisheries arm of the State Trading Organization (STO), was restructured and incorporated as the Maldives Industrial Fisheries Company (MIFCO). Although MIFCO remains a public sector company, this was a major institutional development. MIFCO inherited many doubtful debts from its parent, STO, causing financial stress from its inception. Discussion is now underway between MIFCO and the Ministry of Finance and Treasury on financial restructuring of MIFCO.

15. Other institutional development efforts were initiated in MOFA, MPHRE, and MTI. Training and tuna stock assessment was highly successful in MOFA's Marine Research Section. Strengthening of policy analysis and advice ability in MOFA's Economic Policy and Coordination Section suffered from staffing problems. In focusing on MIFCO's capacity utilization concerns instead of fishers' needs, MOFA's Fisheries Research and Projects Implementation Section, and thus the Project, was unable to contribute to design of a next-generation vessel. This has now been achieved outside the project by efforts of individual private sector fishers. Although, since these vessels have emerged first in the project area, the project

¹¹ Sri Lanka, by far the major export market, for balance of payments reasons, totally embargoed dried fish imports.

¹² Based on MIFCO's current (1997) stock turnover per year of 15 and maximum storage capacity of 1900 tons, maximum capacity is 28,500 tons per year. Higher turnover could increase this.

¹³ Also the primary implementation agency for the 1st and 2nd Fisheries Projects.

may have provided some stimulus. The Environmental Research Unit in MPHRE was strengthened via on-the-job training. MTI chose not to undertake a planned study on enhanced private activity in fisheries, thus negating the sole project effort to initiate assessment and discussion of the sectoral issues. Consultants' performance was generally good, following their terms of reference and completing all tasks. Individual results varied, and marginal improvements were always possible. MRI results appear best due to the full-time and lengthy nature of the consultant's assignment and the support of a committed team. Very acceptable results were obtained in ERU, which ensured minimal environmental impact in the construction of KFC. In EPCS the task as designed was too ambitious and above the ability of staff to take on board. The fishing vessel design task suffered from misdirected focus from the outset, addressing the needs of the public sector enterprise rather than the individual fishers needs, as intended in project design.

Project Implementation Unit (PIU)

16. Since MIFCO had responsibility for the vast majority of expenditures, the Project Implementation Unit (PIU) was located in MIFCO. In hindsight this decision was questioned, both in the Borrower's contribution to the ICR, and by MIFCO management. It was felt that commitment to project implementation may have been greater and the line of responsibility clearer, particularly in relation to components assigned to three government ministries. But this is not at all clear-cut. In a project containing both public and private components, and with diverse ownership of these, a PIU is far more a facilitator and reporter, than an implementor, making the title something of a misnomer. MIFCO certainly fulfilled its responsibility very effectively. It facilitated all ministry implementation requests and actions promptly; so any shortcomings here should not be attributed to it. Realizing that responsibility for implementation lies first and foremost with the actual implementing agencies, and having no authority over these, MIFCO was in no position to persuade other agencies to implement as planned, but only to facilitate them as needed. This should have been sufficient to the needs of the Ministries, and any shortfalls in their performances cannot be attributed to location of the PIU.

17. Had the PIU been located in a line ministry, e.g. MOFA, it not clear that it would have had any more influence than MIFCO with other ministries, while the sectoral remoteness of a central ministry could have left the project homeless. Since the main (KFC) component was a commercial investment, MIFCO, as a directly interested commercial entity, was in a far better position to implement this. In fact, if the commercial aspects were subject to civil service bureaucratic requirements, implementation may have taken much longer. In this situation, shortcomings of implementation, which were few and minor, would go firstly to the interest and commitment of the concerned ministry and thereafter to the general oversight responsibility of the External Resources Department of the Ministry of Finance and Treasury. However, had the majority of the project been concerned with production of "public" goods and services, a public sector agency location would be a more suitable location for the PIU.

18. A broader-based PIU may have improved on the use of funds. Cancellations due to project savings were substantial (SDR 1 mil.). This was foreseen by several supervision missions, who suggested that expansion of needed technical training under the project should be considered¹⁴. Instead, the PIU applied to use the funds for construction of a dry-docking facility in the project area as a means to reduce MIFCO's fleet repair and maintenance costs. Being an inappropriate direction for expansion by the public sector, and not part of project design, the request was not agreed to. A broader-based PIU might have better foreseen the priority needs of the sector. This shortcoming, arising from the joining of public and private interests in one agency, is an inevitable trade-off in the institutional element of project design. In the context of this project, the trade-off appears to have been quite positive.

Costs and Financing

19. Project civil works were implemented with only minor local-cost overruns. Savings on foreign costs are attributed to the excellent performance of MIFCO and the consultant supervising engineers. The delay in start-up arose mainly because of unfamiliarity with Scandinavian co-financing (for the freezing and cold storage components). This was the first time these sources were used and the relatively large volume and diversity of sources required time to become familiar with the utilization requirements (up-front fees, legal documentation, and guarantees) as well as procurement and disbursement requirement of each. Some of the delay is also due to several minor technical problems with refrigeration panels and timely delivery of materials, all of which were resolved satisfactorily. Overall, performance of MIFCO, its consultants and contractors was highly satisfactory in meeting the challenge of establishing a modern plant of sizable dimensions on a remote, greenfield island site.

¹⁴ GOM's contribution to the icr also makes this point.

D. Project Sustainability

20. KFC is assessed as highly sustainable. Financial and Economic indicators (FRR, ERR, and NPV) are all very satisfactory. The location is near to excellent fishing grounds and here MIFCO has a high level of supplier loyalty and satisfaction. The complex itself is well staffed and managed. Borrower commitment to the fisheries sector is quite clear. The policy environment continues to improve, albeit slowly. Local acceptance and participation is very high and incentives and MIFCO's business strategy ensures that this will very likely remain so. The initial environmental impact was inevitably negative in the greenfield situation. But this was only during implementation and of a minor nature. At the local level, the environment has now largely recovered. The social impact is also mixed. As seen from the Baseline and Update Household surveys, not all households in the project area have had access to the benefits. Replicability is a more complex matter, depending on factors affecting financial and economic viability. Immediately the project is not replicable due to the cold-store overcapacity problem. In the longer run, conversion of floating cold-storage capacity must continue. The high cost operation at Mandhoo will hinder the export competitiveness of the economy in a major sector. Financial restructuring will transfer this burden to the larger economy. But, based on international experience, this will not impact on the basic issue of the adequacy of incentives for efficiency in Maldives tuna storage and export. Addressing the underlying structural issues in the sector so as to improve competitiveness and thus incentives for efficiency, appears a necessary precursor to ensuring viability of any replication of KFC.

21. Sustainability of the technical assistance components is mixed. Overall, the scarcity of technical skills leaves the staffing situation fragile and in constant need of attention by government. Sustainability is a direct function of this attention. *FPID/MIFCO restructuring* made a lasting contribution to corporate development in MIFCO¹⁵. As the sector becomes more competitive, this will enhance the component's already high sustainability. *Consultant development of MRS* was highly successful. The *EPCS development program* was overly ambitious and the unit too under-manned to permit sustainability. The economic studies were set at too sophisticated a level to be maintained or even utilized by local staff. Staff trained abroad and recently returned can be expected to revitalize EPCS, but at a far lower level than appears intended at appraisal. Due to the approach taken, the *vessel design component* was never likely to be sustainable¹⁶. As this became clear, government reduced import tariffs on boat engines and timbers to promote private sector boat-building efforts. The concerns of seaworthiness and the qualifications of the operating crews on the newer vessels are still to be addressed by government. The on-the-job *training provided to ERU*, despite some shortcomings, was extremely useful in promoting a capacity for design and implementation of impact assessments. But lack of attention to staff development has resulted in loss of three of the four staff who worked with the consultant team, making sustainability uncertain.

E. Bank Performance

22. Identification, preparation (by FAO/CP) and appraisal were satisfactory, but only in a narrow technical sense. The GOM sector strategy of a floor price and export liberalization was supported, as was further expansion of the public sector monopoly in delivery of economically private activities. This is where needed strategic thinking appears to have been short-circuited. Here the Bank should have sought a solution which would have met GOM's objective of ensuring market access to all domestic fishers however remote, while moving on substantively improving the competitive structure of the frozen fish sector. Instead, the SAR (para 1.25) argued that, without a public sector monopoly or an adequate regulatory framework, either a private sector monopoly or an excess capacity from over-investment by a competitive private sector were foreseen. Instead, the nature of the earlier failure in private sector involvement (para 12) should have been made clear to Government and an emergency financial assistance scheme developed to handle any reoccurrence. Implementation of this, together with a narrowly targeted atoll market-access subsidy scheme and technical assistance in regulation and licensing, would have eliminated the need for continued direct commercial activity by Government. While the excess-capacity issued was addressed, this was far too narrow to prevail (paras 9 and 13) The regulatory aspects were not taken up, either under the project or subsequently. In the event, both an exploitative monopoly and over-capacity did occur, but in the public sector. Only export liberalization rescued the private sector income objective (para 12), but at the expense of the government income objective. Export liberalization also revealed the existence of a highly competitive private sector.

