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Report No. 9254

### PROJECT PERFORMANCE AUDIT REPORT

REPUBLIC OF INDONESIA

FISHERIES CREDIT PROJECT (CREDIT 480-IND)

DECEMBER 28, 1990

Operations Evaluation Department

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# CURRENCY EQUIVALENTS

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Currency unit - Indonesian Rupiah

US\$1.00 = Rp 415 from 1973 through 1978 = Rp 625 from 1979

= Rp 970 on March 30, 1983
= Rp 1798 on May 20, 1990

### WEIGHTS AND MEASURES

# Metric System

1	ton (t)	-	1  metric ton = 1,000  kg = 2,200  pounds
1	kilogram (kg)	-	1,000  grams = 2.2  pounds
1	hectare (ha)	=	10,000 square meters = 2.5 acres
1	GT	-	100 cubic feet of ships' internal capacity

### ABBREVIATIONS

BRI	-	Bank Rakyat Indonesia
DGC	-	Director General of Cooperatives
DGF	-	Directorate General of Fisheries
FAO	-	Food and Agriculture Organization
GOI	-	Government of Indonesia
GT	-	Gross ton
Mof	-	Ministry of Finance
NES	-	Nucleus Estates
OED	-	<b>Operations Evaluation Department</b>
PCR	-	Project Completion Report
PPM	-	Perum Perikanan Maluku
		(a state fisheries enterprise)
RSI	-	Resident Staff Indonesia
SAR	-	Staff Appraisal Report

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THE WORLD BANK Washington, D.C. 20433 U.S.A.

Office of Director-General Operations Evaluation

December 28, 1990

#### MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

### SUBJECT: Project Performance Audit Report on Republic of Indonesia Fisheries Credit Project (Credit 480-IND)

Attached, for information, is a copy of a report entitled "Project Performance Audit Report on Republic of Indonesia - Fisheries Credit Project (Credit 480-IND)" prepared by the Operations Evaluation Department.

Attachment

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### PROJECT PERFORMANCE AUDIT REPORT

#### REPUBLIC OF INDONESIA

### FISHERIES CREDIT PROJECT (CREDIT 480-IND)

#### TABLE OF CONTENTS

		Page No.
Preface		i.
Basic Data	Sheet	111
Evaluation	Summary	v
PROJECT PEI	RFORMANCE AUDIT	
I.	BACKGROUND	1
	Context	ī
	Project Objectives	ī
	Design	2
	Finance Plan	3
	Organization	3
	Pre-implementation Processing	3
11.	IMPLEMENTATION EXPERIENCE	4
	Start-up	4
	Skip-jack Tuna Sub-project	5
	Fishpond Sub-project	5
	Travler Sub-project	6
	Management	6
	Supervision	7
TTT.	PROJECT OUTCOME	8
	Closing Date and Project Cost	8
	Performance at Completion and Longer	Ŭ
	Term Impact	8
TV	PINDINGS AND I RECONS	19
	Conceal	12
	A Instaguasias in Project Decis	12
	R. Inadequactes in floject besign B. Organization of Richarian Credit	12
	C. Management and Training	14
	D Conital Structure of State Patamadasa	15
	E Foorenie Pressent	16
	E. Economic Reassessment	10
Table 1 - S	Summary of Fisheries Statistics for Selected Years	
Table 2 - 1	Performance of PPM Skipjack Fishing Vessels, 1978/89	
Table 3 - 1	Brackish Water Fish Farming Credit Programme:	
	Financial Summary as at April 1990	
	• •	

Map - IBRD No. 2853Rl - Project Location

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#### PROJECT PERFORMANCE AUDIT REPORT

#### REPUBLIC OF INDONESIA

#### FISHERIES CREDIT PROJECT (CREDIT 480-IND)

#### PREFACE

This is a Project Performance Audit Report (PPAR) on the Fisheries Credit Project, which involved an IDA credit amounting to US\$6.5 million (M) to the Government of Indonesia (GOI) for the development of skipjack tuna fishing at Ambon in the Moluccas, and intensification of fish farming in four provinces, namely, East, Central d West Java, and South Sulawesi. The IDA credit was approved in June 1974 and became effective in January 1975. The closing date of June 30, 1979 was extended to December 31, 1981.

This PPAR is based on the Project Completion Report (PCR), $\underline{1}$ / the Staff Appraisal and the President's Reports, the loan documents, the transcript of the Executive Directors' meeting at which the project was considered, on a study of project files and discussions with Bank staff. In addition, an OED mission visited Indonesia in May 1990 to discuss the outcome and impact of the project and the effectiveness of the Bank's assistance with GOI staff and others. Their interest, kind cooperation and active assistance in the preparation of this report is gratefully acknowledged.

The PCR, which was prepared by the East Asia and Pacific Regional Office following a country visit in August 1982, provides a comprehensive analysis of the project experience and its status shortly after the Credit was closed. A number of lessons which were apparent by then are also highlighted in the PCR. The audit memorandum further elaborates on some of the PCR conclusions and on issues arising from the subsequent outcome and impact of the project, because of their importance for other Bank supported fisheries projects. In particular, inadequacies in the preparation and appraisal process are discussed, especially as regards credit arrangements for fish farmers and the choice of fishing vessel intended for operation by fishermen's cooperatives.

The draft PPAR was sent to the Borrower for comments but none were received.

<sup>1/</sup> Project Completion Report, Indonesia Fisheries Credit Project (Credit 480-IND), Report No. 4468, dated May 3, 1983.

- iii -

# PROJECT PERFORMANCE AUDIT REPORT

# REPUBLIC OF INDONESIA

# FISHERIES CREDIT PROJECT (CREDIT 480-IND)

# BASIC DATA SHEET

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KEY_PROJECT_DAT	<u>A</u>		Appra <u>estim</u>	isal <u>ate</u>	A <u>estim</u>	ctual ated a	or <u>ictual</u>	Actua of ap est	l as Z opraisal imate
Project costs (	US\$ million)		12.	9		18.5		1	.43
Credit amount (	US\$ million)		6.	5		6.5		1	.00
Date Board appr	oval				0	6/04/7	4		
Date Signing					0	6/14/7	4		
Date Effectiven			10/18	3/74	0	1/08/7	5		
Date physical c	omponents con	mpleted	06/30	)/79	0	9/30/8	1		
Proportio	n then comple	eted (%)	70			100			
Closing date			06/30	)/79	1	2/31/8	1		
Economic rate o	f return (%)		22-3	9		n.a.		n.	а.
Financial rate	of return (7)	)	20-3	88		n.a.		n.	a.
Institutional p	erformance		Adequ	late		Fair			
Technical perfo	rmance		Adequ	late	e Fair				
Number of direc	t beneficiar:	ies	9,00	00		3,000			33
CUMULATIVE DISB	<u>URSEMENTS</u>	<u>FY75</u>	<u>FY76</u>	<u>FY77</u>	<u>FY78</u>	<u>FY79</u>	<u>Fy80</u>	<u>FY81</u>	<u>FY82</u>
Appraisal estim	ate (US\$ M)	0.5	2.9	5.2	6.2	6.5	-	-	-
Actual (US\$ M)		0.1	0.6	3.3	4.2	4.8	5.1	5.8	6.5
Actual as & of	estimate	20	21	63	68	74	78	89	100
Date of final d	isbursement	03/82							
STAFF INPUTS (s	taff weeks)								
	PRE-								
TASK	<u>FY81</u>	<u>FY81</u>		<u>FY82</u>		<u>FY83</u>		<u>TOTAL</u>	د
Preappraisal	118.4							118.4	•
Appraisal 19.0							19.0	)	
Negotiation	2.2							2.2	2
Supervision	105.7	11.8		13.0		5.1		135.6	5
Other	4.5			6.2		5.8		16.5	5
TOTAL	249.8	11.8		19.2		10.8		291.6	5

