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Report No. 2806

PROJECT PERFORMANCE AUDIT REPORT

INDONESIA FIRST FISHERIES PROJECT

(Credit 211-IND)

January 9, 1980

Operations Evaluation Department

INDONESIA FIRST FISHERIES PROJECT
(Credit 211-IND)

Currency Equivalents

US$1.00 = Rp 326 (at appraisal)
US$1.00 = Rp 415 (August 1971 - November 1978)
US$1.00 = Rp 625 (since November 15, 1978)

Acronyms

ADB	- Asian Development Bank
BAPPENAS	- National Planning Board
CP	- FAO/IBRD Cooperative Program
DG	- Directorate General
DGF	- Directorate General of Fisheries
ERR	- Economic rate of return
FAO	- Food and Agriculture Organization
GOI	- Government of Indonesia
GT	- Gross tons (boat volume measure)
ICB	- International competitive bidding
PCI	- Pacific Consultants International
p.a.	- per annum
PN	- Perusahan Negara (state corporation)
PNPS	- State Fisheries Enterprise for North and Central Sulawesi
PT	- Perseroan Terbatas (corporation operating under the commercial code)

Fiscal Year

GOI - April 1 - March 31
PNPS - January 1 - December 31

Credit Timetable

Board Presentation	- July 7, 1970
Credit Agreement Signing	- July 13, 1970
Effectiveness	- January 15, 1971
Closing	- June 30, 1978

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PREFACE

This is a performance audit of the first Fisheries Project in Indonesia for which Credit 211-IND was approved in July 1970 in the sum of US$3.5 million. The final disbursement was made on November 17, 1976 and the credit was closed on June 30, 1978 after a delay of two years.

The audit report consists of an audit memorandum prepared by the Operations Evaluation Department and a Project Completion Report dated June 11, 1979. The PCR was prepared by the East Asia and Pacific Regional Office on the basis of a country visit in February/March 1979. The audit memorandum is based on a review of the Appraisal Report (No. PA-50a) dated June 22, 1970, the President's Report (No. P-849) of June 24, 1970, the Credit Agreement dated July 13, 1970, and the PCR; correspondence with the Borrower and internal Bank memoranda on project issues as contained in relevant Bank files have also been consulted and Bank staff associated with the project have been interviewed.

An OED mission visited Indonesia in September/October 1979. The mission held discussions with officials of the Ministries of Finance and Agriculture, BAPPENAS, the Directorate General of Fisheries, and some of the firms involved in project implementation. A field trip was made to the project site in Aer Tembaga, to a similar project in Ambon (Credit 480-IND), and to the boat construction site in Banyuwangi. The mission also visited the Asian Development Bank in Manila for discussions concerning the similar project financed by ADB in Sorong. The information obtained during that mission was used to test the validity of the conclusions of the PCR and to consider some additional aspects of the project.

A copy of the draft report was sent to the Borrower on October 29, 1979. Borrower comments are attached as Annex 1 to the PPAM.

The audit generally finds the PCR thorough and accurate with respect to the project's principal achievements and shortcomings. The points discussed by the audit mission have been selected because of their importance to this and other fisheries projects and to underscore potential lessons for the Bank.

The valuable assistance provided by the Government of Indonesia and the many Government staff members and others who were met during the preparation of this report is gratefully acknowledged.

PROJECT PERFORMANCE AUDIT REPORT BASIC DATA SHEET

INDONESIA FIRST FISHERIES PROJECT (CREDIT 211-IND)

KEY PROJECT DATA

Item	Appraisal Expectation	Actual or Current Estimate
Total Project Cost (US$ million)	4.3	8.3
Overrun (%)	-	93 a/
Credit Amount (US$ million)	3.5	3.5 b/
Disbursed)	-	2.48
Cancelled) September 30, 1979	-	0.02
Repaid to)	-	-
Outstanding to)	3.5	3.5
Date for Completion of Physical Components	12/74	est. 10/79
Proportion Completed by Appraisal Target Date (%)	100	15
Proportion of Time Overrun (%)	-	110
Economic Rate of Return	26	negative

OTHER PROJECT DATA

Item	Original Plan	Revisions	Actual or Est. Actual
First Mention in Files or Timetable	-	-	03/03/69
Government's Application	-	-	-
Negotiations	-	-	04/27/70
Board Approval	-	-	07/07/70
Credit Agreement Date	12/15/70	-	07/13/70
Effectiveness Date	10/15/70	-	01/15/71
Closing Date	06/30/76 c/	06/30/78	06/30/78
Borrower	Republic of Indonesia		
Executing Agency	State Fisheries Ent. for N.&C. Sulawesi		
Fiscal Year of Borrower	April 1 - March 31		
Follow-on Project Name d/			

MISSION DATA

Item	Sent by	Month/ Year	No. of Weeks e/	No. of Persons	Man-Weeks f/	Date of Report
Identification	FAO/CP	02-03/69	2.0	2	4.0	08/20/69
Appraisal	IDA	11/69	4.0	4	16.0	06/22/70
Total			6.0		20.0	
Supervision I	IDA	05-06/71	2.0	2	4.0	06/25/71
Supervision II	IDA	11/71	1.5	2	3.0	12/08/71
Supervision III	IDA	02/72	2.0	4	8.0	03/09/72
Supervision IV	IDA	01-02/73	3.0	2	6.0	03/29/73
Supervision V	IDA	11/73	1.5	1	1.5	12/07/73
Supervision VI	IDA	12/74	2.5	2	5.0	01/02/75
Supervision VII	IDA	11/75	2.0	2	4.0	12/12/75
Supervision VIII	IDA	06/76	1.5	2	3.0	08/06/76
Supervision IX	IDA	04/77	2.0	3	6.0	05/20/77
Supervision X	IDA	11/77	2.0	3	6.0	05/20/77
Supervision XI	IDA	07/78	2.0	3	6.0	02/04/78
Completion	IDA	02-03/79	2.5	2	5.0	05/18/79
Total			24.5		57.5	

COUNTRY EXCHANGE RATES

Name of Currency (Abbreviation): Rupiah (Rp.)