¹⁵ In the Second Fisheries Project, the consultants responsible for advising on *FPID/MIFCO restructuring*, recommended a capital structure with a 1:1 debt-equity ratio which was achieved. But the volume of debt at nonrenegotiable fixed (high) rates (13%) and very low liquidity from the outset has been a heavy burden for MIFCO.

¹⁶ A positive lesson emerged, but this was not cost-effective. Much more could have been achieved.

23. Some increase in frozen tuna export capacity was justified. But contrary to the claim in the SAR (para 1.23), this was not the critical constraint. Without capacity increase, given export liberalization, the sector would not have collapsed. The public sector's investment and operating strategies now impact negatively on sustainability of the major component. Assessment of the reasons for lack of success of Government's earlier efforts to develop a competitive structure in the frozen fish industry based on private sector involvement could have suggested alternative development models which might have corrected for past errors and avoided the current public sector monopoly with its attendant financial burden on government. Also, stakeholder analysis may have pointed to initiation of means to incorporate fishing households into the project, so as to simultaneously address the social (poverty alleviation) and competitive structure issues. This presumes a formal role for fishing-householders, something not evident in government's current thinking. With export markets buoyant, there is less incentive for this in the short run. This is unlikely to always be the case. Finally, the concerns of increasing poverty in the project area still remain to be addressed. However, because sectoral restructuring requires total commitment by Government, a project strategy focused on sectoral restructuring as a means to achieving the same objectives could well have achieved far less than was the case here if the needed commitment is not present.

23. Supervision, focusing on physical implementation, was satisfactory. Repeatedly GOM's attention was brought to the issues of staffing and training. By the time the issue of aggregate cold-store capacity utilization arose, construction of the Kooddoo complex was well advanced and it was felt that the majority of the problem would be incurred at Mandhoo, not Kooddoo. The satisfactory financial and economic performance of the KFC investment attests to the correctness of this.

F. Borrower Performance

24. Overall performance of government and its agencies was satisfactory. This being the third project in the series, the preparation and appraisal process were all familiar. A PPF loan financed preparation by FAO-CP, which was fully satisfactory. Stakeholder consultation, largely informal, was supplemented by MOFA expertise and the experience of two earlier projects. Information on direct beneficiaries, fishing households, was assembled under the project. Without modification in the project objective from fisheries development to include an explicit focus on poverty alleviation, this information would not have modified design. All stakeholders were fully committed to implementing the project. Policy change, in export liberalization and additional investment in cold storage capacity, despite the negative impact on the project's performance is seen as successful means to increase competition in fish collection and so returns to fishers. The downside to GOM of termination of MIFCO export monopoly is reflected in the increased urgency for capital restructuring in MIFCO. Despite some inconsistency in approach to sectoral policy and efficiency, on balance government's performance here was satisfactory.

25. Covenant compliance was highly satisfactory. Delays in financial reporting were acceptable in view of the major upgrading of MIFCO's management information system over the implementation period. All were eventually fulfilled very satisfactorily. At no time did this delay impact negatively on project performance. With trouble-free implementation, no interest was shown in a mid-term review by co-financiers or government. MIFCO's finances and staffing of project assisted agencies were the only persistent concerns. Bank staff continually drew government's attention to these.

G. Assessment of Outcome

26. The project's outcome is assessed as satisfactory to highly satisfactory. The objectives specified for it, with the exception of increased Government revenue, have been achieved. The NPV remains positive. The development results assure a sustainable livelihood for fishing households in the project area, a continued stream of export earnings, a more diversified export earnings base, all at a reduced cost. Although direct results of institutional development efforts vary, overall, the project has demonstrated the importance of developing such institutional capacity and provided the foundations for substantive advances here.

H. Future Operation

27. The major component of the project, KFC, will be operated as a commercial entity in accordance with annual and long-term business plans established by MIFCO. Under the project, the capacity to develop such plans was provided to

MIFCO, which now produces them. Performance will be monitorable from independent annual audits of MIFCO's financial results. Operation of the institutional components will be in accordance with priorities and annual work-plans of their respective ministries. Performance will be directly monitorable by comparing output with plans. At present, due to other priorities of government, particularly housing, no follow-on activities by IDA in this sector are foreseen. Should government revisit this, discussions should include possible future work in the area of coastal fisheries development and poverty alleviation in the outer atolls and coastal environmental management. In view of the rapidly changing structure of the fishing fleet, the issue of resource rents should also be reassessed in the overall context of marine resource management.

I. Key Lessons Learned

28. The principal positive lesson is that careful selection of consultants is key to high quality services and trouble-free implementation. Examining the outcome of consultant services for institutional development suggests that prior experience in the Maldives was also critical to successful consultant services. Also, source of financing was very significant here. Bank and UNDP financed technical assistance ensured transparent procurement under competitive conditions. Lessons on the negative side move away from the narrower confines of the major component to the larger arena of sectoral issues. The main lesson is that it is virtually impossible to use a commercial entity to implement policy-based programs without impacting negatively on the performance of both. The financial restructuring needs of MIFCO have largely been induced by its public sector status, suggesting that the study of increased private sector participation may represent a missed opportunity to consider a more sustainable approach. The study might have been more usefully located in a central ministry, or a line ministry more directly concerned with sector performance. At the outset, a broader-based, strategic approach by Government and the Bank to policy planning in the sector, incorporating considerations of efficiency, competitiveness and the appropriate roles of the public and private sectors, could have delivered a more forward-looking project and a bridge to a more dynamically competitive sector. Finally, in designing institutional development components, care should be taken to avoid mismatches between objectives and capabilities.

PART I I: Project Implementation Assessment

Table 1: Summary of Assessments

A. <u>Achievement of Objectives</u>	<u>Substantial</u>	<u>Partial</u>	<u>Negligible</u>	<u>Not Applicable</u>
Macroeconomic Policies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sector Policies	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial Objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Institutional Development	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Objectives	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poverty Reduction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gender Concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Social Objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Environmental Objectives	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Sector Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private Sector Development	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. <u>Project Sustainability</u>	<u>Likely</u>		<u>Unlikely</u>	<u>Uncertain</u>
	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
C. <u>Bank Performance</u>	<u>Highly Satisfactory</u>		<u>Satisfactory</u>	<u>Deficient</u>
Identification	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Preparation Assistance	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Appraisal	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Supervision	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
D. <u>Borrower Performance</u>	<u>Highly Satisfactory</u>		<u>Satisfactory</u>	<u>Deficient</u>
Preparation	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Implementation	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Covenant Compliance	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Operation (if applicable)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
E. <u>Assessment of Outcome</u>	<u>Highly Satisfactory</u>	<u>Satisfactory</u>	<u>Unsatisfactory</u>	<u>Highly Unsatisfactory</u>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table 2: Related Bank Loans/Credits

Loan/Credit Title	Purpose	Year of Approval	Status
<i>Preceding Operations</i>			
Fisheries Project (CR0907)	To increase fisheries production through provision of credit for motorization of pole and line sailing vessels; provide technical assistance	1979	Completed
Second Fisheries Project (CR1320)	To expand the fisheries sector infrastructure, facilitate a more effective fish pricing system to enhance fish production, develop new markets for frozen fish exports.	1983	Completed
<i>Following Operations</i>			
Fourth Fisheries Project	Fisheries Management & Employment Devt & Coastal Environment	Not yet agreed with GOM	Discussion proposed

Table 3: Project Timetable

Steps in Project Cycle	Date Planned	Date Actual/Latest Estimate
Preparation	1988	May 1990
Appraisal	November 1989	April/May 1991
Negotiations	April 1990	November 1991
Letter of Development Policy	NA	NA
Board Presentation	September 1990	January 1992
Signing	NA	April 1992
Effectiveness	NA	July 1992
Midterm Review	NA	NA
Project Completion	June 1997	June 1997
Loan/Credit Closing	December 1997	December 1997

Table 4: Loan/Credit Disbursements: Cumulative, Estimated and Actual
(US\$ thousands)

	FY92	FY93	FY94	FY95	FY96	FY97
Appraisal Estimate	825.0	2,463.6	5,219.3	7,656.1	9,384.4	10,000
Actual	0.0	1,462.7	5,310.9	7,793.7	8,952.3	9,483.3
Actual as % of Estimate	0%	62%	103%	103%	96%	95%
Date of Final Disbursement	February 12, 1997					