# MISSION DATA

		No. of	Specia	lizat	tions	Performance	•	Types of	
Mission	Date	persons	repres	ented	1	rating	Trend	<b>Problems</b>	
	(mo./yr)		•	<u>/a</u>		<u>/b</u>	<u>/c</u>	<u>/d</u>	
Identification/									
Preparation	08/72	3	F(2)	E					
Appraisal	06/73	6	F(2)	<b>E(</b> 2)	FA(2	)			
Supervision 1	n8/75	3	F	Ē	FA	1	1		
Supervision 2	03/76	2	F	E		1	1		
Supervision 3	06/76	2	F	Е		1	1		
Supervision 4	04/77	3	F	E	FA	2	2	M,T	
Supervision 5	12/77	3	F	E	FA	2	1	M,T	
Supervision 6	07/78	3	F	E	FA	2	2	F,M	
Supervision 7	09/79	3	F	E	FA	2	1	F,P	
Supervision 8	12/79	2		E	FA	2	2	M,T	
Supervision 9	08/80	2	F		FA	2	3	M,T	
Supervision 10	05/81	2	F		FA	2	2	M,O	
Supervision 11	01/82	2	F		FA	2	1	M,O	
OTHER PROJECT DAT.	A								
Borrower			Govern	ment	of In	donesia			
Executing agency			Perum	Perik	anan	Maluku (PPM	)		
Fiscal year			April 1 - March 31						
Name of currency Currency exchange	(abbreviat rate:	ion):	Rupiah	(Rp)					
Appraisal year average			1973 US\$1.00 = 415						
Intervening	years ave	erage	1973-8	1		US\$1.00 =	510		
Completion :	year avera	age	1981			US\$1.00 =	625		
$\frac{1}{2}$ F = Fishery	expert; I	= econo	mist; F.	A = f	inanc	ial analyst	•		

problem-free or minor problems; 2 = moderate problems; and 3 = major 1 <u>∕</u>⊵ problems.

<u>/c</u>

1 = improving; 2 = stationary; and 3 = deteriorating.F = financial; M = managerial; T = technical; P = political; and O = <u>7</u> other.

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#### PROJECT PERFORMANCE AUDIT REPORT

### REPUBLIC OF INDONESIA

### FISHERIES CREDIT PROJECT (CREDIT 480-IND)

#### EVALUATION SUMMARY

#### Introduction

When this project was identified, in the early 1970s and prior to the 1973 world fuel oil price crisis, Indonesia was engaging in a major fisheries expansion program aimed at making fuller use of the country's fish resources for both domestic consumption and for exports and increasing income and employment opportunities of subsistence fishermen and fish farmers.

#### Project Design & Objectives

The Project, as approved by the Board in 1974, was designed to increase fish production from the project area thereby increasing employment and earnings of fishermen and fish farmers, to strengthen fisheries estates' management and to enhance economic development in the project area, comprising East, Central and West Java, South Sulawesi and the Moluccas. The SAR detailed three sub-projects and a technical assistance component to support project implementation. These components were:

- (a) a skipjack tuna fishing complex in Ambon for the state enterprise Perum Perikanan Maluku (PPM), consisting of shore facilities for handling the catch (ice-making, freezing and cold storage), and for fishing vessel maintenance (jetty, slipways and workshops), together with provision of two 100 gross ton (GT) carrier vessels and ten 30 GT pole and line fishing boats. Ten more of these vessels were provided for sale to local fishermen's cooperatives, whose catches were to be sold to PPM which would also be responsible for maintaining the Coop boats.
- (b) milkfish and shrimp pond improvements over 15,000 hectares in Java and South Sulawesi, together with nine small ice plants;
- (c) the provision of 25 trawlers for fishing cooperatives in the Java area;
- (d) technical assistance comprising specialists in management, boat building and mechanical, electrical and civil engineering were provided for the skipjack sub-project and three pond-fisheries experts supported the fish & shrimp farming program; and

(e) loans for fishermen's cooperatives and other sub-borrowers such as fish-farmers, were to be extended by the Bank Rakyat Indonesia (BRI), and the Director-General of Fisheries (DGF) was responsible for coordinating and supervising project implementation.

#### Implementation Experience

An initial three month delay in effectiveness and slow procurement at the outset caused a two year delay in project implementation. However, procurement did improve very greatly later on with assistance from GOI and Resident Mission (RSI) staff. Supervision records show that moderate managerial problems were experienced through most of the years with less frequent instances of difficulties of a financial or technical nature.

Two project components, namely the 25 cooperative trawlers and 9 small ice plants were dropped during project implementation and the savings used to finance part of the cost overruns for the other vessels and consultants. Total project costs were the equivalent of US\$16.9 M instead of US\$12.8 M as estimated at appraisal.

#### Results

Credit 480-IND was fully disbursed by February 1982, shortly after the formal closing date of December 31, 1981. Excluding the two sub-components which were dropped, as mentioned above, the project's other objectives were very largely achieved except for the poor financial control on operations, cost overruns and the rather small number of fish-farmers assisted (less than 3,000 compared with the SAR target of 9,000). As recorded in the PCR, marine fish catches and fish-pond yields, although about 40% below appraisal targets, were considered satisfactory and showed rapidly increasing production trends. PPM's fleet of ten 30 GT pole & liners and two 100 GT catcher/carriers, plus the ten cooperatively owned 30 GT fishing vessels were fully operational, as were the shore facilities at Ambon. PPM, having made losses from 1978 to 1980, recorded its first net profit in 1981. Fish pond productivity, expressed as kg/ha/yr, was showing increases of up to 100% for milkfish and 500% for shrimp, from Credit 480 assisted ponds. However, the level of sub-loan arrears and defaults remained disappointingly high at 44% and was improving only slowly, due to the lack of an appropriate system for fisheries debt recovery in BRI and to BRI's relative unfamiliarity with long-term fisheries lending prior to this project.

Sub-loans under the fish farming component benefitted 2,725 owner/operators of 8,900 ha of ponds and totalled Rp. 1,616 million. The appraisal target was 9,000 beneficiaries and 15,000 ha but it is clear that this target underestimated both the average size of fish farm and the amount needed per hectare to achieve the necessary improvements.

Economic rates of return were assessed at appraisal for nine separate components, with results ranging from 22% to 39%, but were recalculated at completion for only two, namely PPM (Ambon) and a 5 hectare fish pond. At completion the ERR for PPM was 29% (SAR 34%) and 30% for the fish pond (SAR 24%). There was no weighted value quoted for ERR covering the project as a whole, either at appraisal or completion. Results since completion suggest a very satisfactory outcome for the fish-farming sub-project, but a disappointing decline in performance of the skipjack-tuna sub-project based at Ambon.

#### Sustainability

As indicated in the PCR it did appear at the completion stage, as if the prospects for sustainability were good and, as regards the fish farming component this has indeed proved to be the case. Arrears including accrued interest, have been reduced to 9.5% of the amount originally lent (44% at completion) and are continuing to reduce slowly. It is considered that the arrears could be virtually eliminated if BRL were willing to establish fisheries units to enable closer and more frequent contact with its borrowers at provincial and district levels.

Project achievements in aquaculture have been reinforced by two ADB funded brackish water aquaculture projects and by additional lending under the IDA funded Rural Credit Project (IDA Loan 827-IND). The fish-farming extension service, which was a weak element during much of this project, has since been reorganized, amalgamated with other Ministry of Agriculture farm extension services and strengthened. Farmed fish production has greatly increased, especially from brackish water ponds which yielded more than 192,000 m. in 1987 compared with 113,000 mt in 1981.