Year:

	Exchange Rate:
Appraisal Year Average	US$1 = 326 Rp
Intervening Years Average	US$1 = 415 Rp
Completion Year Average	US$1 = 625 Rp

a/ After adjusting appraisal cost estimates upward for effects of inflation, devaluation, delays, and addition of certain items, and downward for elimination of certain items, the cost overrun is 71%.

b/ Plus exchange adjustment of $0.02 million.

c/ As shown in Credit Agreement.

d/ No continuation of project concerned; Fisheries Credit Project (Credit 480-IND) is in different area.

e/ Number of 5-day weeks shown in the mission report plus travel time.

f/ Number of weeks times number of persons.

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DISBURSEMENT TABLE

(US$ million, cumulative)

Period Ending	Appraisal Estimate	Actual Disbursement	Actual as % of Estimated
06/30/71		.03	
12/31/71	.68	.04	6
06/30/72		.08	
12/31/72	1.04	.09	9
06/30/73		.10	
12/31/73	2.01	.19	9
06/30/74		.30	
12/31/74	2.99	.36	12
06/30/75		1.62	
12/31/75	3.50	2.96	85
06/30/76		3.37	
12/31/76		3.50	

PROJECT PERFORMANCE AUDIT REPORT

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HIGHLIGHTS

The First Indonesia Fisheries Project, partially financed by the Bank's US$3.5 million credit, has failed to accomplish the major goals envisaged at appraisal, which were to more fully exploit off-shore skipjack tuna fishing areas, and to significantly increase tuna exports. All vessels provided under the project have not been delivered and those that have been are ineffective and in substandard condition because of design flaws, poor construction and inadequate maintenance. Tuna catch remains far below appraisal estimates primarily because of poor management of the fleet and inadequacies of the vessels. There has been some development of tuna exports, but at levels far below the project targets. The shore facilities are also of improper design and poorly constructed. Because of the many failures of the project, it has been ineffective and possibly counterproductive as a demonstration for the private sector.

The long series of delays and implementation problems have made it essentially impossible for this project to ever become financially viable. These problems have been caused to a great degree by substandard performance of nearly all associated with it - the executing agency, the Government, contractors and consultants, and the Bank Group. For the Bank Group the project reveals the dangers of rushed preparation and appraisal, lack of technical expertise or inadequate use of it, discontinuous supervision, and misunderstood procurement procedures. The re-estimated rate of return is negative compared to the appraisal estimate of 26%. The lessons learned in the project have been applied with some success in later Indonesian fisheries projects.

The following points may be of particular interest:

- preparation and appraisal was inadequate (PPAM paras. 25, 26; PCR paras. 2.03, and 6.01-6.07);
- supervision lacked continuity (PPAM para. 27; PCR paras. 6.11, 6.12 and 6.15);
- supervision optimistic about the project's progress (PPAM paras. 23, 24, 28; PCR paras. 6.10 and 6.11);

- communications with Government were overly cautious (PPAM para. 29; PCR para. 6.11);

- consultants lacked essential experience and skills (PPAM paras. 17-19; PCR paras. 3.02-3.04, 5.06 and 5.07);

- technical support provided by IDA was weak (PPAM paras. 23, 28, 29, 36, 37; PCR paras. 6.07, 6.12); and

- significant procurement problems occurred (PPAM paras. 32-36; PCR paras. 3.07, 3.09-3.14).

PROJECT PERFORMANCE AUDIT MEMORANDUM

INDONESIA FIRST FISHERIES PROJECT
(Credit 211-IND)

I. SUMMARY[1/]

1. Most key ingredients for success of the First Indonesia Fisheries Project (211-IND) appeared to exist at the time of appraisal; skipjack tuna in offshore areas was adequate and largely unexploited and bait was readily available; there were reliable local and international markets for skipjack tuna (and real prices have increased well beyond appraisal estimates); and skipjack fishermen in the project area were highly skilled. An almost unbroken series of implementation problems, however, have made this probably the Bank Group's least satisfactory project in Indonesia.

2. The project consists of the construction of shore facilities (ice plant, cold storage, wharf, slipway, workshop, etc.) and thirty skipjack pole-and-line fishing vessels of 30 gross tons each, 15 intended for the private sector and 15 for the State Fisheries Enterprise for North and Central Sulawesi (SFE), which would also own the shore facilities at Aer Tembaga. The objective is export development, both by the Enterprise directly and by demonstrating feasibility to the private sector.

3. Project production began about four-and-a-half years behind schedule, due to delays in:

(a) obtaining the initial consultant (six months);

(b) changing consultancy (one year);

(c) design and bidding for the shore facilities (one year and six months);

(d) construction of shore facilities (ten months); and

(e) vessel construction (six months).

Efforts to advance construction of the later vessels were frustrated by further construction delays, and ten vessels are still not completed. Many of the shore facilities and vessels are seriously defective due to poor design, inadequate supervision of construction, and lack of maintenance. Project costs, after adjusting for inflation, exchange rate changes, elimination and addition of some items, and delays, exceed appraisal estimates by 71%.

1/ Adapted from the PCR.

4. Project fish production rate until recently was 5% of appraisal projections,[1] due to poor vessel utilization (primarily because of the time needed for repairs), poor catches, the non-completion of the final ten boats, and the excessively high appraisal estimate of both daily catch rate and annual fishing days. SFE is now losing $750,000/year and is $1.8 million overdue in interest payments. Improved management could probably improve boat utilization and the daily catch rate, bringing the catch up to the level of nearby private vessels, but the economic rate of return would still be negative.[2] No serious effort has yet been made to induce private sector purchase of vessels under the project.[3]

5. One of the basic problems has been poor SFE management and poor consultant and contractor performance, which in turn has burdened the project with many technical defects. This situation was partially caused and compounded by interagency disputes, conflicting objectives, and inadequate supervision by GOI. The first three President Directors of SFE were all unsuccessful, and support staff have been very weak, especially in technical and financial areas. Relationships with the local public and private sectors have been poor. Management and staff dedication and motivation have been low and opportunities for improved performance have seldom been utilized. Until late 1975, the Directorate General of Fisheries (DGF) had full responsibility for supervising SFE and played the major role in selection of SFE managers and consultants, and in procurement. The subsequent division of responsibility between DGF and an Assistant to the Minister of Agriculture only compounded the problems, as did disputes between DGF and the North Sulawesi provincial government.