Table 5: Key Indicators for Project Implementation

I. Key implementation indicators in SAR//Presidents Report	Estimated	Actual
1. Kooddoo Port and Freezing/Cold Storage Complex		
(i) Port Works	290 meters of birthing	300 meters of birthing
(ii) Freezing/Cold Storage Plant	100 tons/day & 1500 tons	120 tons/day & 1900 tons
(iii) Vessels	3 new, 4 refurbished & 1 tug	4 new & 1 tug
(iv) Navigational Aids	32 lights and 30 beacons	32 lights and 30 beacons
2. Technical Assistance		
(i) Restructuring FPID	Incorporate and install a new MIS	Incorporated as MIFCO with a new MIS
(ii) Boat Design	New Fishing Vessel	Completed - no output
(iii) Improve MOFA Economics Unit	Studies & Sectoral Analysis Capacity	Completed - marginally successful
(iv) Fisheries Statistics- MOFA	New collection and collation system	Completed - successful
(v) Fish Stock Assessment - MOFA	Tagging Study	Completed - fully successful
(vi) Environmental Research Unit	Construction Monitoring & Training	Completed - largely successful
(vii) Overseas Training	5 persons/156 months	8 persons/190 months
(vi) Private sector participation	Consultant Study	Not undertaken

Table 6: Key Indicators for Project Operation

Key operating indicators in SAR/Presidents Report	Estimated	Actual
None included	n/a	n/a

Table 7: Studies Included in Project

	Study	Purpose as defined at appraisal/redefined	Status	Impact of study
1.	Impact of Government Determined Tuna Prices on the Sector	Assembly of available data on all sectors of the industry, development of models for Felivaru cannery, fish collection, KFC, and tuna pole and line fleet	Completed	Very low for two reasons: i) study and model technically too complex to be of practical use either to MOFA or MIFCO. ii) change to floor price system reduced interest.
2.	Prepare a formula to determine tuna prices	A formula to mimic free market situation	Subsumed into Study 1	<i>ditto</i>
3.	Econometric Model	To provide a basis for price policy recommendation	Subsumed into Study 1	<i>ditto</i>
4.	Fiscal Alternatives	To define long-term economic solutions	Completed	A useful sectoral overview, but needs revisions.
5.	Assess Long-term Tuna Prices in World Markets	Provide price projection system for planning	Dropped by GOM	N/A
6.	Assessment of Resource Rent and its Distribution	Explore various taxation regimes for fisheries sector	Subsumed into Study 4	<i>as for # 4 above</i>
7.	Determine Comparative Advantage of Tuna, Pelagic and Reef Fish Production	Identify relative competitiveness of the Maldivian fisheries Sector	Dropped by GOM	N/A
8.	Design and Process Socio-Economic Baseline Survey	Establish status of the project area prior to project implementation	Completed	Together with 1997 update, this provides major insight to change in the project area.
9.	Fisheries Statistical System	To update accuracy of catch data	Completed	Improved accuracy and timeliness of basic data.
10.	Training Program for EPCS staff	To develop a long-term staff development program.	Completed	Little impact thus far, due to inadequate follow-up.

Table 8A: Project Costs

Item	Appraisal estimate (US\$ million)			Actual/latest estimate (US\$ million)		
	Local costs	Foreign costs	Total	Local costs	Foreign costs	Total
<i>I. Kooddoo Complex</i>						
1. Port Works	0	5.5	5.5	3.7	2.0	5.6
2. Freezing/Cold Storage Plants	.2	7.7	7.9	0.6	6.0	6.6
3. Office, Housing, Workshop	.07	1.3	1.4	0.7	6.2	6.9
4. Miscellaneous Equipment	0	3.5	3.5	-	4.1	4.1
5. Vessels	0	3.4	3.4	-	4.9	4.9
6. Navigational Aids	.02	.1	.12	-	0.3	0.3
7. TA/Training for Vessels	0	.13	.13	-	-	Included in vessel cost.
8. KFC design & supervision	0	2.4	2.4	-	2.1	2.1
<i>II. Tech. Assistance.</i>						
1. Support for FPID	0	.66	.66	-	0.1	0.1
2. Support for Restructuring FPID	0	.38	.38	-	0.4	0.4
3. Support for MFNA	.11	.97	1.0	-	0.8	0.8
4. Environmental Research Unit	.05	.17	.22	-	0.3	0.3
5. Private Sector Encouragement	0	.2	.2	-	-	-
III. Physical Contingencies	.01	1.1	1.1	N/A	N/A	N/A
IV. Price Contingencies	.08	2.1	2.2	N/A	N/A	N/A
TOTAL	.5	30.0	30.5	5.0	27.2	32.2

Table 8B: Project Financing

Source	Appraisal estimate (US\$ million)			Actual/latest estimate (US\$ million)		
	Local costs	Foreign costs	Total	Local costs	Foreign costs	Total
Government	0.2	2.9	3.1	-	3.4	3.4
MIFCO	-	-	-	1.6	-	1.6
IDA	0.1	10.0	10.1	-	9.5	9.5
Norway	0.2	6.4	6.6	-	3.1	3.1
Sweden	0.1	2.3	2.4	-	6.7	6.7
Nordic Devt. Fund	0.1	5.5	5.6	-	5.4	6.4
OPEC Fund	-	2.6	2.6	-	2.6	2.6
UNDP	-	0.3	0.3	-	0.3	0.3
TOTAL	0.7	30.0	30.7	1.6	31.0	32.6

Table 9: Economic Costs and Benefits

Assumptions	Costs	Benefits
(a) Kooddoo Port and Freezing/Cold Storage Complex		
<p>Main assumptions are:</p> <p>(i). Twenty-year economic life; (ii) all three mother vessels scrapped; (iii) the throughput for the plant until year 2000 have been used from the plants released data and export prices have been held constant after year 1997; (iv) replacement costs of equipment estimated with table of useful life, depreciation costs and replacement schedule (extrapolating MIFCO actual depreciation); (v) the operational costs of plant and collector vessels estimated by MIFCO through year 2000 and then held constant (vi) the economic price for fuel was estimated at Rf 2.80 per litre by eliminating transfer costs, (e.g duties) the financial costs (e.g the costs of opening letters of credit) from recent CIF prices in Male.</p>	<p>The major costs included in the analysis are:</p> <p>(i) operations costs including the cost of collection and freezing, selling and distribution;</p> <p>(ii) investment and maintenance of port facilities;</p> <p>(iii) administrative costs for MIFCO.</p>	<p>The only quantifiable benefit accruing to the investment in Kooddoo is the increased export value of processed tuna.</p>

Table 10: Status of Legal Covenants

Agreement	Section	Covenant type	Present Status	Original Fulfillment Date	Revised Fulfillment Date	Description of Covenant	Comments
DCA	4.01(b) (ii)	1	CD	Annually by 6/30	no revision	Submission of audited project accounts.	Regularly delayed as MIFCO and its auditors strove for improved reporting..
DCA	4.01(b) (iii)	1	CD	Annually by 6/30	no revision	Submission of unaudited projects and other accounts.	Regularly delayed as MIFCO and its auditors strove for improved reporting..
DCA	4.02	11	C	duration of credit	no revision	Inform IDA prior to investment in cannery on Laamu Atoll, or freezer/cold store in north	No investment plans to date.
DCA	Sched 4, Item 1	5	C	duration of credit	no revision	Maintain a Project Coordinating Committee until project completion	Project Coordination Committee operates informally through MIFCO
DCA	Sched. 4 Item 2	11	C	6/30/93 through Project Completion	no revision	Establish Presidential Committee to review submitted proposals and analysis at least every 6 months in deciding on next period tuna prices	Towards end of implementation GOM changed to a floor-price policy set at a less intrusive level and so eliminating the need for the Commission.
DCA	Sched. 4, Item 4	11	CP	06/30/92 & 6/30/93 & every 6 months thereafter	no revision	Establish Economic Planning and Coordination Section (EPCS) in MOFA by 06/30/92. Develop pricing formula for fresh tuna and analyse sectoral production and export incentives by 06/30/93 Carry out and furnish such analysis to the Presidential Committee every 6 months.	Covenant complied with in early years of project. Pricing committee now reduced to enforcing floor price only. Market price above floor price for past three years making regular intervention by Price Committee unnecessary.
DCA	Sched. 4 Item 5	5	C	one year prior to start-up	no revision	Provide IDA with detailed staffing plans for Kooddoo fish freezing complex	Final staffing roster now completed and in place.
DCA	Sched. 4 Item 6	5	C	duration of credit	no revision	Fisheries sector activities of STO/FPID (now MIFCO) under qualified, experienced management and competent staff.	Quality of management and staff generally acceptable. Financial management continues to be weak. Auditor improving reporting..
DCA	Sched. 4 Item 7	11	C	12/31/94	no revision	Allocate at least 15 new dhonies to Gaafu Alifu and Gaafu Dhaalu Atolls	Dhonis already provided in 1993
DCA	Sched. 4 Item 8	5	CP	03/31/93	no revision	Interim Review with Project co-financiers	No implementation problems and no interest for MTR among cofinanciers.
DCA	Sched. 4 item 9	6	C	12/31/92	no revision	Measure for protection of live turtles and turtle eggs around Kooddoo Island.	Decree enacted, no incidents reported. Presence of MIFCO staff and Security Forces base on Kooddoo has led to expanded turtle reproduction activity on Kooddoo.