The skipjack tuna fishing component based at Ambon has not fared so well during the 8-1/2 years since credit closing. PPM's shorebase and fishing fleet are still operational, although the ice-plant and the ten pole & line boats are nearing the end of their working life and may need replacing within the next three years. Despite the subsequent acquisition of four long-liners PPM has never caught more than 60% of the appraisal target annual catch (the 12 year average, 1978/1989, is only 35%) and in consequence has recorded a net profit, after interest and depreciation, in only one  $y_{-r}$  (1981) out of the past twelve. As a state enterprise, PPM's continued survival is therefore dependent on GOI's willingness to support its losses although, as the PCR also notes, the losses were and continue to be partly due to GOI decisions concerning the extremely high ratio of debt to equity in PPM's capital structure and the level of depreciation charges, which were judged to be about 40% higher on average than was justified by the value of assets.

The position of the cooperative owned fleet is even worse in that, with one exception the boats are now all derelict and are said to be beyond any hope of renovation, having given at most only six years of working life. The cooperatives concerned still owe the banks more than Rp 382 M, plus interest, in respect of vessel and fishing gear costs, and also owe a further Rp 54 M to PPM for repairs, fuel and ice supplied. They have no other means or any hope of ever being able to repay such amounts and in their case, at least, it is clear that the project has had a decidedly negative impact.

### Findings and Lessons

Despite the apparently favorable status of the project at completion, there were two inherent weaknesses stemming from the preparatory stage which should have been more adequately dealt with prior to negotiations, namely BRI's relative lack of experience of lending to the fisheries sector and an overoptimistic assessment of the capability of fishermen's cooperatives in the project area to manage and maintain relatively large and costly fishing vessels.

Considering that the fisheries credit program, including the fish farming component and sub-loans to cooperatives and others for skipjack catcher vessels and trawlers, was originally planned to utilize about 60% of project funds and that BRI was also to be responsible for all of the lending, it is remarkable that at no stage was any credit expertise included in a.., of the supervision missions, let alone anyone particularly knowledgeable about the problems of fisheries credit recovery. Although, as the PCR points out, credit recovery should take place at the time of fish catch delivery or of fishpond harvesting, and not routinely, at regular monthly or annual intervals, a mechanism and the staffing needed for this purpose should have been determined and agreed with BRI before lending commenced. As it was, the high level of arrears was due more to BRI's unpreparedness and disinclination to establish specialist fish-farming credit units in the Provinces or to assign staff specifically to work in this field, rather than to any inherent unwillingness by fish farmers to repay their loans. It is to be hoped that such arrangements will be included in any future credit plans.

The need for project design to be realistic as to implementation time schedules and the nature of components for inclusion in the project, was recognized in the PCR, along with the view that the provision for trawlers and for small ice-plant in fish-farming areas should have been excluded at appraisal. The same may be said about the fishing vessels selected for sale to cooperatives in the Ambon area, which proved to be too large and too costly for them to operate and maintain, particularly as they had to rely on the PPM slipway and workshops for vessel repairs and upkeep, a role which PPM found itself i-creasingly unable to fulfill after the first two or three years, because it had to give priority to maintaining its own fleet. A fishing vessel designed to meet the needs of an industrial scale, company type of operation is unlikely to prove suitable also for a much smaller scale enterprise. Each should have a vessel designed around its own requirements. It is essential that preparation and appraisal missions must view such matters much more critically in future.

#### PROJECT\_PERFORMANCE\_AUDIT\_REPORT

#### REPUBLIC OF INDONESIA

### FISHERIES CREDIT PROJECT (CREDIT 480-IND)

#### I. BACKGROUND

#### <u>Context</u>

1. Although Indonesia is known to have substantial marine resources, its fishing industry still has much potential for further development. Prior to 1970 the industry was based on a large, mainly subsistence coastal fishery, using traditional boats and gear. A small commercial fishery had developed but was dominated by joint ventures between mainly Japanese companies and ethnically-Chinese Indonesian businessmen. Very few Indonesian fishermen had the capital or managerial ability needed for successful commercial fishing. Fisheries cooperatives were not well organized or very effective and so the Government of Indonesia (GOI) turned to the concept of state enterprises.

2. In 1970, there were eight state fisheries enterprises, each rather small and managing a few fishing boats or small sheld facilities. None were particularly profitable but covered their operating costs and although operated commercially, they also had social goals such as, research, employment and price stabilization, etc. IDA's First Fisheries Project (Credit 211-IND) in Indonesia became effective in October 1970, in the shape of a state fishing enterprise located at Aer Tembaga, North Sulawesi intended to promote skipjack tuna fishing for export.

3. Preparation for the Fisheries Credit Project (Credit 480-IND) commenced shortly thereafter, whilst the Aer Tembaga project was still in the process of implementation and concurrently with the establishment of Asian Development Bank (ADB) funded new enterprises in West Irian, Riau and Central Java and a Japanese Government supported tuna long-line fishing project in Bali. All of these enterprises have encountered severe managerial and financial problems, made worse by a rapid rise in fuel based operating costs since the 1973 oil price crisis and a collapse in skipjack and tuna world market values in 1982 which have never fully recovered. In view of this relatively poor record, GOI has increasingly moved towards supporting the private fisheries sector, with particular emphasis on the nucleus estate approach in which private enterprise and individual fishermen or cooperatives can associate on mutually beneficial terms. GOI has also continued to support the state enterprises in the expectation that they could become the bases for future nucleus estates, as has already happened in two cases.

#### Project Objectives

4. In pursuance of the overall national aim of making fuller use of Indonesia's fish resources for domestic consumption and export and thereby

increasing income and employment opportunities for subsistence fishermen and fish farmers, the main objectives of the Fisheries Credit Project were to expand production of skipjack tuna from the Ambon area for export and encourage greater investment in and increased production from brackish water fish farms in East, Central and West Java and South Sulawesi. In the process and by means of appropriate technical assistance, the technical and managerial capacity of the Ambon state fishing enterprise Perum Perikanan Maluku (PPM) would be developed, the DGF's Fish Farming Extension Service would be strengthened and the expertise of the Bank Rakyat Indonesia (BRI) as regards the particular needs, problems and characteristics of the fishing industry, would also be enlarged and strengthened.

#### Design

5. The design of the project differed from the earlier Aer Tembaga project (Credit 211-IND) in that about half of its funds were directed to the developent of brackish water fish farming and the balance to marine fisheries, whereas Credit 211 was concerned only with marine fisheries development. Fish farming was then growing in importance as a source of income and employment in many coastal areas of Indonesia but was in need of development capital and better extension services.

6. Design of the facilities at Ambon incorporated some of the recommendations and lessons learned from the earlier project at Aer Tembaga, such as the jetty being extended into water of sufficient depth as to allow larger refrigerated cargo ships to berth alongside as well as the fishing fleet. The Ambon cold storage system was also designed to minimize loading and unloading time, producing cost savings and better quality fish. Provision for the recruitment of experienced consultants to strengthen PPM's management and organizational structure was regarded as an important improvement in project design, given the acute managerial and technical problems that were being experienced at Aer Tembaga.

7. The project, as approved by the Board in 1974, comprised three subprojects and a technical assistance component to support project implementation. These were:

- (a) Skipjack Tuna Sub-project, involving the establishment of a tuna fishing complex in Ambon for the state fishing enterprise, consisting of 10 pole & line fishing boats to be used by PPM for skipjack fishing; fishing gear for catching live bait and skipjack tuna; two 100 GT carrier vessels to increase fishing efficiency; shore facilities for handling the catch (ice-making, freezing and cold storage) and for fleet operation and maintenance (jetty, slipway and workshops). A further 10 pole & line fishing vessels of similar size and design, were provided for sale on credit to local fishermen's cooperatives, on the assumption that their catches would be sold to PPM, and that PPM would be responsible for maintaining the Cooperative boats and accounting for Cooperative loan repayments by deductions from catch sale values.
- (b) <u>Fish Pond Sub-project</u>, consisting of improvements to about 15,000

ha of existing smallholder brackish water ponds in East, Central & West Java and in South Sulawesi; development of about 45 one to five ha demonstration ponds for use by a strengthened extension service; and establishment of nine 5-ton ice plants for the preservation of project milkfish and shrimp production enroute to market.