6. Insofar as the Bank is concerned, although the project objectives and technical design were generally sound, the implementation schedule and the catch and cost estimates were excessively optimistic, and inadequate provisions were made to obtain private sector participation. Both the appraisal report and the supervision missions noted the managerial weaknesses of SFE; however, they failed to appreciate the seriousness of the problems or to devise effective solutions. Supervision of the project has largely been limited to procurement and financial matters and there has been little technical assistance to the borrower.[4] For example, inadequacy in boat design was noted in supervision reports, but this information was not passed on to

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1/ During the past six months, catches and boat utilization improved, bringing the production rate to about 35%.

2/ See Annex 1, Note 1.

3/ See Annex 1, Note 3.

4/ The Region disagrees with these conclusions and points out that much technical assistance was provided to the project informally while supervision missions were in the field, and that of the 11 supervision missions 10 contained a fisheries expert. The audit considers that the presence of a fisheries expert on supervision missions does not necessarily mean that effective technical assistance was provided.

the borrower in follow-up letters. Supervision continuity has been minimal; largely as a result of Bank reorganizations, the project has been handled by six divisions and nine different supervision mission leaders. Seldom did anyone remain responsible long enough to obtain an adequate perspective on the project. The excessive optimism and caution of the early supervision missions prevented the Bank from pressing for radical reforms while there was still a reasonable chance to rescue the project. Shortage of technical expertise also limited the Bank's effectiveness.

7. Experience in Indonesia over the past decade has shown that state enterprises, while often the only choice for operation of shore facilities, are not very efficient at fishing. Nevertheless, the vastly better performance of two similar projects (at Ambon, under Credit 480-IND, and at Sorong, with Asian Development Bank finance) shows how much difference good management 1/ and close relations with the local government can make, and reflects in part the lessons learned under Credit 211-IND.

8. Every effort should be made to secure delivery of the last 10 vessels as quickly as possible, though it may be advisable to resell them to the private sector or another state enterprise at market prices that will be substantially below the excessively high cost of the vessels. SFE management must be given the mandate and the external assistance to put its accounts and operational information in order so that meaningful commercial analyses of its past, current, and projected performance can be made. No additional investments or long term cash commitments should be made until that is accomplished. GOI should return full supervisory authority and responsibility to DGF along with the mandate to conduct a full analysis of the options available to GOI with respect to the future of SFE. There appear to be only two options:

(a) a massive infusion of equity 2/ to bring the debt-equity ratio within the debt maintenance capabilities of the Enterprise; or

(b) disposal of the assets of the Enterprise at prevailing market prices and a write off of GOI losses.

Regardless of the final outcome, SFE management should be encouraged to continue its recent operational successes, but to broaden its perspectives to the overall management of the Enterprise. This management effort must include a general attempt to cut costs, particularly through shoreside staff reduction. The Bank should be ready to assist these management actions with the provision of technical assistance, possibly directed at all state fishing enterprises.

9. Among the general lessons for the Bank Group are the need for more careful attention to project management, implementation schedules and local government involvement; the importance of having contingency plans ready in

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1/ See Annex 1, Note 1.

2/ Conversion of outstanding Government loans into equity.

case of implementation problems and of making special efforts once such problems develop; the dangers of excessive optimism in appraisal and supervision; the need for continuing technical input and review; the need for involvement beyond formalities and technicalities in the procurement process; the desirability of casting the net widely for and being very selective about consultants; the complexity of even small agro-industries projects; and the problems of using state enterprises for fisheries development.

10. Although the SFE has shown dramatic improvements in its daily operations in the six months it has been under new management - boat utilization has increased from an average of less than four days to 14 days per boat and monthly catches increased to about 300 t - the project's economic rate of return is negative.1/

II. MAIN ISSUES

A. General

11. The implementation of this project has been characterized by a continuous succession of problems and poor performance by nearly every institutional body associated with it. Any development project is likely to have some problems because of the very nature of the development process, and indeed most have to weather a few minor or major storms before proceeding successfully to the accomplishment of their objectives. The burden of difficulties visited upon the Aer Tembaga project, however, has been simply overwhelming. Numerous mistakes were made, with the result that the blame for the unsatisfactory implementation can be shared to some degree by nearly all who were associated with the project.

12. One of the few positive results to emerge from the project is that nearly all who were associated with the project have also gained some knowledge and experience that has been usefully applied to later fisheries projects, both in Indonesia and elsewhere. Many of the most serious errors of the Aer Tembaga project have been avoided in the later Bank financed project at Ambon (Credit 480-IND) and the ADB financed project at Sorong, though neither of these projects is totally free from problems.

B. Shortcomings in Technical Design

13. The design of the shore support facilities at Aer Tembaga has several serious shortcomings which limit productivity and raise operating costs. The ice-making plant is designed to make blocks of 133 kg rather than 50 kg as at Ambon and Sorong. This type of plant is not really well-suited to tropical conditions and the blocks do not freeze completely even after 50 hours in the brine tank so the actual production of ice is below the rated capacity of 25 tons per day. Handling of the larger blocks is also more of a problem, but not an insurmountable one since blocks could be easily cut with an icepick or similar instrument, though that is not done at present.

1/ See Annex 1, Note 7.

14. The handling system for moving fish from the boats to the brine tank and then to the cold storage is highly inefficient. It is an entirely manual system using wooden boxes and handcarts to move the fish. The only attempt at mechanization is a single conveyor that moves the fish from floor level to the top of the brine tank and then dumps them into one end of the tank. Distribution of the fish along the length of the tank and subsequent removal of the frozen fish must be done manually using dip nets.