Covenant Types:

- 1 = Accounts/audits
- 2 = Financial performance/revenue generation from beneficiaries
- 3 = Flow and utilization of project funds
- 4 = Counterpart funding
- 5 = Management aspects of the project or executing agency
- 6 = Environmental covenants
- 7 = Involuntary resettlement

- 8 = Indigenous people
- 9 = Monitoring, review, and reporting
- 10 = Project implementation not covered by categories 1-9
- 11 = Sectoral or cross-sectoral budgetary or other resource allocation
- 12 = Sectoral or cross-sectoral policy/ regulatory/institutional action
- 13 = Other

Present status:

- C = covenant complied with
- CD = complied with after delay
- CP = complied with partially
- NC = not complied with

Table 11: Compliance with Operational Manual Statements

Statement number and title	Describe and comment on lack of compliance
No deviation from applicable Operational Manual Statements observed.	

Table 12: Bank Resources: Staff Inputs

Stage of project cycle	Planned		Revised		Actual	
	Weeks	US\$	Weeks	US\$	Weeks	US\$
Preparation to appraisal	na	na	na	na	67.70	212.10
Appraisal	na	na	na	na	28.10	95.20
Negotiations through Board approval	na	na	na	na	19.60	70.00
Supervision	na	na	na	na	66.5	243.4
Completion	na	na	na	na	24.00	43.4
TOTAL	na	na	na	na	205.9	664.10

Table 13: Bank Resources: Missions

Stage of project cycle	Month/year	Number of persons	Days in field	Specialized staff skills represented	Performance rating		Types of problems
					Implementation status	Development objectives	
Through appraisal	March 88	3	10	ECN, FRS, ECN	-	-	-
Appraisal through Board approval	April 91	4	19	FNA, ECN, ECN, FRS	-	-	-
Supervision	June 92	3	8	ECN, FRS, ENC	1	1	LC
	Aug. 92	2	6	PE, ECN	1	1	LC
	Feb. 93	1	4	ECN	1	1	LC
	May 93	1	5	FRS	2	1	LC
	April 94	2	12	ECN, FRS	1	1	LC
	Aug. 95	1	4	ECN	HS	HS	LC
	June 96	1	3	FRS	HS	HS	LC
	June 97	1	7	ECN	S	S	LC
Completion	Dec. 97	1	10	ECN	S	S	LC
Total	-	20	88	-	-	-	-

Key:

EGR : Power Engineer
 FNA : Financial Analyst
 ECN : Economist
 OPN : Operations Assistant

LC : Compliance with Legal Covenants
 FP : Financial Performance
 PR : Procurement Progress
 PM : Project Management Performance

REPUBLIC OF MALDIVES
THIRD FISHERIES PROJECT - (IDA Credit 2327-MAL)
IDA Final Supervision and Implementation Completion Review Mission, Nov. 20-30, 1997

AIDE MEMOIRE

Introduction

1. Mr. Robert Hunt from the International Development Association (IDA) visited the Maldives, from November 20 to 30, 1997, to carry out the Implementation Completion Review (ICR) of the Third Fisheries Project, supported in part by IDA Credit 2327-MAL. Mr. Hunt thanks the Government of the Maldives (GOM), its agencies, the Maldives Industrial Fisheries Company (MIFCO), and the UNDP office in Male', for the assistance and input provided to his mission.
2. The mission met with officials of the Ministry of Finance and Treasury (MOFT), the Ministry of Fisheries and Agriculture (MOFA), the Maldives Monetary Authority (MMA), the Ministry of Trade and Industry (MTI), the Ministry of Planning, Human Resources and Environment (MPHRE), UNDP, the Maldives Fisheries Company (MIFCO), MIFCO's Auditors (Coopers and Lybrand, Male'), the Maldives Traders' Association (MTA) the Bank of Maldives and the Chamber of Commerce. Since a recent supervision mission visited the Kooddoo Fisheries Complex, financed under the project, and met with local atoll officials, fishers and other locals, this mission confined its activities to Male'.
3. The main thrust of the mission was to gather information and data for the ICR for the project. GOM's own ICR was also discussed, including comments provided earlier. Earlier IDA staff assisted GOM in developing the terms of reference for this task and providing a list of suitable consultants.

Project Components and Summary of Implementation Status

4. Development of a fisheries complex, comprising a harbor with a tugboat and a cold store and four collector vessels, at Kooddoo, was the central project component. A supporting program of technical assistance in corporatizing and management of MIFCO, environmental monitoring at Kooddoo and a series of technical assistance inputs and training to MOFA, and MTI rounded this out. Except for one consultant study, to be carried out by MITI, all project components have been completed. The Closing Date for disbursement of funds from the Credit is December 31 of this year. An undisbursed amount of about US\$ 1.3 million equivalent will be canceled from the loan amount. This arose through exchange rate movements, savings on civil works and noncompleted technical assistance (the consultant study and some training). Overall the project's impact appears highly positive. It expanded market access for artisanal fisher people, permitting increased income earning opportunities. It also supported development of important technical capacities in MOFA and MPHRE.

Kooddoo Complex (including Collector Vessels and Tugboat)

5. Handed over to MIFCO on Feb. 28, 1996, only two months later than planned, this complex is now fully operational. As detailed in successive supervision mission Aide Memories, implementation was virtually trouble free. This appears the result of good technical input from consultants and contractors and an excellent working relationship between MIFCO and consultant/contractor personnel - a lesson for all projects.

MIFCO Technical Assistance

6. This accomplished restructuring and corporatizing of FPID into MIFCO' and installing management systems and human resource development capacity. The restructuring issue, reflected in MIFCO's continued frail financial performance, lingers on MIFCO seeks a corporate structure best suited to the multiple objectives of GOM, its sole shareholder. The aggregate lesson here is that lack of harmony in objectives will impact negatively on institutional performance.

Environmental Monitoring at Kooddoo

7. A baseline survey and interim assessment, including on-the-job training of MPHRE staff, were carried out by Carl Bro Consultants and the Environmental Research Unit of MPHRE. The interim assessment showed only

minor impact and with some early recovery. Loss of the survey vessel caused a lengthy time lapse between on-site inspections. Two months ago Kooddoo was revisited. A written report of this visit is not yet available. The original survey marker pegs were lost; while the initial record of their placing is inadequate. Loss of qualified staff in ERU and inappropriate, consultant-supplied, equipment also hindered the Kooddoo visit. Coming at an early stage in ERU's formation the initial Kooddoo assessment appears to have been a major challenge. Staff were relatively untrained and inexperienced, which the consultant input failed to allow for. This is a lesson for future design of such assistance. Also, the loss of key staff in this area indicates that a complete cadre of skills in this area may be too costly for MPHRE to maintain; instead an alternative, more cost-effective, means of accessing such capacity should be sought.

MOFA - Economic Planning and Coordination Section (EPCS)

8. The consultant implemented program of sector studies and upgrading of sectoral data collection has been completed for some time. Training abroad under the project is almost completed; two of five people have returned. Many staff trained on-the-job by the consultants have left EPCS for alternative employment, often in other government agencies providing external training opportunities. MOFA now no longer has the capacity to maintain the econometric and policy-oriented studies nor to utilize them for policy analysis and program development. Concern for this was regularly expressed by supervision missions over the course of implementation. Continued agreement on the need for such a capacity suggests that the lesson here is for MOFA/EPCS to sharpen its labor market competitiveness, or seek another means of obtaining these services.

MOFA - Tuna Stock Assessment Technical Assistance

9. Output exceeded expectations; a sizeable data base was developed and some 34 reports and publications are based on preliminary analysis of this. These have provided substantive insight to the structure and movements of tuna stocks. Although unplanned, overseas training of three MOFA/MRS staff was financed from the Credit in addition to two others being financed under an IDA Education Credit. In contrast to the MPHRE/ERU and MOFA/EPCS components, here development of an initial core of competent staff arose from project related activities. The long-term, on-site form of expatriate consultant input may have been of some positive significance on capacity development here.

MOFA Vessel Design Technical Assistance

10. Intended to benefit artisanal fishers, this focused solely on attempting to resolve MIFCO's throughput concerns. A MOFA/MIFCO investigation of a capital-intensive pole-and-line system in use in the South Pacific showed this to be nonviable in the Maldives and enabled avoidance of a poor investment in this. Thereafter, MOFA/MIFCO interest in the component evaporated. Recently, without project or MOFA assistance, the private sector provided an answer, and in a local context, by further expanding the size of the traditional local fishing vessel. About 10 are now in operation in the Kooddoo collection area and look like making a substantive contribution to landings in the area. More are reported under construction. Due to lack of interest by MOFA, technical and economic evaluation of these will be in of the ocean and the market place, and the entire risk will fall on the individual boatowners/small investors. The lesson here is that, at the outset of such research, the relevant beneficiary of such technical assistance should be clearly identified, involved in all the activities, and remain the primary focus of the effort.