- (c) <u>Trawler Sub-project</u>, involving the procurement of 25 trawlers for sale on credit to fishing cooperatives in the Java area.
- (d) <u>Technical Assistance</u>, for effective implementation of the project, comprising specialists in management, boat building, electrical, mechanical and civil engineering for the skipjack tuna sub-project and three pond-fisheries experts to support the brackish water fish and shrimp farming program. A total of 17 man/years for up to seven experts was proposed.

### Finance Plan

8. At appraisal it was estimated that the project would cost a total of US\$12.9 M, of which the IDA credit amounted to US\$6.5 M. Allocation of the total estimate, including the relevant amount for technical assistance, was approximately 42% to the skipjack tuna sub-project, 44% to the fish-pond subproject and 14% to the trawler sub-project.

9. The estimated foreign exchange component totalled US\$3.8 M, or 30% of total costs, and it was therefore intended that the IDA credit would finance roughly 50% of total project cost, including about US\$2.7 M of local currency cost. The credit was intended to supply about 58% of BRI support for the project, 53% of PPM's investment costs and 14% of GOI's contribution to project cost.

#### Organization

10. Loans to the fishermen's cooperatives and other borrowers such as fish-farmers, were to be extended and administered by BRI. Overall responsibility for coordinating and supervising project implementation was undertaken by the Director General of Fisheries.

11. There is no mention of any involvement by the Director General of Cooperatives.

#### Pre-implementation Processing

12. GOI's request for a second IDA-financed fisheries project was reviewed and discussed by an FAO/Bank identification mission in August/September 1972. In January 1973 FAO/Bank again visited Indonesia and prepared the project broadly along the lines of GOI's request. The project was appraised by IDA in June 1973.

13. These missions noted local and international scientific assessments of the marine resources in Indonesian waters as being capable of yielding a 30-

fold increase in skipjack production and a 7-fold increase in overall total fish catch, compared to the 1972 landings of only 5,000 tons of skipjack and 839,000 tons of all kinds of fish. Notwithstanding this potential for increased production, some inshore areas, such as the zone up to 5 miles offshore along the north coast of Java, were already overfished because about 97% of the 288,000 boats in the fishing fleet were not mechanized and were therefore unable to travel further afield. Consequently, it was important to divert as much fishing effort as possible away from overexploited coastal waters to more distant but still underutilized fishing grounds.

14. Prior to project start-up there were about 184,000 ha of brackish water fish-ponds in Indonesia, dating back for several hundred years in some places, but mostly employing only a low level of milkfish culture technology and yielding about 330 kg/ha annually of mixed fish species, crabs and shrimp. The missions noted that quite simple improvements to pond design producing better control of water conditions could, when combined with the use of small amounts of fertilizer, generate large increases in productivity of up to 500-600 kg of milkfish and 250 kg of shrimp per annum.

15. Issues included concern about the ability of state fishing enterprises such as PPM to manage such development projects, given the problems that were affecting the Aer Tembaga development; and the inadequate level of extension back-up for fish farming development, coupled with a general lack of facilities to demonstrate improved fish farming techniques. There were also doubts about BRI's preparedness to engage in a substantial fisheries credit program given that BRI had no in-house fisheries expertise and that lending to the fisheries sector had until then constituted less than 2% of the bank's lending portfolio and was experiencing arrears of about 40%.

16. Negotiations took place in April 1974 when, in addition to agreements on such matters as local funding and interest rates, agreement was also reached that BRI would engage a qualified fishery officer to liaise with DGF and PPM over the technical appraisal of sub-loan applications. DGF agreed to construct 45 demonstration fish-ponds each staffed by one trained fish farming instructor, and to recruit a further 50 extension officers who would work with the three pond fisheries experts. Conditions of effectiveness included that at least one pond fisheries expert and the management specialist for PPM be appointed and in position prior to the project being declared effective.

17. The credit was approved by the Board in June 1974.

#### **II.** <u>IMPLEMENTATION EXPERIENCE</u>

#### Start-up

18. Project effectiveness was planned for October 18, 1974 but had to be deferred because of initial difficulties in recruiting the first aquaculturist and the management specialist for PPM. The credit was eventually declared effective on January 8, 1975. Thereafter the remaining technical assistance personnel and consultants were recruited expeditiously and the project made good progress at least until Year 4.

#### Skip-jack Tuna Sub-project

19. Soon after effectiveness, specifications and tender documents for the twenty skipjack pole & line fishing boats were prepared with the assistance of consultants and in consultation with RSI. The boat construction contract was awarded to a state owned yard in Sumatra which delivered the first ten craft to PPM on schedule by October 1977. Delivery of the remaining ten vessels was delayed from April 1978 until October/November 1979 because of disputes involving BRI, PPM, DGF and the Cooperative Department (DGC) concerning the selection of coops to receive the boats, their cost and manner of repayment.

20. Considerable delay occurred in procurement of the two carrier vessels, caused by changes in specification necessitating retendering and other bureaucratic problems, so that they did not finally enter service until just after the credit closing date and at greatly increased cost.

21. Construction of the shore facilities at Ambon commenced in early 1976 and was completed within two years, on schedule. The work was carried out with little or no cause for complaint and at completion, the condition of these facilities was adjudged good to excellent and the operational equipment was working satisfactorily. However, the cost of these shore facilities, at US\$5.9 M was double the appraisal estimate and the cost of the sub-project as a whole was US\$11.445 M compared to the appraisal estimate of US\$5.364 M.

### Fishpond Sub-project

22. Implementation of this component started in September 1975, and appeared to be going well when, as reported by the third supervision mission in June 1976, loans had been made to some 780 smallholders covering 2554 ha of brackish water ponds. However, by the time of the 4th supervision in April 1977, the position had deteriorated quite badly. BRI lending procedures, such as poor appraisal at branch level, coupled with inadequate extension follow-up, were giving cause for concern and escalating arrears. Notwithstanding the support provided by the three experts, fish-farming extension workers appeared poorly motivated and in many cases were not regarded by more experienced pond owners as having any specialized knowledge to offer.

23. Because of the deteriorating quality of its fisheries portfolio and under IDA advice, BRI suspended disbursements in May 1977, and reappraised all fisheries sub-loans in accordance with guidelines provided by IDA. This exercise resulted in the cancellation of a number of bad loans and a considerable improvement in subsequent lending operations. At the same time DGF acted to improve the quality of its extension services in the project area, in terms of increased staffing and establishing pond demonstration & training units along the lines of undertakings made during negotiations. As a consequence of the interruption, BRI did not complete its fishpond lending program until early 1980, well behind schedule, and totalling 2,725 owner/operators of 8,900 ha. Provision for small ice-plants was dropped during 1978 because supplies of ice from other existing sources were sufficient and there was little or no interest by cooperatives or local businessmen in taking out loans for this purpose. The savings were applied towards the escalating cost of technical assistance. Total expenditure, including the costs of demonstration ponds and consultant services, was US\$5.427 M or 95% of the appraisal estimate.

# Trawler Sub-project

25. The third supervision, in June 1976, noted reports of increasing numbers of private trawlers fishing illegally inside coastal water limits, especially in the Java Sea area, exacerbating the overfishing problem to the detriment of artisanal/subsistence fishermen. It was therefore agreed with DGF to put the trawler component into abeyance.

26. Two years later, the sixth supervision in July 1978 agreed with DGF to drop the trawler component altogether, in favor of three additional carrier boats for the Ambon operation. However, there is no indication that any orders were placed for these three vessels and in the end, the savings from Category 2 (trawlers) was used to offset some of the other cost overruns.