15. The cold storage itself is accessible only by means of small narrow doors and, because of this, frozen fish can be moved into and out of the cold storage only manually using wooden boxes and handcarts. For the quantities expected at appraisal, a properly designed facility should have allowed for handling and storage of the fish with a forklift truck. Storage and handling in the cold storage rooms is also done manually in a manner that is highly labor intensive and detrimental to the quality of the fish; consequently, costs are high.

16. The fishing boats are of two different designs. After construction of the first ten boats was completed they were found to be approximately 43 GT rather than the approximately 30 GT specified in the construction contract. The builder then demanded a higher price for the larger boats and, in an effort to keep costs down for the remaining 20 boats, SFE and DGF, with IDA concurrence, decided to redesign a smaller boat that would be about 30 GT under Indonesian admeasurement rules. The resulting design is too small and is not suited for the type of fishing trip envisioned for the project since its inception. The new design has neither the fuel capacity nor the crew space to engage in the multiple day trips to distant grounds that were a major purpose of the project.[1/]

C. Consultant Performance

17. The project has been plagued by poor consultant performance, and the Bank must share part of the blame for having approved the selection of inappropriate consultants in some instances (see PPAM para. 19 and PCR paras. 6.03 and 6.12), for some overly restrictive terms of reference, and for ignoring some of the recommendations of the consultants.[2/] The first SFE consultant was employed prior to appraisal and for several years during implementation and was approved by the Bank even though it is not a consulting but a ship construction and repair firm that simply assigned a few excess

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1/ Both CPS and the Region point out that these boats are capable of engaging in multiple day trips by having fuel drums on the deck and the crew sleep in any available space on board. The short average duration of the trips were more the result of poor management of the enterprise than the size of the ships. Vessels of that size operate relatively successfully in Sorong and Ambon, under similar conditions.

2/ The Region disagrees with this statement except the point on selection of inappropriate consultants, finding nowhere any substantiation for the other conclusions.

personnel to SFE. Evidence in the project files indicates that the Bank was aware that the consultants were neither appropriate nor competent for the assignment, but approved the contract nevertheless.

18. FAO provided a consultant as the "chief of project operations", a position that was identified in the appraisal as a crucial element in the project. In fact, the appointment of and assumption of duties by this consultant was made the primary condition of effectiveness of the project by the credit agreement. This consultant position proved to be a major source of delay in the early stages of the project. Delays occurred in concluding a Funds in Trust agreement between FAO and GOI, locating and appointing the consultant, and his arrival in Jakarta. Subsequent delays were caused by his attempts to significantly alter key elements of the project, his involvement in matters well beyond his terms of reference and his competence, and the process of arranging a replacement following the termination of the Funds in Trust agreement by GOI. FAO must be faulted for having agreed to an inappropriate consultant in the first instance and in the second for not providing the supervision and backup that was a condition of the FIT. Had this supervision been provided it would have encouraged more effective performance by the consultant or prevented some of his more erroneous activities.

19. Following the termination of the consultancy and the realization by the Bank that the local consultant could not handle the engineering of the facilities, an expatriate consultant was brought in, first as engineering support for the local firm and later as management support for SFE. The firm was and is a competent and reputable civil engineering firm but had no fisheries experience or management consulting experience. In fact, the people it supplied for the assignment had to be recruited specifically for that purpose. Its effectiveness was further limited by the fact that some of the team members could speak neither English nor Indonesian, and by overly restrictive terms of reference that constrained its management advisory role. The results of this consultancy were unsatisfactory in many respects, as evidenced in part by the facilities and boats that were actually built; though in fairness to the consultants, it must be pointed out that many sound recommendations were not accepted or were ignored. Nonetheless the overall performance of the firm must be rated as unsatisfactory.

D. Bank Performance

20. The audit finds that the Bank must share responsibility for the failure of this project, and feels that this responsibility is greater than intimated by the PCR:

(a) Institutionally. The several reorganizations that took place within the Bank during this project had the unfortunate side effect of preventing any semblance of supervision continuity. As the PCR points out, supervision responsibility of this project had been assigned to six different divisions and the 11 supervision missions undertaken had nine different mission leaders.

(b) Procedurally. Many standard Bank procurement procedures caused delays in project implementation. This was mainly due to not recognizing at appraisal the administrative difficulties the Bank's procurement procedures would encounter in the light of DGF's inexperience with Bank operations and thus not providing for the procurement assistance DGF needed.

(c) Individually. Due to the lack of continuity in staffing supervision missions, the judgement of many staff members associated with this project can, in the opinion of the audit mission, be questioned in several important areas. The most noticeable are evident in communications with GOI, the supervision of procurement, and the use of the technical information.

(i) Preparation and Appraisal

21. During preparation and appraisal numerous questions were raised within the Bank about the management of the Enterprise and its capability to absorb a project of this magnitude. Most were raised in internal Bank memos but at least one letter from the Resident Staff in Indonesia (RSI) to DGF raised the question in great detail, pointing out that the project would increase landings by over 700%, employees by over 600%, and annual expenditures by over 10,000%. Because of these valid concerns, the appraisal stated that expatriate management was essential to the project. This view was reinforced in various post appraisal memos yet this "essential" element was dropped in negotiations, as indeed it was not possible under Indonesian law. The audit feels this was just the first of what would become many instances where something was determined to be "essential" or "crucial" after supposedly detailed study (such as appraisal) and then dropped.

22. The audit concurs with the PCR (para. 6.01) that the appraisal seriously under-estimated project costs and left little margin for unforeseen. It also seems questionable to have used a cost escalation factor of only 3% against a background of Indonesia's annual inflation rate that had only improved to 9% in 1969 from 85% in 1968. In retrospect this underestimate of costs and inflation proved to be especially damaging in view of the many delays that occurred.