MTI - Consultant Study on "Enhancement of Private Sector Participation in Fisheries"

11. This study was designed to assist GOM in thinking about future sectoral efficiency improvements. MITI and Bank staff combined to produce a draft terms of reference; expressions of interest in implementation were advertised for. These were not followed up and the study was never undertaken. Despite enquiries by several supervision missions, the reason was never made known. The primary lesson suggested here is the need to achieve clear and firm agreement between the borrower and the Bank as to the likely future direction of sectoral development, thus providing a common basis for commitment to such studies.

Future Operational Needs of the Project

12. Probably the greatest concern for the project's future is the weak financial structure and stagnant operational performance of MIFCO. Until resolution of basic policy directions concerning how best to address poverty alleviation and economic growth in outer atolls, there is likely to be little the Bank can provide in the way of meaningful additional operational assistance to the project. MIFCO's financial weaknesses combined with its dominant position leaves sectoral growth and development heavily dependent on government for direction, stimulus and financing. Although the reliance of a large segment of the population on fish catch and sales for a major portion of its income requires continued government attention, the large volume of public finance tied up in essentially non-performing assets leads to questioning the appropriateness of the capital intensive strategy towards sector development. Direct public involvement, via capital intensive investment under a public sector enterprise, greatly weakens both the budget constraint and incentives for the industry to operate efficiently. At the same time, it squeezes out the private sector, constraining economic deepening and efficiency improving competition. The situation requires careful review and analysis of alternative policies aimed at improving sectoral efficiency. The continued low per capita GDP share in the sector emphasizes this need. Pending this and the resultant policy decisions, little short run improvement is to be expected.

ATTACHMENT

THIRD FISHERIES PROJECT - (IDA Credit 2327-MAL)
IDA Final Supervision and Implementation Completion Review Mission, Nov 20-30, 1997
PERSONS MET BY MISSION

UNDP

- Mr. Narindar Kakar, Resident Representative.
- Mr. Ali Hasheem, Consultant

MALDIVES INDUSTRIAL FISHERIES COMPANY (MIFCO)

- Mr. Ibrahim Shakeeb, Managing Director.
- Mr. Adnan Ali, Deputy Director, Operations.
- Mr. Ibrahim Atif, Deputy Director, Sales.
- Mr. Mohamed Haneef, Deputy Director, Accounts.
- Mr. S. Krisnarajah, Accountant, Accounts Department.
- Mr. Ali Khaled, Senior Sales Officer.

MINISTRY OF FISHERIES AND AGRICULTURE (MOFA)

- H.E. Mr. Hassan Sobir, Minister.
- Mr. Jadullah Jameel, Director General.
- Mr. Ahmed Hafiz, Deputy Director, Marine Research Section.
- Mr. Mohammed Rashid, Director, Projects and Extension.
- Mr. Hassan Rasheed, Assistant Director, Economic Policy and Coordination Section
- Ms. Aminath Latheef, Senior Economics Research Officer, Economic Policy and Coordination Section
- Dr. Charles Anderson, Fisheries Stocks Consultant.

MINISTRY OF FINANCE AND TREASURY (MOFT)

- H.E. Mr. Adam Maniku, Deputy Minister.
- Ms. Aminatu Ali Manik, Assistant Undersecretary.
- Ms. Fathmitath Nuzuha, Desk Officer (World Bank).
- Mr. Ibrahim Ferushan, Desk Officer (ADB/Protocol).
- Mr. Gary Davis, Consultant Accountant.

MINISTRY OF PLANNING, HUMAN RESOURCES AND ENVIRONMENT (MPHRE)

- Mr. Amjad Abdullah, Coastal Engineer.
- Mr. ----- Shaheer, -----

MINISTRY OF TRADE AND INDUSTRY (MTI)

- Mr. Ahmed Naseem Director General of Investments.

MALDIVES TRADERS' ASSOCIATION (MTA)

- Mr. Adil Saleem, Vice President, Information and Statistics.

MIFCO AUDITORS

- Ms. Samanmali Dharmasena, Resident Manager, Coopers Lybrand, Male'.

BANK OF MALDIVES

- Mr. B. Ratnam, General Manager.
- Mr. Mohamed Ahmed, Assistant General Manager.

MALDIVES CHAMBER OF COMMERCE

- Mr. Ahmed Nasheed, Vice President.
- Mr. Abdul Azeez, Secretary General.
- Mr. Ibrahim Shareef, Treasurer.

REPUBLIC OF MALDIVES

THIRD FISHERIES PROJECT

(CR 2327-MAL)

Borrower contribution to the Implementation Completion Report

1 Objectives and design

The objectives of the Third Fisheries Project, as formulated in the Staff Appraisal Report of 1991, were;

- a) increase fish production, government revenue, and foreign exchange earnings at a lower processing cost;
- b) increase the income of fishing households to alleviate relative poverty;
- c) reduce migration to the capital, Male, through balanced regional growth; and
- d) create the environment for increased private sector participation in the fisheries sector.

Considering the knowledge of the fishery resources, the performance of the industry and the prevailing issues at the time, the objectives were very relevant to the needs of the sector and the country. This is evident from a separate, independent study of the fisheries sector undertaken by the Government of Maldives (GOM) around the time of the appraisal of the project. Major conclusions of this study were as follows:

The annual catch was not anywhere near the maximum level of sustainable yield and the catch could be further increased by expanding the operational area of the fishing boats. The productivity of the boats could also be raised if the freezing capacity was increased, supply of fuel improved and if the fish price structure was changed. Maldives had well established market outlets, with good prospects for the future, for frozen tuna in Thailand and Japan and for canned tuna in Europe. There was a need to restructure and improve performance of the agency responsible for the Government's fisheries facilities and for most of the purchase and export of fish in the country. The Ministry of Fisheries and Agriculture (MOFA) needed to be strengthened to enable it to prepare and implement fisheries management plans.

These facts and concerns were reflected in the objectives and strategies in the Third National Development Plan (1991-93). The first two objectives of this plan dealt with increased production and export of fish and raised income and living standards of the fishing population. The associated strategies included priority to fisheries management, improvement of fisheries infrastructure and encouragement of private sector investments in development of fisheries infrastructure and marketing.

Quantitatively, it was assumed that the catch in the project area, Huvadhu Atoll, and the export of tuna would increase by 25 %, over the 1990 level, to 16,300 t and 14,000 t respectively. Secondly, the average income of 2,000 fishermen would increase by 32 % to Rf 8,300 per year. Thirdly, the project's contribution to the Government's revenue would turn positive from the first year of operation amounting to about Rf 30 million in loan service charges levied on Maldives Industrial Fisheries Company Limited (MIFCO). The objective concerning reduced migration from the atoll was quantified by an estimate

of 240 persons to be employed by the Kooddoo Fisheries Complex (KFC), ashore and at sea.

At the time of appraisal, with the information then available, it appears that the degree of ambition, with regard to increased production, export and fishermen earnings, was reasonable. In retrospect it is clear that the predictions regarding the earnings of fishers were too modest. It also appears that the fisher population was over-estimated by nearly 100 %. Some of the development that has taken place between 1991 and 1997 with regard to fishing would have been difficult to foresee in 1991. However, the predictions could possibly have been better had there been a thorough survey of the fishing and fishers in the project area prior to the appraisal of the project. There is no mention in the Staff Appraisal Report of detailed information on the target beneficiaries. The number of persons to be employed by KFC could, of course, be predicted by high degree of certainty but to translate this into an objective of reduced migration seems to be over-ambitious.

The main components of the project, required to meet the first three objectives, were; a) a fishing port, b) wharf equipment, c) freezing and cold storage facilities, d) support infrastructure, e) collector vessels f) mooring tug and navigation lights, g) technical assistance in design, construction supervision and support to MIFCO. An important feature of the project was the change in technology from freezing onboard mother vessels to freezing ashore in order to reduce the cost of processing. All the components were appropriate and only minor modifications were required during the course of the implementation.

The fourth objective was envisaged to be met by technical assistance (16pm) in the preparation of a framework to facilitate and encourage private sector participation in the collection, processing and exporting of fish. Successful implementation of the component might have been a useful contribution but the achievement of the objective would depend on other actions and fundamental policy decisions by the Government.