#### Management

27. Administrative and technical weaknesses in the management of state enterprises, including PPM and fishermen's cooperatives, were recognized at appraisal and led to the inclusion of several technical assistance positions in the project to help PPM to develop its managerial capacity whilst implementing the project. The project provided a technical adviser (described as a management specialist in the SAR and Credit Agreement), a master fishermen and a refrigeration engineer who performed well in assisting their counterparts, training other local staff, supervising construction of the shore base and advising on procurement, etc. However, as none of them had any direct managerial function they were unable to be of much help in accelerating project implementation.

28. Record-keeping for management and project monitoring purposes did improve during the projet, but were still unsatisfactory at completion and are only marginally better. It was noted that although the performance of PPM's management team was genually satisfactory, there were problems of commitment since most managers spent excessive time in Jakarta, where their families lived, rather than on the job. In particular, the PCR stressed the need for a commercially oriented functional accounting system, the absence of which, throughout the project, resulted in increased operational costs and was the chief cause of reported accounting losses.

29. Management of the fish farming component presented different problems in that the recruitment of three pond-f. heries experts was intended to strengthen DGF's fish farming extension service, but had only marginal impact in that respect. As regards BRI, the main worry was the lack of personnel especially at branch level, who had experience of fisheries credit management. The employment of a fisheries graduate by BRI was helpful in improving liaison between the bank and DGF, but the officer concerned had only about two years post-graduate experience and was not therefore in a position to have much influence on the quality of sub-loan appraisal at the branches, or to direct the management of loan repayment on lines that accord with the way of life of fishermen and fish farmers.

30. There was a potentially very damaging disagreement at a critical stage during 1978, between PPM and DGF on the one hand and DGC and the Ambon fishermen's cooperatives on the other, concerning the choice of which cooperatives should receive boats and the manner of cost recovery. Such key questions should have been resolved before the orders were placed to build the vessels, whereas failure to do so cost a year's delay in delivery and added significantly to their cost. It was also a serious error by project management and by the preparation and appraisal missions that DGC's institutional and legal responsibility for cooperative affairs as not given enough consideration so as to ensure full participation by DGC from the outset in planning and implementing this part of the project.

31. Finally, from the record and from discussions held with some of the cooperative members concerned, it appears that they were not adequately consulted before decisions were taken on the type, size and cost of fishing vessel to be built. Cooperative members stated that the vessels differed in respect to size. manner of construction, materials and cost, from what they expected. They were particularly unhappy with the shallow draft, flat-bottomed design instead of a deeper V-shaped hull which they considered to be more sea-worthy. The seventh supervision report (September 1979) noted that the first five boats were in service but that the cooperatives concerned were unhappy about their high purchase and operational cost and that this was leading to bad relations between the coops and PPM and disputes about fish prices, etc. Effectively the coops were arguing that they were pressured into taking boats which they could not afford to operate, maintain and repay at prices dictated by PPM. BRI was also clearly unhappy about the loan repayment prospects. The eighth and subsequent supervision reports note steadily worsening repayment arrears, poorly maintained craft and suggestions that PPM should take over the boats together with the BRI loan commitments, although this idea was never followed through.

#### <u>Supervision</u>

32. Although IDA's supervision procedure has no direct bearing on project management, it is frequently perceived by borrowers, however incorrectly, as contributing to the management process. Such was certainly the case in this instance and IDA's supervision interventions helped to expedite procurement and to improve technical standards, often by providing the bridge for contact between GOI officials. As noted in the PCR, supervision was not forceful enough in promoting improvements in PPM's accounting & financial management or in facilitating project cost recovery. However, its request to BRI in 1977 to stop disbursements and to reappraise all the fish farming sub-loans, helped to reduce arrears and improve portfolio quality. On the other hand, had BRI been better prepared perhaps by the inclusion of a fisheries credit specialist in the earlier missions, the problems might not have arisen.

33. There were a total of 11 supervision missions between August 1975 and January 1982, at roughly six monthly intervals. Mission members totalled 27, each averaging 6 man-days per visit which should have been adequate. Apart from the lack of fisheries credit expertise, mission composition was satisfactory with a fishery expert present on 10 missions, an economist on 8 and a financial analyst on 9. Continuity was also reasonable especially during the latter half, but Mission No. 7 in which 3 participants spent only 2 days each in country and No. 8 in which two members were allowed only 1-1/2 day, each, hardly seems adequate time for proper understanding at a fairly crucial stage in the project cycle.

#### III. PROJECT OUTCOME

#### Closing Date & Project Cost

34. The sixth supervision (July 1978) noting the delays, especially in procuring the 10 skipjack fishing boats for Ambon cooperatives and the 2 carrier vessels for PPM, coupled with DGF's request, recommended postponement of the closing date from June 30, 1979 by 18 months to December 31, 1980. This was agreed and IDA subsequently granted a request for a further postponement to December 31, 1981 when the credit was formally closed.

35. Final disbursement was in February 1982 at which point the credit of US\$6.5 M was fully disbursed. However, funds from Category 4 (unallocated) and from the balance of Category 2 (trawlers) were transferred to Categories 1 & 3 to finance part of the cost overruns for other vessels and consultants. Total project costs were the equivalent of US\$16.9 M, an increase of 32% over the appraisal estimate of US\$12.8 M. About 10% of the cost overrun is attributable to changes in project design, e.g. carrier vessel specification, and the remainder to project delays, higher equipment and material costs and to much higher consultant costs than originally estimated.

36. In fairness, these cost escalations were largely due to longer term knock-on effects of the oil price crisis from 1973 onwards, the consequences of which could not have been foreseen by the appraisal mission, even as late as June 1973. However, it is also clear that more effective project and sub-project management would have minimized delays and thereby would also have reduced the cost overruns.

#### Performance at Completion and Longer Term Impact

37. The PCR was based on the findings of a country visit in August 1982 and thus reviewed the project outcome and performance up to and including 1981/82. The audit visit in May 1990 was perforce limited by time constraints to discussions in Jakarta and field studies of fish farming in East Java and the marine fishing component at Ambon. 38. As regards the Skipjack-Tuna Sub-project, the completion mission concluded that the operational status and productivity of PPM and the fishing cooperatives concerned was generally satisfactory and improving, although it was still about 40% below appraisal estimates. The shore facilities at Ambon were well maintained and fully operational and the combined fleet of twenty PPF and coop fishing vessels were apparently all serviceable. The world market price for frozen skipjack had increased from US\$520 per mt in 1978 to US\$1045 per ton in 1981 and this had helped PPM to record its first annual net profit, after allowing for interest and depreciation charges.

39. Notwithstanding continuing managerial difficulties, unresolved disputes with cooperatives over prices and scarcity of live-bait for skipjack pole and line fishing, the recalculated ERR for the Ambon/skipjack sub-project is shown in the PCR as 297, only 57 less than the appraisal estimate. In the audit's view this figure is too high because it is based on an inaccurate and over-optimistic assessment of PPM's fleet efficiency and productivity. The appraisal target for production per boat/year was 325 tons of skipjack, based on 1.3 tons per day for 250 days at sea during each year. The PCR, para. 3.02, incorrectly quotes the target as 1.3 tons per fishing day and assesses actual catches as being only about 40% below appraisal targets. It will be evident that there are fewer fishing days than total days at sea because the latter figure includes days spent steaming to and from the fishing grounds and catching bait, etc., which take up about 35% of the time. Consequently the equivalent target catch per fishing day would be about 2.2 tons. In reality, as can be seen from Table 2, during the 12 years from 1978 and 1989 total annual landings from PPM's fleet of 10 vessels never exceeded 1,360 tons or 42% of the target catch of 3,250 tons.