23. The appraisal was extremely optimistic in its estimate of catch rate per boat per day (1,600 kg) and its estimate of boat utilization (200 days per year). This appraisal assumption has never been questioned by the Bank until the PCR, on the contrary it has been used over and over again in cash flow analyses of what could be done or would be done once Aer Tembaga got proper management. This figure of 1,600 kg/day has influenced supervision throughout the project and as late as September 1978, following the last supervision mission, the Bank informed DGF that one solution to the problems of the SFE would be to achieve this catch rate through better fleet management. The letter also stated that this was an achievable target in view of "the known resources."

24. The audit mission feels that while the initial estimate of 1,600 kg/day may have been appropriate in view of the information on hand at the time regarding the resource and the operations of non-Indonesian boats, it is

optimistic in today's environment and is not achievable in view of the resource, the boats, the equipment, the men, the weather and other factors operating in Indonesia. It was an estimate made on the best data available in 1969. Subsequently, better information has become available, most notably the operational experience of this and other Indonesian skipjack tuna fleets and that information clearly shows that 30 GT boats operating in Indonesia will average less than 1,000 kg/day. The audit mission received supporting and concurring information from private operators in Bitung and has found supporting documentation in the project file for 1972, when a management proposal from a Japanese fishing firm estimated feasible catches at 500 to 1,000 kg/day based on its own experience.

25. The appraisal correctly recognized the need for strong and competent management for the Enterprise as a major element necessary to the success of the project and called for the appointment of four top executives, three expatriates and one (the accountant) local. However, the appraisal did not adequately consider the issue of middle management or increased staff support for the project directors. This oversight has proved costly in that staff and overhead have grown considerably and, what is perhaps more damaging, there have not been the necessary types of skills available in the local labor market. As a result, this weakness in middle management persists to the present.[1/]

26. The audit concurs with the PCR that the project was inadequately prepared and that the appraisal mission was hampered by lack of manpower. This weakness of the preparation/appraisal process was especially unfortunate in view of the Bank's limited experience in Indonesia at the time and its total lack of experience in the fisheries sector. It resulted in a lack of adequate consideration of some of the non-technical issues that were to prove important in the implementation phase, such as the difficulty of attracting competent people to the area, the crucial position of local government, and the ethnic and religious factors that were to affect relationships between management and the labor force and between the Enterprise and the local government and community. It also resulted in some of the erroneous information that was included in the appraisal report, such as the incorrect description of the legal status of the Enterprise vis-a-vis other state fishery enterprises.

(ii) Supervision

27. The supervision process was severely hampered by lack of personnel continuity due to reorganizations within the Bank Group. The eleven supervision missions had nine different mission leaders and on only five occasions did two successive missions have at least one mission member in common. Because of these discontinuities it was difficult if not impossible for staff to develop an overall perspective of the project. The continuity problem was further exacerbated by the several management changes on the side of the Enterprise and GOI, which effectively prevented the development of any of the personal relationships between Bank and GOI/Enterprise staff of the type that might have more effectively dealt with the many problems that arose in the project.

1/ See Annex 1, Note 1.

28. The supervision process was also hampered by excessive optimism on the part of nearly all supervision missions. The project was not rated as having "major problems" until the eighth supervision mission (6/76) and it was only after the ninth mission (1977) that the "major problems" were recognized as having a technical side as well as financial and managerial. This is particularly surprising in view of the fact that the eighth mission had followed the discovery that the boat design was actually 43 GT and the seventh mission noted that the roof of the cold storage had collapsed and the insulation was found to be improperly installed. In addition, as noted earlier, optimism concerning potentially achievable catch rates of 1,600 kg/day was retained throughout the supervision phase up to and including the final mission. It was only in the PCR that this unrealistic figure was finally dropped.

29. In trying to be diplomatic the Bank failed to communicate to the Government its concern about project performance. The most striking example of this involved the early design of the shore facilities. The Bank's transportation experts reviewed the proposed design and sent a memo to the cognizant Project Division that described the design as unacceptable, questioned the competency of the firm that prepared it, and said that a whole new design should be prepared by a new and competent consultant since the submitted design was almost beyond salvaging through modification. The resulting letter to the Directorate General of Fisheries, however, states that "it would be possible to approve the wharf technical specifications..." but the writer "hopes" that new expertise can be found to prepare better specifications.

30. The Bank appears to have suffered from a lack of sufficient in-house technical expertise during critical periods of this project but the audit finds that insufficient use was made of expertise that was available. The technical advice that was available was not necessarily acted on or effectively communicated to the Government nor was it sought out as often as it was needed. The supervising divisions tended to focus mainly on the mechanical aspects of procurement and consultancy between missions and the missions themselves tended to be preoccupied with financial and managerial problems, admittedly severe, to the partial exclusion of the very real technical problems that arose.

31. Likewise, the absence of a significant role for RSI in the supervision of this project adversely affected the Bank's performance, though this situation has since been changed for current projects. It is especially unfortunate that the role of RSI through much of the Aer Tembaga project implementation was little more than communications and liaison, at a time when a more active role might have done much to alleviate the problem of lack of supervision continuity because of Bank Group reorganizations.

(iii) Procurement

32. A significant part of the procurement problem arose because of the total lack of familiarity of the SFE and DGF with Bank procedures and practices at that time. It should be noted, however, that the experience gained

on this project has been put to good use in reducing such problems in subsequent projects. Nonetheless, the procurement problems on this project were extreme. The initial decision of the appraisal to procure all 30 boats from a single source appears questionable in retrospect in that it offered no economies of scale and effectively excluded the several small local yards that were most experienced in building similar boats. It may have been unwise to separate the tendering for the hulls and for the engines and equipment.1/ While this type of division can be carried out successfully in a more sophisticated procurement environment, it must be done with great care and requires exceptionally well prepared tender documents to clearly define the physical and contractual interfaces between the separate contractors. Such was not the case in this project and subsequent disputes between the two contractors themselves and between contractors and SFE have contributed to the delays in project implementation. It would have been far better if the overall boat procurement had been divided into several sets of complete vessels rather than into 30 hulls and 30 sets of engines and equipment.