The other technical assistance components of the project related to tuna research, economic fisheries planning, vessel design, environmental monitoring and restructuring of MIFCO. They were all relevant to the needs of the country and would contribute to the achievement of the stated objectives at varying degrees. They could also be seen as components of an implied objective of institutional strengthening of the organisations concerned, i.e. the Marine Research Section (MRS) and the Economic Planning and Coordinating Section (EPCS) of MOFA, the Environmental Research Unit (ERU) of the Ministry of Planning, Human Resources and Environment (MPHRE) and MIFCO. The technical assistance components were well defined but the training inputs required to achieve the intended effects were insufficient. The shortage of trained staff in government institutions is not a new problem in Maldives and the needs could have been better foreseen and acted upon during the design of the project.

The environmental aspects of the project were well taken care of in the project design. Practically all possible measures to minimise adverse effects were included in the construction designs and specifications of facilities. An environmental problem which is difficult to predict and to control is that of sand transport, causing erosion in some areas and filling in others. This is also a problem in Kooddoo but the seriousness of it will only

become known through further monitoring. An industrial establishment like the Kooddoo complex will always have some negative effects on the environment despite various preventive and remedial measures. However, the impact is localised to the island concerned and there are many islands to choose from. There might be islands, or clusters of islands, that should be preserved for different environmental reasons related to wildlife, fauna, coral ecology, etc. This should be considered in connection with the selection of locations for future projects. In choosing Kooddoo, the selection criteria were mainly of technical nature. One environmental concern was the importance of the island as a nesting area for turtles. It was concluded that Kooddoo is not an important area and, furthermore, new regulations prohibiting the collection of turtle eggs on the island were introduced during the course of the project.

Regarding the role of women, it was concluded that the project was not likely to have much effect. The opportunities for production of Maldivian Fish would not be affected but the higher family income derived from fishing could possibly open up for other activities leading to improved quality of life. The assumption of limited effect was probably correct.

The project risks were rightly considered modest because of the abundant fish resources, the well established export markets for frozen tuna and the positive experience of earlier fisheries projects in Maldives.

2 Implementation

The implementation of the Third Fisheries Project has, by and large, been a very positive experience for all concerned. The entire project, barring two technical assistance components, were delivered without any major problems. Practically all services delivered by contractors and consultants were satisfactory. There was, however, an initial delay of about one year in the start of the construction of KFC. This is mainly attributed to the complications in coordinating project inputs from different funding agencies having different guidelines, procedures and regulations for procurement.

The Kooddoo complex, including collector vessels, tug boat and navigation lights, were completed as envisaged with a few improvements. The freezing capacity was enhanced to 120 t/day (from 100 t/day), the cold storage capacity to 1,900 t (1,500 t) and the number of new collector vessels was increased from three to four. All equipment and facilities have functioned as anticipated. The only problem of significance that has been encountered is strong wave action in the harbour basin during particular seasonal weather conditions. Entering the harbour and berthing of collector vessels under these conditions is a hazardous operation with high risk of damaging the vessels.

Most of the technical assistance services were delivered as anticipated. It was only in connection with the environmental component that it was felt that the consultants did not possess sufficient knowledge about the coral reef environment and that some equipment selected by them was unnecessarily expensive and difficult to service in Maldives. In the context of the whole project, however, these were minor issues.

The technical assistance component concerning the design of new fishing vessels was not implemented. Staff of MIFCO and MOFA visited Fiji and Solomon Islands where large pole-and-line vessels are used. The study tour resulted in uncertainties regarding suitable type of vessel to be introduced and in doubts about the economic feasibility and crew acceptability. The design of a new vessel was therefore cancelled and attempts are being made to obtain vessels for trials under Japanese grant aid.

The component concerning private sector participation was cancelled since the Government was achieving the corresponding objective by other means.

3 Effect of external factors

The increase in total catch of Skipjack in Maldives increased by only 6,600 t (11 %) from 1990 to 1996 against the increase of over 12 % per year in the period 1983-90. Although scientists still believe that there is no danger of over-fishing the maximum yield within the area of operation of the *dhonis* might have been reached. The catches of Yellowfin have on the other hand more than doubled from 5,300 t to 12,400 t. The combined catch of Skipjack and Yellowfin has therefore increased by about 20 %.

In the same period (1990-96), the utilisation of Skipjack for production of Maldivian Fish increased by 65 % which is equivalent to about 8,000 t of fresh fish. The main reason for this was the liberalisation of the export of traditional tuna products from 1990. The stagnating catches and the increased demand from the Maldivian Fish trade reduced MIFCO's ability to compete with their fixed purchase prices set by the Government. MIFCO's total purchases was therefore reduced by one third (11,000 t) from 1990 to 1992. The share of MIFCO's purchases in Huvadhu Atoll was reduced from 87 % in 1990 to 52 % in 1994. It was only in 1995, after a significant increase in catches and after MIFCO was allowed to set its own prices, that the down-going trend was reversed.

In order to compete with dried fish processors MIFCO had to raise the purchase price considerably. During 1997, the average price has been 3.3 Rf/kg against a projected price of 2.6 Rf/kg. This difference is 27 % which, in the context of the project, is equivalent to a cost increase of about Rf 10 million per year during the current year.

The fishermen, on the other hand, have benefited from the higher purchase prices. They have also benefited from a lower than anticipated price of fuel, 3.3 Rf/lit against 4.05 Rf/lit.

Very recently, concurrently with the establishment of KFC a few new large *dhonis* have been introduced by private fishermen in the area. These boats can operate over a larger area and carry more fishermen than the common *dhoni*. Their resource base is therefore larger, the catch rate higher and they produce more fish. They have already demonstrated this at Kooddoo and the importance of them will increase as the fleet of this type of boat expands. There are about ten large *dhonis* in operation at present (August 1997) in the project area and many others are under construction and being planned. As a consequence of this, the fish receiving arrangements in the port will have to be modified and expanded since the larger boats occupy significantly more space than the common *dhonis*.

4 Achievements

The Kooddoo Fisheries Complex started to function in February 1996 and produced about 6,300 t that year with four new and two old collector vessels in operation. Through MIFCO's mother vessels another 3,900 t were produced. Some of this fish (about 200 t) was collected from the Addu Atoll and some of it (about 800 t) was collected in the Huvadhu Atoll was delivered to Maandhoo. MIFCO's purchases in the project area were therefore 10,800 t. The total production in the atoll was 16,000 t according to MOFA statistics.

During the first seven months of 1997, KFC has produced 9,760 t with four new and three old collector vessels and three mother ships in operation. About 1,700 t of this is coming from the Addu Atoll so the purchases in Huvadhu Atoll amount to about 8,050 t. The catches during the second half of the year are normally about 70 % of those during the first half. This would indicate a year-end result of about 11,500-12,000 t against the second year target of 12,600 t in the appraisal report. If the deliveries from Addu Atoll are added the ultimate target of 14,000 t will probably be reached.

Judging by the above data and assuming that the fish used for home consumption, dried fish and for Maldivian Fish production is the same as in 1996, i.e. 5,000 t, the production target of 16,300 t will be reached in 1997. The reason for not reaching the export target with fish from Huvadhu Atoll is thus that more fish than anticipated is used for the traditional products.

The production of fish varies considerably during the year. In 1996, the highest monthly delivery to KFC was 1,500 t (in May) while the lowest was only 70 t (in October). Since MIFCO needs all the fish it can purchase and has a socio-political obligation to purchase all fish that has been caught, great flexibility is required in the use of its facilities. During peak periods the collector vessel capacity and the freezing capacity at KFC are not sufficient and mother vessels have had to be used. The capacity of the mother vessels, however, is also limited and the old collector vessels have been used to deliver ice and water to the former. The ice has been used for buffer storage of fish when the freezing capacity of the mother vessel has not been sufficient. Therefore, and for reasons of repair and maintenance, the performance of the old collector vessels has been poor. During the first seven months of 1997, the old vessels (of 19 GRT) have delivered 170 t on an average while the new ones (of 25 GRT) have delivered 900 t each. In sum, the collection system has not functioned as envisaged in the design of the project, the old collector vessels being the bottleneck. The operational costs of the fleet of vessels, including the mother ships, has been much higher than predicted at the design stage.

The project design provided for expatriate personnel to help to manage the Kooddoo complex. In total, there were provisions for ten persons. MIFCO has, however, managed to operate the complex with national personnel and only two foreign technical staff (from the Philippines). This has resulted in considerable lower operational costs for the shore plant than planned.

The objective of increased Government revenue has not yet been achieved. The total yearly operational costs of the complex have been higher than anticipated and the revenue somewhat lower. The total difference is in the order of Rf 15 million. This has

resulted in an accumulated deficit from the first year of operation and it will take a long time to recover, if ever possible with the present level of loan service charges.

It might also be worth noting that the "at lower cost" condition in the first objective referred to the change of freezing onboard mother vessels to freezing in the shore-based plant. This change has not yet been completed as is evident from the discussion above.