40. Equivalent production figures for the 10 cooperative boats are not available but from Supervision 8 onwards there are warnings about these craft being poorly utilized and badly maintained. One has to assume therefore that they spent less time at sea and caught fewer fish even than the PPM fleet. It was planned that PPM would maintain the cooperative fleet but after the first few years PPM had to give priority to its own boats, which is understandable, but resulted in cooperative vessels frequently having to wait, idle, for several weeks before they could be attended to. It is greatly to be regretted that nine of the coop boats are now derelict and are reported to be beyond any hope of repair or renovation, having given no more than six years of working life. The cooperatives concerned still owe more than Rp 382 M, plus interest, in respect of vessel and fishing gear costs and were also reported to owe a further Rp 54 M to PPM for repair work carried out in the past and for fuel and ice supplied. There seems to be little or no possibility of their being able to repay these debts and the cooperative fishermen are, in effect, worse of  $\hat{i}$  now than before the project started.

41. The trend towards improved profitability noted in the PCR sadly proved to be short-lived. In 1982 the average export price for skipjack slumped from US\$1045 to US\$653 per ton and continued to decline thereafter to US\$612 in 1986. Prices started to recover in 1987 but even by 1989 were still no more than US\$898. Given that costs of fuel, fishing gear and wages, etc., have also increased over this period it is not surprising that PPM reverted to making net losses annually from 1982 to date.

42. On a more positive note, it is to the credit of PPM's staff and management that their shore base and fleet are still operational, although it is understood that the ice-plant and the ten skipjack boats are now nearing the end of their working life and will need replacement within the next few years. Live bait availability is less of a problem because fishing is now based mainly on the use of aggregating rafts, known locally as rumpon, to attract the bait fish and tuna shoals. The fleet also now includes vessels equipped as longliners, which use frozen bait to catch other tuna species, such as Yellowfin, which are more profitable than skipjack.

43. It is understood that there are hopes that PPM might form the basis for a fisheries nucleus estate development, an idea which seems well worth investigation. PPM staff have developed considerable expertise over the years, in fishing, fish handling onshore, marketing and the upkeep of vessels and other equipment. However, there will be need for a considerable injection of new capital to replace worn out boats, plant and machinery and the question of management capability will also have to be addressed.

44. The outcome of the Fish Farming Sub-project was viewed very favorably by the completion mission (PCR paras. 3.05 and 5.02), despite the high rate of sub-loan arrears which was 44% at completion. Although progress was slow to start with, by the end there was a major improvement in aquacultural extension services supported by a series of demonstration ponds in most of the areas served by the project. Pond owners who took advantage of these facilities were enabled to increase annual milkfish yields from 300 to around 1,000 kg/ha/yr and tiger shrimp yields from an average of 50 kg to as much as 300 kg/ha/yr. This was achieved by means of higher stocking rates and reduced mortality losses made possible by better husbandry resulting from the provision of credit and extension advice.

45. During the project, BRI disbursed the equivalent of US\$3.5 M in subloans to 2,725 owners of about 9,000 ha of brackish-water ponds and in view of the favorable outcome, and despite the persisting high arrears, the recalculated ERR at completion was 28%, compared with the appraisal estimate of 24%. The audit generally concurs with the PCR's assessment of the economics of this component, which has continued to have a beneficial impact during the eight years since project completion.

46. The improvement in fish-farming extension has been reinforced since 1982 by the amalgamation of fisheries extension into an overall agricultural extension program under the Directorate for Education, Training and Extension of the Ministry of Agriculture. Experience gained during the project has also been of benefit to subsequent developments, such as two ADB funded brackish aquaculture projects and the fish-farming component of the IDA funded Rural Credit Project (Loan 827-IND). As shown inter-alia in Table 1, brackish water pond fish production has increased over time, country wide, from 112,900 tons in 1981 to 192,000 tons in 1987, whilst the area of brackish ponds has also increased significantly, from 198,000 ha in 1981 to 263,000 ha in 1987. Wider adoption of improved technology is evidenced by a growth in average productivity, from 560 kg/ha/yr in 1981 to 730 kg/ha/yr in 1987 and although figures are not available, the productivity growth in financial terms will be even more dramatic because it is known that many ponds have been converted from milk-fish production to the much more profitable tiger shrimp culture.

47. The high level of arrears which remained outstanding at project completion, has reduced steadily, albeit slowly since then to a stage where, as shown in Table 3, the outstanding principal plus accrued interest now amounts to only 9.5% of the original sub-loan total. It appears that this has happened with a minimum of pressure by BRI and that a more active program of regular contact with borrowers, such as was recommended by IDA supervision, would have virtually eliminated these arrears well before now. The opportunity was taken during the audit visit in East Java, to meet three pond owners/operators whose loan accounts were still in arrears. The following points emerged from the discussion:

- (a) in two of the three cases, inheritance problems following the deaths of the original borrowers hindered proper working of the ponds for several years and so led to the arrears;
- (b) two appeared unaware, prior to the interview, of the serious nature of their indebtedness, both owed about Rp 1 M yet both had earned at least Rp 8 M from their ponds during 1989 and should therefore be able to resume payments;
- (c) some ponds suffered from shortages of freshwater, with consequent high mortality and low productivity because of excessive salinity levels during the dry season. Production levels vary from year to year, depending on stocking rates, salinity and predators, etc., up to about 550 kg/ha for milkfish and 180-230 kg/ha for tiger shrimp. Wherever possible, pond owners are stocking more shrimp and cutting back on milkfish;
- (d) two of the pond owners employed experienced workers on a sharecropping basis to operate their ponds. The two owners had had discussions with local extension officers, but never in company with their workers who were said to be reluctant to adopt any new ideas. The general view was that the extension service is much more active now than in the past.

48. As noted earlier, it is clear that BRI needs to establish closer and more regular contact with borrowers in order to encourage accelerated repayment of arrears and also to be informed about seasonal or other difficulties that may arise. It is also clear that such action is highly relevant to the fish-farming sub-loan portfolio of IDA Loan 827, in relation to which it was observed that arrears currently stand at nearly 46% in East Java. Finally, it appears that additional efforts are needed to ensure than extension messages reach not only the pond owners but also their share-cropping workers who are largely responsible for day-to-day pond management and upkeep.

#### IV. FINDINGS AND LESSONS

#### <u>General</u>

49. The audit is in general agreement with the PCR comment that "...The project's objectives were achieved except for the poor financial control on operations and the limited number of fish farmers assisted." (PCR, Highlights, para. i). Numerous problems were experienced en route, as detailed in the PCR but despite these difficulties the overall outcome may be described as generally satisfactory, at least as far as the Fish Farming Sub-project is concerned. With regard to the Skipjack Tuna Sub-project, although the PCR is correct in its statement concerning objectives having been attained, they have subsequently proved to be less sustainable. This has been particularly so with the cooperative owned fishing vessels, most of which are now derelict.

50. The completion mission identified four main lessons arising from the project which are set out in para. 5.05 of the PCR. Although in a different order, they are as follows:

- (a) project design should be more realistic as regards components (e.g. trawlers and ice boxes should have been omitted) and to the implementation schedule;
- (b) subloans should be recovered from cooperatives or fishermen whenever fish catches are delivered and not once yearly;
- (c) management and training are key factors for project success; management requirements and the use of experienced consultants in managerial positions, if need be, should be considered as priorities in future;
- (d) the capital structure (debt/equity) of project beneficiaries should be adequate to prevent deterioration of their financial standing.

Although the audit is in general agreement with these conclusions, it also considers that the analysis contained in the PCR did not penetrate sufficiently to identify other important issues. These matters are therefore discussed below.