33. The pattern of several different and interdependent procurement contracts (ice plant, cold storage, wharf, slipway, boat hulls, boat equipment and engines) was inherently risky and subject from the outset to delays unless it were managed closely and carefully, a capability that SFE was known not to have. The Bank did not consider that delays in one procurement activity were likely to have effects on others with a resulting feedback and amplification effect. This is what happened in several instances, with the result that the project has had numerous delays and several instances of delayed bid openings and retendering.

34. Throughout the documents in the project file relative to procurement procedures there is an apparent staff preoccupation with the form rather than the substance of tendering, bidding, and procurement procedures.2/ This apparent preoccupation stemmed from a combination of inadequate flexibility to adjust standard ICB procedures to meet prevailing conditions and the possible rigidity of the procedures themselves.

35. The cold storage and wharf tender were opened on October 15, 1973 but the Bank requested DGF to reconsider some points raised in a letter sent to the Bank by a non-responsive prospective bidder, regarding some technical features of the cold storage. Reconsideration took some weeks and did not change the bid evaluation by DGF. This evaluation was pouched to Washington on December 18, 1973 followed by urgent cables from RSI requesting prompt approval in view of the expiration date of January 15, 1974. Bank approval was cabled back to Jakarta on December 21, 1973, apparently before the evaluation was received. In January 1974, the selected bidder requested post-award amendments, largely because of the sudden rise in fuel costs, but

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1/ The Region and CPS feel that combining the tenders would have created as many problems as it would have resolved; particularly because few Indonesian shipyards have experience in procuring engines and equipment for boats they are building. In the Sorong and Ambon projects, the tendering was also separate, with no significant problem resulting.

2/ See Annex 1, Note 6.

the Bank rejected this request. Eventually, negotiations broke down and the cold storage had to be retendered and the eventual price was 30% higher than the low bid originally selected by DGF in October 1973. Apparently missing from the whole process was any consideration of the qualifications or experience of the selected contractor. As it turned out, the selected contractor had no experience in a tropical environment, a prequalification not requested in the tender documents, and that may well have contributed to the poor quality of the finished product.

36. Of all the procurement contracts, that for the boats had the most difficulties. In the first instance, the Bank's recommendation, accepted by DGF, to delay building of boats until construction of the shore facilities had begun was an unfortunate decision. During the agreed delay period, a new estimate of likely boat costs was made, based on new cost data and some redesign of the boats. The Bank showed increasing concern over cost overruns and correctly questioned some of the overly sophisticated features of the design.

37. The tenders for hulls and for engines and equipment were eventually closed on November 14, 1974. No tenders for hulls were received by the appointed deadline though one was offered but rejected unopened by Enterprise management some 15 minutes past the deadline. Retendering brought several bids and the evaluation committee forwarded its selection of the successful bidder to the Bank for approval. The Bank had received the list of bidders and the amounts of their bids by cable and approved the proposed award, before it received the evaluation report at headquarters, on the basis of cabled advice from the Resident Mission. The bid evaluation does not appear to have given adequate weight to contractor qualifications, with serious negative results. The company was a new one with no prior experience as an entity; its predecessor firms had no experience in fishing boat construction and only limited experience in wooden hull construction; and the company did not have control over its construction facilities, having only a one year lease on its land with no renewal option versus a two year construction contract term. The boats were poorly designed and poorly built, many delays have occurred including a significant delay for site relocation, and the last ten boats have not been delivered yet, some four-and-one half years after contract signing.

ANNEX 1
Page 1

DEPARTEMEN PERTANIAN

DIREKTORAT JENDERAL PERIKANAN

JALAN SALEMBA RAYA No. 16

Tromol Pos No. 3071/Jkt JAKARTA Telp. 883733-883734-883735

Nomor : F I/5/13/18/79 Jakarta. December 10, 1979

Lampiran :

Perihal :

Mr. Shiv S. Kapur
Director, Operation Evaluation
Department the World Bank,
1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

Dear Mr. Kapur,

Re : Project Performance Audit Report
on Indonesia First Fisheries Project
(Credit 211 - IND)

First of all we would like to thank you for your letter dated October 29, 1979 attaching the captioned Report which just reached our hands on November 13, 1979.

We are deeply impressed by the Report which is so comprehensive. And we acknowledge that the contents are true in general. But for several points there are some mis-information or mis-intepretation namely :

1. The mission used the performance of the latest replaced management (1976-1978) as a pattern for evaluation of all the previous management teams of the Project. We understand that the latest management had made the biggest mistakes and owned the most weaknesses.

   As a matter of fact, the weakness of the previous management mainly lay on the lack of coordination supposed to be conducted by the President Director.

   A management Board member can do nothing for the substantial progress of the company without the close cooperation among all members of the Board, whatever high capability he may have individually. In previous case the main weakpoint was in the fleet management which was supposed to be the main resource of income. Whereas the other Director was too much involved in routine works due to lack of qualified financial staff.

GOI was assumed to appear reluctant to assign top people to this project. This is not true. The fact is that there were some problems beyond solution :

a. Top people are unlikely to be assigned at this place unless highly paid which was impossible due to the Government Regulation on salaries etc.

b. Capability in term of science and experience is not the only requirement for this project. However political aspect has to be considered in this respect.

2. The mission was informed that PN PS' relation with the local community was very poor. This actually happened in the years 1976 onwards. Before that the relation was pretty good, except the commercial orientation followed under mutually profitable basis. The latter was due to the stressing given to PNPS to afford the highest possible profit on every transaction to support earning additional income for the company. This policy was as well related to the commercial orientation the mission assumed PN PS' management has lacked, but consistently conducted before 1976.

3. Every effort had been made in 1974 - 1975 to pursuade the private skipjack boat owners to purchase some of the project boats. But since the boats were not completed and the price was assumed to be too high, they were not in the position to make any decision. They would like to see and prove the efficiency of the boats prior to their decision. Some of them even declared not interested due to their outstanding loans to have financed their existing boats. They preferred more simple boats.