The income of fishermen has increased dramatically, partly because of the project and partly for other reasons. Already in 1993, during the "Kooddoo coldstore baseline survey", it was found that the fishing household income was in the order of Rf 15,000 per year against the prediction of Rf 8,300 at full operation of the project. Since no baseline survey was undertaken during the preparatory phase it is difficult to explain the increase. The yearly inflation during 1990-93 was 15-20 %. The income has continued to increase and may well have doubled since 1993 according to fishermen and authorities in the project area. During the first seven months of 1997, the average daily landing was a little over one tonne per *dhoni* which is nearly twice the amount predicted at the time of appraisal. Other reasons for increased earnings are the higher fish prices and the fact that all fish can now be sold. Earlier, during peak periods, fish remained unsold and was wasted. Details about the earnings will be better known after completing the impact survey scheduled to be undertaken later in 1997.

The new *dhonis*, recently introduced, have engines of 100-140 hp, a deckhouse and carry a crew of about 15 persons. Some of them have modern electronic instruments such as Geographical Position Systems (GPS). They have a wider operational range, migrate periodically depending on the availability of fish and operate 250, or more, days per year. Their yearly catches are in the order of 400-500 t judging by the results available to date. The idea of such larger boats might not be new but it is without any doubt the Kooddoo project that has encouraged and accelerated the development by providing a guaranteed market for their catches.

It appears that there has been a significant socio-economic development in the project area since the KFC came into operation. It is mostly felt in the islands near Kooddoo and others that have benefited from a combination of higher fishing incomes and employment opportunities at KFC and its vessels. The number of KFC employees from the project area is 200. To what extent this has reduced migration to the capital is yet to be determined. The impact survey will attempt to assess this as well as the socio-economic development in general.

The objective of creating an environment for increased private sector participation in the fisheries sector has not been achieved by the project. The planned project input to this effect was not implemented. However, the Government has, through other mechanisms, made significant progress towards this goal. A new Companies Act has been introduced recently and new legislation for mortgage and contracts have been prepared. An Inland Revenue Department has been established in the Ministry of Finance and Treasury and legislation for Business Tax and Property Rental Tax has been prepared. The project has contributed in a small way through the restructuring of MIFCO into a limited company and through the abolishment of the fixed prices for the purchase of tuna. It might also be worth mentioning that the private sector share of

export value of fishery products increased from 23 % in 1990 to 43 % in 1996 although this is not related to the project.

The major achievements of the technical assistance components other than those for design and construction supervision are; better knowledge about the tuna resources as a result of the tagging experiments and the length-frequency studies; better organised data base for future resource assessment; an improved fisheries statistics system; initiation of environmental monitoring programmes by ERU; and a streamlining of the organisation and functioning of MIFCO.

5 Sustainability

The overriding factor that will determine the long term viability of KFC is the availability of fish. In the review of tuna resources, undertaken under the tuna research component of the project, it was concluded that the Skipjack stock of the Indian Ocean appears to be in a good condition. However, there have been declines in the catch rates and in sizes of fish caught which should be matters of concern. The cause of these changes is not known but may be related to local over-fishing, oceanographic fluctuations or the purse seine fishery in the Western Indian Ocean. In the case of Yellowfin, both catch and fishing effort might be above maximum sustainable levels. Catch rates along the western coast of Maldives have declined recently. The above mentioned purse seine fishery appears to be an obvious reason but other explanations cannot be discounted.

The catches from Huvadhu Atoll were around 16,000 t in 1996 and seem to be of the same order in 1997. The highest landings during the past seven years amounted to 17,500 t in 1991 and the lowest was 10,000 t in 1992. The long-term effect of the introduction of larger and more efficient boats is not yet known but may help to reach and exceed the production target of 16,300 t. There will, however, be fluctuations in the future also and the target may not be reached every year.

The KFC production target of 14,000 t per year will not be reached unless the performance of the three old collector vessels is improved and will not be maintained unless some of them are replaced by more efficient vessels. At a reasonable level of efficiency, the collector vessel fleet could accommodate all the fish supply in the atoll except during occasional, extreme, peak periods. This would, of course, require that they were not used as supply vessels for the mother ships as at present. In the long term, they need to be gradually replaced to avoid too frequent operational disruptions due to breakdowns and maintenance. The reaching and maintaining the target assumes that there won't be any drastic changes in the sharing of the catches between KFC, the Maldivian Fish processors and fishing households.

Regarding the shore plant and associated infrastructure, no problems are foreseen and it is expected that the operational targets can be met without any major additional costs over and above those for maintenance, replacement and minor alterations.

Even if the production target is reached this year or in 1998, the complex will not show any profit for many years to come because of the accumulated losses during the initial years and reduced margins in the future because of the higher than anticipated cost of

fish purchases. The Government revenue from MIFCO in the form of loan service charges and share of profit will be much lower than planned for in the project design.

The high level of fishermen's income reached during the initial years of operation of the project are likely to be maintained or further increased as long as all the fish caught can be sold to MIFCO and Maldivian Fish processors. Dramatic changes in fish prices are not foreseen but the increased catch rates of larger *dhonis* will result in higher average incomes. Fish preserved in ice onboard will carry a premium price which will further raise the income of this practise if it materialises. One of the more advanced fishermen in Villingili is planning a new *dhoni* of 85 feet in length and 32 feet wide with insulated fish hold for carrying ice.

The sustainability of the institutional strengthening is more in doubt than that of the KFC. The improvement of the statistical system in MOFA should have long-lasting effects but all the new possibilities that are offered by the system have not yet been utilised. The assistance in economic planning did not lead to any sustained benefit, mainly due to the lack of trained manpower in the Ministry and inadequate training inputs under the project. Much of the tuna research undertaken under that component needs to be continuously updated as the fishery develops and expands. The foundation for such work has been laid but the resources of skilled manpower in MRS are scarce and it might not be possible to implement the necessary monitoring and analysis programme without further support of training and technical assistance. Similarly, the foundation for environmental monitoring has been laid in ERU but frequent changes of staff, with the absence of a continuous focal point, is of concern.

The restructuring of MIFCO and streamlining of its functioning has had sustained effects but more needs to be done regarding restructuring, fiscal arrangement, management and accounts to make MIFCO a viable enterprise.

6 Performance of the Government of Maldives

All institutions and their staff involved in the project have been fully committed to it. Within the limits of their capacity and ability, they have sincerely and effectively executed the work assigned to them. These are major reasons for the smooth implementation of the project. MIFCO, being the main national partner in the project, has carried most of the responsibilities and the work burdens of the project implementation through its Project Implementation Unit (PIU). It has fulfilled its role very satisfactorily and is operating the Kooddoo complex successfully with less than planned input of expatriate personnel and therefore at lower cost. In retrospect, however, and in view of the changed status of MIFCO as a limited company, it would have been more appropriate to locate the PIU in a ministry, e.g. MOFA, since several other ministries were involved in the implementation. MIFCO has experienced some difficulties in exercising its authority *vis-a-vis* the ministries concerned and has incurred undue costs of coordination, management and administration.

In accordance with the loan agreement, the Government established a Project Coordinating Committee which met regularly and oversaw the implementation.

However, the actual role of the committee was very limited since no major problems or issues were encountered during the implementation.

The Government of Maldives is in compliance with all loan agreements and covenants, including those related to audit and accounts.

7 Performance of The World Bank

The performance of the World Bank has been very satisfactory. Its staff has been very helpful and their positive attitude has been appreciated by the national project staff and other officials. The only apparent shortcoming in the entire project process is the lack of detailed information on the project area and its population in the Staff Appraisal Report.

8 Further monitoring and future operation

A baseline survey of the project area was, as already mentioned above, undertaken in 1993 before the start of the construction at Kooddoo. That survey will be repeated before the end of 1997 in order to quantify changes that have taken place during and after the establishment of KFC. It appears that the impact has been substantial and if this is confirmed by the planned survey no further monitoring of these aspects would be required.

The development that is taking place in the field of boat design and construction and in fishing operations need further monitoring. It is of importance for the operation of Kooddoo and similar complexes but more so for the country as a whole in the context of fisheries management. The monitoring needs to be of both quantitative and qualitative nature. The number of new boats entering the fishery and the number of old ones going out and the rate at which all this is happening is of interest as are the changes in catch rates, areas and patterns of operation, equipment used onboard, preservation of bait and fish, etc. These are all important factors in the future management of the fisheries. If it is proven that the new boats have a catching capacity of 400 t per year, only 250 of such boats would be required to catch the entire present fish production in Maldives while the present fleet consists of about 1,400 units. This is of course the extreme end of a possible scenario that won't materialise over night and perhaps not at all. But, the direction of the development is clear and it is important that the Government carefully monitors it in order to facilitate and regulate it and to be prepared for the consequences of it.