#### A. Inadequacies in Project Design

51. The PCR concluded that project design was unrealistic as regards implementation time schedules and that in consequence there was a ten week delay in the project becoming effective and an eventual two and a half year time overrun before project completion. Of these, the delay in effectiveness seems to be the most crucial, particularly because of its cause. The Project Agreement was signed on June 14, 1974 and was scheduled to be made effective only four months later, on October 18, 1974. However, amongst the conditions was a requirement that the consultant management specialist for PPM and one of the fish pond experts had to be recruited and in post before the credit could be declared effective. 52. Overseas recruitment is notoriously difficult and time consuming under any circumstances and to demand that two such key people be recruited and in post within only four months seems quite unreasonable and it was inevitable that there would be delays. However the crucial point is that recruitment to such tight timings is bound to restrict choice to the possible detriment of the project. In the audit's view it is much more important to select the right person for a key post, such as management specialist, even at the cost of a few months, than to insist that the post be filled by a given date. It is therefore recommended that effectiveness conditions related to recruitment should be worded in a more constructive and less restrictive way in future.

53. The PCR concluded that project design was defective as regards some of its components, and in particular suggested that the two components which were eventually dropped, namely trawlers and small ice plant, should not have been included in the first place or should have been deleted during appraisal. It was known from the outset, viz. SAR para. 2.08, that inshore waters, especially in the Java Sea, were being heavily fished by all and sundry including the existing trawler fleet, even though the area was ostensibly reserved for the local artisanal/subsistence fishing communities. Audit therefore agrees that the inclusion of additional trawlers was inappropriate and that a better approach would have been to induce some of the existing trawl fleet to divert to other underfished areas, such as the fishing grounds off South Kalimantan.

54. Cancellation of the provision for small ice plants in areas served by the Fish Farming Sub-project was agreed because it was found that there was adequate larger scale commercial ice-making capacity operating in the market and no demand emerged for the proposed smaller units. The audit endorses the decision to cancel the ice-plant but was unable to judge whether or not the situation could have been foreseen during either preparation or appraisal. It could have been a case of unrealistic planning, as suggested by the PCR, or equally well an instance where the project was overtaken by developments originating elsewhere.

55. The design and specification of fishing vessels selected for sale to fishing cooperatives in the Ambon area was another aspect in which project design proved inadequate and in the audit's view, led to the rapid deterioration and final breakdown of nine of the ten vessels after at most only six years service. As late as November 1977, long after the orders for boat construction were placed, there were still disagreements (as reported by Supervision Mission No. 5) over the selection of cooperatives to receive the vessels, and arguments persisted for several years thereafter about vessel costs and manner of construction, etc. Cooperative members claimed that they were not consulted beforehand about vessel size and design and found themselves landed with boats which were too costly to buy, operate and maintain.

56. It seems clear that the cost advantages of building 20 boats to the same specification weighed more heavily with project planners than other considerations and that the cooperatives, in consequence found themselves having to accept vessels which were too large and too expensive for their limited means. The craft were too large to be beached in the traditional way for routine hull maintenance by their owners, so they had no option but to rely on PPM to service the vessels on the project slipway. This was fine until PPM found that with increasing age, their own vessels to which they had to give priority, were taking up most of the available slipway time, forcing the coop boats to wait for long periods before they could be attended to.

57. Thus, Supervision Missions Nos. 8 and 9 reported that the cooperative fleet was being poorly utilized and badly maintained, that there were bad relations between PPM and the cooperatives and that loan repayments to BRI were falling badly into arrears. Somehow this situation escaped the attention of the Completion Mission during August 1982, which regarded the cooperatives as operating profitably, (PCR, para. 3.02), but by 1985 only one of the coop boats remained in service and that has been operated by PPM on behalf of the cooperative concerned.

58. It is clear that project design was defective in not having consulted the fishermen concerned before decisions were taken as to which cooperatives should benefit and what kind of boat should be built. As was well demonstrated in this case, it does not follow that a fishing vessel design suitable for use by a commercial company will also be appropriate to other circumstances. Each group of user should have a vessel designed to meet their particular needs. Design was also unrealistic in over-estimating the longer term ability of PPM to maintain a large fleet of cooperative vessels in addition to its own fleet. It is therefore recommended in future that project design be based, inter alia, on the principle that intended beneficiary groups should have a major say in determining the nature of inputs from which they are expected to benefit but for which they will also have to pay. It is also essential that preparation and appraisal missions, and especially the latter, must view these matters much more critically in future to ensure that timescales are realistic and that components are properly planned before appraisal, or if that is not possible, that the project contains adequate provision for the necessary planning and design work.

### B. Organization of Fisheries Credit

59. According to the PCR, paras. 2.04, 3.04 and 5.05, the main lesson learnt was that credit recovery should take place at the time of catch delivery or pond marketing and not once yearly, so as to improve project financial control. However, in the view of the audit, this was merely an end-product from the real lesson for future reference, which is that appraisal should not have allowed a fisheries credit program to proceed without including provision for the necessary remedial action, knowing that the agency concerned, BRI, lacked experience of fisheries credit management, lacked staff particularly at district level who had any real understanding of the fisheries sector for effective subloan appraisal and lacked any mechanism for collecting repayment installments at the fish landing beach or beside the fishpond.

60. Considering that the fisheries credit program, including the fish farming component and sub-loans to fishing cooperatives and others for skipjack catcher vessels and trawlers, was originally planned to utilize nearly 60% of total project provision and that BRI was to be responsible for managing all of the lending, it is remarkable that no specific credit expertise was included in any of the supervision missions. There were also doubts from the outset (SAR, para. 4.16 and Annex 7, paras. 8 and 9) about BRI's preparedness to engage in a substantial fisheries credit program because of the above-mentioned shortcomings and because BRI's lending to the fisheries sector had until then comprised less than 2% of the bank's loan portfolio and was experiencing arrears of about 40%. There was a clear need for someone having particular experience of the problems of fisheries credit recovery and their causes and solutions, to advise BRI and help set up an appropriate mechanism and staffing for this purpose, concurrently with the start of lending. Ideally such a post should have been included in the technical assistance component and in this regard the audit considers that GOI and IDA missed an opportunity to make a really worthwhile contribution to fisheries development in Indonesia.

61. Given the problems they have experienced, it is greatly to the credit of BRI staff that they have succeeded in reducing fish pond credit arrears to the present low level. In the process some of the BRI staff will also have gained useful experience of some aspects of the fisheries sector, but by means of trial and error rather than by a planned and constructive approach.

### C. <u>Management and Training</u>

62. One of the principal findings of the Completion Mission was that adequate management and training were key factors in project success and that the use of experienced consultants in managerial positions, if need be, should be considered as priorities in future projects (PCR, paras. 1.05 and 5.05). Concern about the managerial capacity of PPM was also an issue during preparation and appraisal (SAR, para. 4.13 and Annex 2), to the extent that the recruitment of a management specialist to advise and assist PPM's top management team, was made a condition of effectiveness.

63. The original intention, arising from the acute managerial problems experienced during implementation of the Credit 211-IND, Aer Tembaga project, was that the provision of experienced consultants would strengthen PPM's management and organizational structure. As shown in SAR para. 3.21 and Annex 10, it was proposed that the technical assistance team would comprise the Management Specialist/Team Leader, plus an electrical/mechanical engineer, a civil engineer and a naval architect/master boat-builder. However, what eventuated was a three man team consisting of a technical adviser, a master fisherman and a refrigeration engineer. The supervision record is not very clear as to how these changes came about but it is apparent that the original emphasis on strengthening the managerial function in PPM was changed to concentrate on reinforcing PPM's technical capacity.

64. As acknowledged earlier, in para. 27, the project team worked well in their various technical fields but as none of them occupied a managerial position their impact on improving the management function was minimal. Sadly therefore, this was one very important area in which the project failed to meet its objective because GOI and IDA allowed their attention to be diverted elsewhere. 65. The lesson in this case is that where inadequate management is identified as an issue during project preparation/appraisal, and it is agreed that its strengthening is to be an objective, then the means must be unequivocally specified, i.e. the personnel concerned and their terms of reference, and no changes should be permitted that in any way detract from that principal objective.