4. Your mission was not properly informed that in 1974 - 1975 a regulation was issued on the intensive maintenance of the boats. All boats coming back from sea should be immediately checked both the engines as well as the hulls. Any trouble encountered at sea should be immediately reported. The Fleet Manager bore responsibility for it.

   This custom was probably not carried out due to drastic reorganization/ replacement of many responsible section chiefs or even managers conducted by the next Management Board which was not acceptable to them and got no sympathy from them.

5. GOI has made every effort necessary to rescue the project and the enterprise. It was proved by several time replacement of the Board Members. But the right team had never been encountered which could cover every aspect or requirement.

6. The unsuccessful implementation of the project is acknowledged. Beside the reasons explained by the mission this is due to the following reasons:

   a. Tender prosedure applied was a partial one which consumed too much time and raised too many problems. This weakness was learned and was therefore never followed by the next projects which applied an integrated overall tender prosedure.

   b. During the long period of construction a lot of national as well as world-wide disasters occurred such as energy crisis, general prices increase, devaluation etc. which had negatively affected the construction process.

7. Despite the substantial progress in catch rate achieved lately, the mission found that the Economic Rate of Return is still negative.
   This condition had been calculated in the financial analysis made by the management in 1975 that in order to reach a condition where the ERR is positive at least 25 fishing boats are to be utilized by PNPS under a normal amount of fishing days. This is due to the substantial amount of depreciation and interest to be covered by the income.
   As in the case of annual loss of about US $ 750,000.- the mission found, it includes the amount of depreciation and interest of about Rp.390 million whereas the operating loss is about Rp.80 million or equivalent to US $ 28,000.-. Nevertheless it is considered quite substantial.

8. The mission assumes the present President Director does not appear to be of the caliber to reverse PNPS' fortunes based on his performance as Director of Production of the state enterprise at Ambon.
   The point is that the key problem lies on production. It is the first thing to care, the first problem to solve. We assume if this problem has been solved, the rest will be easily overcome. That's why most attention of the President is now concentrated in this field. The others will get their turn.

We presume the recommendations given by your mission are quite concrete. However some of them are beyond execution or too much problems could be encountered on their execution i.e. :

a. Recommendation for sweeping personnel changes, dismissal of unsatisfactory staff and general reduction in staff numbers is not so simple to be conducted as we may imagine. The problem of probable conflict with Labor Institution, Labor Federation as well as Local House of Representative is a big one, whatever reasons we may explain. This is a political aspect too complicated to overcome.

b. By recommending that PNPS to sell the 15 vessels or more on credit basis and even below the procurement cost, if necessary, the mission assumes PNPS is no longer trust-worthy to operate the fishing boats effectively as planned.

Besides, accounts receivable or loan collection is not a minor problem in North Sulawesi. Experience indicated that 75% of those items were uncollectible from time to time in North Sulawesi.

The problem of Riau Project is something else. It is not comparable with that of PNPS. It is a long story to explain.

The other Recommendations will be forwarded and instructed to PNPS.

Your kind attention is highly appreciated.

Yours sincerely

Director General of Fisheries

DEPARTEMEN PERTANIAN
DIREKTORAT JENDRAL PERIKANAN

Iman Sardjono

PROJECT COMPLETION REPORT
FIRST INDONESIA FISHERIES PROJECT
(Credit 211-IND)

I. BACKGROUND

State Fisheries Enterprises

1.01 Although Indonesia has substantial marine resources, its fisheries industry is not well developed. A large subsistence fisheries industry along the coasts, using traditional boats and gear with little mechanization, has generally fully if not excessively exploited areas near fishing villages. The small commercial marine subsector is dominated by joint ventures with foreign (chiefly Japanese) companies, and ethnically-Chinese Indonesians. Since few Indonesian fishermen have the capital and management capacity necessary for commercial fishing, and fisheries cooperatives are not yet very effective, the Government of Indonesia (GOI) turned to state enterprises.

1.02 In 1970, there were eight state fisheries enterprises, each rather small, managing a few fishing boats or small shore facilities (e.g. ice plants or slipways). None were particularly profitable, but most covered their operating costs. Rapid inflation during the mid-1960s had made their loan interest payments and depreciation charges (calculated on a cost, not replacement basis) negligible. Although operated commercially, these enterprises also had social goals (research, employment, price stabilization).

1.03 Between 1970 and 1975, foreign assistance was obtained for development of six state fisheries enterprises. IDA assisted existing enterprises in Aer Tembaga, North Sulawesi (Cr. 211-IND, 1970) and Ambon, Moluccas (Cr. 480-IND, 1974) with skipjack tuna development; the Asian Development Bank (ADB) financed new enterprises in Sorong, West Irian for skipjack production, in four centers in Riau for general marine fishing, and in Pekalongan, Central Java, for fish catching and marketing; and the Japanese Government supported a tuna long-line project in Benoa, Bali. All six of these enterprises are losing money, and most have encountered serious management problems. ADB has just post-evaluated the Riau project; that operation was so unsuccessful that GOI has agreed to sell most of its boats to the private sector. The Pekalongan project is bogged down by technical and bureaucratic problems. The Sorong and Benoa projects have largely overcome their management problems; with the aid of the November 1978 devaluation, they may break even shortly. The Ambon project has generally been well managed; if problems with cooperatives (who own half of the boats) and bait supply can be ironed out, it too might break even. GOI, in view of this relatively poor record, has switched its emphasis increasingly to support of the private fisheries sector.

Skipjack Tuna

1.04 Skipjack tuna is one of the few major underexploited commercial fish species. Worldwide maximum sustainable yield has been very roughly estimated at around one million tons per annum (p.a.), compared to the present catch of about 650,000 tons. Demand for skipjack has been increasing, as the catch of some other tuna species, especially albacore, which are preferred because of their larger size and lighter meat, has stagnated. In addition, skipjack accumulate less mercury than larger, longer-lived yellow-fin tuna; mixing thes two species, as light-meat tuna, helps meet importers' health specifications.