It appears from the discussion in Section 4 above that KFC is well on its way to meet the target of 14,000 t of frozen fish per year. If the production of the mother vessels operating in the project area is added, the target is probably being met in 1997. However, the freezing onboard mother ships is more expensive than freezing ashore and they were originally not part of the project for this reason. Furthermore, they require assistance from collector vessels rendering the latter less useful to the shore plant. A careful review of the operational aspects of the complex needs to be undertaken as soon as the 1997 data are available early next year. There are already now clear indications that the following matters need attention:

- At least two of three operational mother vessels need to be phased out and the old collector vessels should instead be used for their intended purpose and not as supply vessels to mother ships. The cost of operation of the fleet is at present much higher than what was planned for.
- The repair and maintenance of collector vessels is an expensive affair in lost time and cost of steaming since they have to be taken to Felivaru (mostly) or Male for dry-docking. The revival of facilities in Addu Atoll together with private parties need to be looked into further.
- The old collector vessels are often out of commission due to repairs and maintenance problems related to their age. They are also slow to unload since it has to be done manually fish by fish. They need to be replaced by more modern collectors with maximum capacity within the size limitations of vessels imposed by berthing and dry-docking facilities.
- The fish receiving stations in the port at Kooddoo need to be modified because the introduction of larger *dhonis*.
- The ice producing and storage capacity of 30 t/day and 60 t respectively will not be sufficient if fishing boats start to carry ice for preservation of the fish. Close consultations with fishermen and early planning of alternative solutions are desirable to meet the demands from this new development.

In addition to the steps already taken to improve the performance of MIFCO, further actions are required to make MIFCO a viable business enterprise. Some portions of the company, such as the Alifushi boatyard is in the process of being commercialised. In other areas, a restructuring of operational units and cooperation with the private sector might be desirable to introduce elements of competitiveness in operation and flexibility in, for instance, pricing of fish in different areas and under different circumstances. To enable such cooperation a financial restructuring of MIFCO is required. As far as Kooddoo is concerned, a revaluation of the cost of the productive components would be appropriate since the actual costs are in excess of what they would have been if the project had been a private sector investment. A reduction of the interest rate charged to MIFCO might also be justified in view of the social and regional development benefits of the project. The goal of such restructuring should be a break-even operation by MIFCO under forecasts on reasonable levels of fish supply, prices of fish and efficiency of operation.

9 Lessons learned

The first main lesson learned is that the fishery resources might be more limited than believed hitherto. Since there is, at present, an over-capacity of fish processing facilities the supply of fish and the utilisation of facilities must be very carefully monitored for a period of time before planning any further investments.

Secondly, the fishing has reached a level of sustained development judging by the appearance of the new larger fishing boats. There is no need for the Government to further actively stimulate this type of development. Efforts should be devoted to facilitating it by improving infrastructure and support services, e.g. harbours, fuel supply and credit, and to regulating the fisheries. Changes are taking place at a rapid pace and MOFA needs to stay in close consultation with the fishermen to enable timely and appropriate Government interventions.

Thirdly, the lack of trained staff is still a serious bottleneck in fisheries research, economic fisheries planning and management of fisheries. Further long-term technical assistance and major training inputs are required.

Fourthly, careful selection of consultants is the key to high quality services and problem-free implementation.

Fifthly, more thoughts need to be given to the on-lending terms to national institutions and companies with regard to the valuation of the capital costs and interest rates and to their role in project implementation.

Sixth, steps in the right direction have been taken towards better performance of MIFCO but more induction of business culture, strategy and practises is required.

THIRD FISHERIES PROJECT (CR 2327-MAL)
Borrower contribution to the Implementation Completion Report

PERSONS MET

Ministry of Finance and Treasury

Adam Maniku	Deputy Minister
Abdul Rasheed	Deputy Minister (Inland Revenue)
Ibrahim Mohamed	Deputy Director, (Public Enterprise Monitoring Unit)

Ministry of Fisheries and Agriculture

Jadhulla Jameel	Director General
Ahmed Hafiz	Deputy Director
Mohamed Rasheed	Deputy Director
Aminath Lateefa	Senior Economic Research Officer
Hassan Rasheed	Assistant Director
Charles Anderson	Consultant (Fishery Biologist)

Maldives Industrial Fisheries Company Ltd

Ibrahim Shakeeb	Managing Director
Adnan Ali	Deputy Director (Operations)
Mohamed Didi	Operations Manager, Kooddoo
Ahmed Mushthaq	Accountant, Kooddoo
Mohamed Solah	Engineering Manager, Kooddoo
Mohamed Zahir	Captain, M/V Kalaminja 401

Huvuadu Atoll

Hussein Moosa	Atoll Chief, North Huvadhu
Hassan Moosa	Atoll Chief, South Huvadhu
Mohamed Zaeem Fishermen	Dhoni owner, Villingili

Ministry of Planning, Human Resources and Environment

Mohamed Khaleel	Deputy Director, Environmental Affairs
Amjad Abdulla	Coastal Engineer
Mohamed Zuhair	Assistant Environmental Analyst

Ministry of Trade, Industries and Labour

Ahmed Naseem	Director General of Investments
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Ministry of Transport and Communications

Mohamed Thawfeequ	Director, Maritime Affairs
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THIRD FISHERIES PROJECT (CR 2327-MAL)
Borrower contribution to the Implementation Completion Report

DOCUMENTS CONSULTED

- Anderson R C (1996) Third Fisheries Project; Tuna Research Component, Final Summary Report. Marine Research Section, Ministry of Fisheries and Agriculture, Male.
- Carl Bro International a/s (1995) Third Fisheries Project; Environmental Component, Final Report, Volume 1. Ministry of Planning, Human Resources and Environment, Male.
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



MINISTRY OF FINANCE AND TREASURY
MALE
REPUBLIC OF MALDIVES

5
2000

FACSIMILE TRANSMISSION

To:	The World Bank Washington DC	Date:	17 th May 1998
Attn:	Mr. Robert D. Hunt	Ref:	13-N1/98/178
From:	Mr. Adam Maniku Deputy Minister	Page :	1 of 1
		Fax No.	(202) 477-6391

Should there be any missing / illegible page(s) please inform us immediately. (960-324432)

Message:

Dear Mr. Hunt,

RE: 3rd FISHERIES PROJECT CR 2327-MALD - COMMENTS ON THE BANK ICR

With reference to the captioned project please find below the comments from the concerned Ministries/ Offices on the Bank Implementation Completion Report.

MINISTRY OF FISHERIES AND AGRICULTURE

- The Economic Planning and Co-ordination Section (EPCS0 of MOFA received only one one-year training course and they never had the capacity to carry out studies related to policy and econometrics in the section.

MINISTRY OF PLANNING, HUMAN RESOURCES AND ENVIRONMENT

- No comments

MALDIVES INDUSTRIAL FISHERIES COMPANY (MIFCO)

- See attachment

With best regards,

Ahmed Shibab
Director General

Comments to World Bank ICR Report on 3rd Fisheries project

1. B- Achievement of Objectives

Item-3 para 2- Government revenue from fishing.

- A- Refer resource rent - There is a royalty and a license charged equally from foreign licensed vessels and Maldivian Fishermen fishing beyond 75 miles (EEZ). Upto 75 miles fishing is allowed only for Maldivians and no charges what so ever imposed.
- B- Profit from Mifco- when Mifco was formed, lots of debts ex FPID/STO was transferred to MIFCO. All long term loan given to MIFCO by the Government, namely 2nd Fisheries Project, Maandhoo project A (Grant aid from Japan) and Project B and 3rd Fisheries Project were transferred with very high interest rate (10% to 13%). STO has never paid the interest of 2nd Fisheries project. This was getting accumulated and finally transferred to MIFCO. Ever since Mifco was formed with these burdens, we have been negotiating with Govt. to reduce The interest rates and does something with the accumulated interest so that Balance sheet would look much better. Within 4 years of Mifco's Operations, we have paid off all inherited loans from FPID/STO and now we are left with accumulated interest and reducing of interest rate without which Mifco will not be able to breath normally. Believe it or not, all these projects have got social obligations to fulfill. Therefore, we strongly believe that interest rate should be reduced to 6% and accumulated interest has to be rescheduled in order Mifco to start making profit and contribute to Govt. revenue.

C- Mifco does not get any subsidy from the Government.

Item 6/7 Increasing income of fishing households.

- A- The difference of the income between non-fishing households and fishing households is the significant increase of earning to the fishing households. This is more apparent in Addu Atoll. Some of the youngsters working in resort islands in Male' Atoll have gone back to their Atoll and joined the fishing. Others are investing in building new bigger Dhonis.
- B- Re employment- it is not expected at any time the employment in Huvadu Atoll to be more than 1% because of the kooddoo project. Mifco in recent years has cut down its operational cost by reducing the staff and increasing the productivity (Ref item 3 Processing cost).

Item 8

14% of fish caught in the project area was diverted to the other projects, simply because KFC could not handle the entire area with only 4 collector vessels and 2 old collector vessels. We have to add 4 mother vessels as Addu picked up fishing. Addu was not originally included in the project but Addu became very important fishing ground and being closest to KFC, the management of Addu was entrusted to KFC.