### D. <u>Capital Structure of State Enterprises</u>

66. The audit endorses the views expressed in para. 3.04 of the PCR concerning the need to rectify an imbalance in the capital structure of PPM by which too large a proportion of GOI's investment is in the form of loans rather than equity. The consequent very heavy interest charges, coupled with depreciation charges which, as the PCR points out were about 40% higher than justified by the value of assets, have been major factors producing the annual net losses recorded by PPM in eleven of the past twelve years. It is also noted that there has been no change in the situation since publication of the PCR in 1983.

67. It is appreciated that the position is complicated by GOI policy toward state enterprises in general, and therefore it is not a simple matter to adjust PPM's debt/equity ratio along the lines suggested in the PCR. However, given that PPM will shortly be seeking additional capital to replace some of its fleet and shore equipment, and that consideration may be given to creating a fisheries nucleus enterprise based on PPM, it is recommended that debt/equity ratio issue be reviewed at that time.

### E. <u>Economic Reassessment</u>

68. According to Annexes 12 and 13 of the SAR, financial and economic rates of return were calculated for each of the components, as tabuland below. However, there is no reference in the SAR to any weighted overall ERR assessment for the project as a whole and the reference to such a figure in the PCR Basic Data Sheet is therefore erroneous. The presentation of FRR/ERR figures in the PCR Highlights, para. (ii), as being representative of anything more than the two components concerned, is also somewhat minimed and is a solution.

69. The Completion Mission selected the 5 ha fish-pond in South Sulawesi (Component No. 8) and PPM (Component No. 1) for re-evaluation, vide PCR para. 5.02, with the results shown in the table below, in parenthesis. The other components were not re-evaluated and it was not possible, therefore for the PCR to include an overall assessment of ERR for the project.

	Component (Annex 13)	FRR Z	ERR Z	
		FRR	ERR	
<ol> <li>PPM (includes shore plant and catcher fleet)</li> <li>Cooperative tuna boats</li> <li>Beach seine</li> <li>30 GT trawler</li> </ol>				
	and catcher fleet)	34 (26)	34 (29)	
(2)	Cooperative tuna boats	20	22	
(3)	Beach seine	36	42	
(4)	30 GT trawler	20	22	
(5)	Ice plant	30	31	
(6)	Java 1 ha fish pond	22	23	
(7)	Java 1 ha shrimp pond	38	39	
(8)	Sulawesi 5 ha fish pond	22 (28)	24 (30)	
(9)	Sulawesi 5 ha shrimp pond	26	28	

70. Although the audit is not wholly convinced about the use of ERR as a method of measuring project outcome, it is considered that the PCR should have been more explicit as to the limited extent of its economic reassessment. The audit mission also lacked time or adequate data for ERR recalculations, but on the basis of its overall review of project outcome, the position is likely to be:

- (1) PPM; at best little more than break-even after 12 years, with major new investment needs shortly, ERR likely to be less than 10%;
- (2) Coop boats; 90% derelict after less than 6 years service and large debts still owing; ERR has to be negative;
- (3) Beach seine net; for catching bait, small item of minor economic significance;
- (4) Trawlers; cancelled, ERR not applicable;
- (5) Iceplant; cancelled, ERR not applicable;
- (6/9) Fish Farming; now well established in all areas and continuing to improve, with good markets and high prices, overall ERR could be at least 30%.

# <u>Table 1</u>

# PROJECT PERFORMANCE AUDIT REPORT

# REPUBLIC OF INDONESIA

# FISHERIES CREDIT PROJECT (CREDIT 480-IND)

# SUMMARY OF FISHERIES STATISTICS FOR SELECTED YEARS

(A)	FISH PRODUCTION (mt)	<u>1981</u>	<u>1983</u>	<u>1987</u>
	Total	1,914,505	2,214,481	2,670,413
	Marine Fisheries	1,408,272	1,682,019	2,017,350
	Inland (capture)	264,983	265,562	276,291
	Fish Farming (total)	241,250	266,900	376,772
	Brackish water ponds	112,916	134,072	192,123
	Freshwater ponds	78,224	79,681	95,353
	Other (cages & paddy)	50,110	53,147	89,296
(B)	FISHERMEN (No.)			
	Full time	579,336	602.477	679.714
	Part time (major)	411,792	460,291	508,173
	Part time (minor)		163,875	184,543
	Total	1,104,649	1,226,643	1,372,430
(C)	FISH FARMERS (No.)			
	Brackish water	111,269	121,023	145.235
	Freshwater	610,476	713,632	1,057,281
	Other	241,687	254,705	347,839
	Total	963,432	1,089,360	1,550,355
(D)	<u>AREA UNDER CULTURE</u> (ha)			
	Brackish water ponds	198,210	220,365	263,162
	Freshwater ponds	47,085	41,783	46,528
	Other	96,958	137.434	99,681
	Total area (gross)	342,253	371.054	409.371
	Total area (net)	(306,318)	(326,885)	(369,351)
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<sup>&</sup>lt;u>Note</u>: 1987 is most recent published data. Data provided by Directorate General for Fisheries.

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# Table 2

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### PROJECT PERFORMANCE AUDIT REPORT

### REPUBLIC OF INDONESIA

# FISHERIES CREDIT PROJECT (CREDIT 480-IND)

# PERFORMANCE OF PPM OWNED FLEET OF TEN X 30 GT SKIPJACK FISHING VESSELS /a

Year	Total Catch (mt)	Actual as % of Appraisal	Days at Sea	Catch/boat/day (mt)
Appraisal	۴.	•		
target	3250	-	2500	1.3
1978	732	22.5	1370	0.5
1979	1069	32.9	2535	0.4
1980	994	30.6	2276	0.4
1981 <u>/Ъ</u>	1205	37.1	2440	0.5
1982	915	28.1	2158	0.4
1983	1337	41.1	2051	0.6
1984	620	19.1	n.a.	n.a.
1985	993	30.5	n.a.	n.a.
1986	1359	41.8	n.a.	n.a.
1987	992	30.5	n.a.	n.a.
1988	509	15.7	n.a.	n.a.
1989	322	9.9	n.a.	n.a.
Notes:	<u>/a</u> There are cooperat:	e no production dat ive owned fishing v	a available for vessels.	the 10
	<u>/b</u> The proje	ect was formally co	mpleted w.e.f.	12/31/81.

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Source: Perum Perikanan Maluku (PPM) reports.

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# Table 3

# PROJECT PERFORMANCE AUDIT REPORT

# REPUBLIC OF INDONESIA

# FISHERIES CREDIT PROJECT (CREDIT 480-IND)

# BRACKISH-WATER FISH FARMING CREDIT PROGRAM FINANCIAL SUMMARY AS AT APRIL 1990

		<u>E. Java</u>	<u>C. Java</u>	<u>W. Java</u>	<u>S. Sulawesi</u>	<u>Total</u>
Beneficia	ries	544	1,226	263	692	2,725
Pond Area Total Len	(ha) t	3,234	2,650	797	2,468	9,149
(Rp. mill:	ion)	589.5	342.0	149.0	535.4	1616.0
<u>Recoverie</u>	<u>s</u> (April)					
Principal	(Rp '000)	670.3	-	-	-	670.3
Interest	(Rp '000)	94.0	-	-	-	94.0
Total	(Rp '000)	764.3	-	-	-	764.3
<u>Arrears</u>						
No. of acc	counts	59	39	45	6	149
Principal	(Rp '000)	60,967	10,994	15,021	955	87,936
Interest	(Rp '000)	_47,350	11,198	6,806	352	65,706
Total	(Rp '000)	108,317	22,192	21,827	1,307	153,672
Total arro	ears as % of					
amount	lent	18.4%	6.5%	14.6%	0.27	9.5%

Source: Bank Rakyat Indonesia, Jakarta.

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