Worldwide skipjack production has been increasing by 6-7% p.a. over the past decade. It now comprises about 28% of total tuna-family output, up from 21% in 1965-69. About 40% of total catch comes from the West Central Pacific (including Indonesia). There is a well-developed world market in frozen skipjack for canned tuna in the United States and Europe, and for raw (sashimi) and specially smoked (katsuobushi) fish in Japan. Skipjack prices rose from an average of $275/ton (c.i.f. California) in 1967-69 to $685/ton in 1976-78, an increase in real terms of 5% p.a.

1.05 The traditional technique for catching skipjack, used in this project, is live bait, pole and line fishing. The skipjack boat either catches live bait (various small fish), or buys it from local bait fishermen. When a school of skipjack is sighted, bait is thrown out to attract them. Once the fish come alongside, lines are dipped into the water with unbaited hooks, decorated to imitate baitfish, while water is sprayed on the sea and more bait is thrown out, to simulate a large school of bait and get the skipjack to bite at anything. This labor-intensive technique is still widely used worldwide. A larger scale, more capital-intensive method, whereby a large purse seiner surrounds an entire skipjack school with a net, is now spreading from the United States to Japan and other countries.

Aer Tembaga

1.06 The project site is at Aer Tembaga, 2 km from Bitung, the main port of North Sulawesi, and 40 km from Manado, the provincial capital. Officials from other parts of Indonesia are not always happy to be posted in North Sulawesi, as the local people form a tight-knit community and are considered difficult for outsiders to manage.

1.07 Japanese fishermen introduced skipjack fishing to Bitung during the 1920s. Eight local boat owners (seven ethnically-Chinese Indonesians, plus one well-connected Indonesian firm), operate some 35 boats, serving primarily the local (Manado and Bitung) market, and form an influential community. Most have at least ten years' experience in the industry; all except one recent entrant are very successful. Although they have other enterprises, all supervise closely construction and operation of their skipjack boats. The number of boats has increased slowly over the past decade (there were 27 in 1969), but their average size has almost doubled to 18 gross tons (GT). The boats have an average life of 8-10 years, and are built in Bitung, of local wood, in small boatyards or on the beach. Construction takes about three months. Second hand engines are generally installed, and a minimum of other equipment. In 1978, total cost was about Rp 25 million for a 20-25 GT boat.

1.08 Local captains and crews are very skillful in skipjack fishing, as they start learning in their youth. They need no modern navigation techniques because they stay within sight of North Sulawesi's mountains. Crews average about 20 per boat, of whom about 15 fish when the skipjack are located. The boats obtain all their bait from local bait fishermen, in return for 20% of the catch. Overheads are low: one shore staff is employed per one to three boats, compared to three to five shore staff per boat by state enterprises. As the

boats carry no ice, they cannot venture more than a few hours from Bitung, and return home promptly after a large catch. The boats average about 180 fishing days p.a., and a catch of 750 kg per fishing day, for total annual output per vessel of some 135 tons. The main constraints have been bait and skipjack supplies within a few hours' trip from Bitung, and the size of the local market.

II. PROJECT FORMULATION

Identification and Preparation

2.01 The project was originally proposed by FAO, to increase fish production, especially for export. Surveys found abundant bait and skipjack resources exploitable on three to seven-day trips from Aer Tembaga. The State Fisheries Enterprise for North and Central Sulawesi (PN Perikani Sulutteng, PNPS) was operating profitably a 16-vessel skipjack fleet. Aer Tembaga/Bitung had a good harbor and boat repair facilities.

2.02 GOI asked the FAO/IBRD Cooperative Program (CP) to identify the proposed project. A two-man mission, which visited Indonesia for ten days in March/April 1969, both identified and prepared the project. The only serious reservation in the CP identification/preparation report of September, 1969, concerned prospects and arrangements for skipjack marketing. The report expressed confidence in PNPS' management, and seemed satisfied with the performance of DGF's local engineering consultants (PT Pelita Bahari, a state enterprise) who were designing the shore facilities, although more detailed design and costing were requested before appraisal. The report estimated a skipjack catch of 1.25 tons per fishing day, and 220 fishing days p.a., for an annual catch of 275 tons per vessel.

Appraisal

2.03 IDA preappraisal discussions revealed concern about PNPS' ability to manage such a rapid expansion of its activities, and also showed interest in private sector involvement. The November 1969 appraisal mission basically concurred with the CP report, but recommended that 15 of the 30 vessels go to the private sector on credit, and only 15 to PNPS, both because of PNPS' limited managerial ability, and to support private sector development. The examination of PNPS was limited. To overcome management constraints, the mission proposed expatriate consultants, an Indonesian accountant for PNPS, and a slower build-up of PNPS' fleet, by only 5 new vessels p.a. (15 vessels over a 3-year period) compared with the CP proposal for 15 vessels p.a. (30 vessels within 2 years). No attention was given to other management-related questions such as the role in the project of the Directorate General of Fisheries (DGF), the Ministry of Agriculture, and the North Sulawesi Provincial Government, although a Project Committee was proposed to coordinate the main agencies concerned.

2.04 The appraisal was more optimistic than the CP report in its catch projections. Its catch estimate of 1.6 tons per fishing day, with 200 fishing

days p.a., for an annual total of 320 tons per vessel, was based on performance by similar vessels in Palau, in the Caroline Islands of American Micronesia. No comparison with other skipjack operations, e.g., the private sector in Bitung, was made. The mission accepted that Indonesian shipyards could build the boats, and that Pelita Bahari would be able to design the shore facilities.

2.05 The prospects for a similar project at Ambon were also examined, but rejected because the adequacy of bait at Ambon was not known. Skipjack development at Ambon was later included in Credit 480-IND.

Project Objectives and Description

2.06 The primary project objective was export expansion, both directly and by demonstrating to the private sector and other state enterprises the viability of extended-trip skipjack fishing for export. The project would remove skipjack production and marketing constraints at Aer Tembaga by building (a) larger boats with insulated storage for ice and chilled fish, to exploit more distant skipjack and bait resources on voyages of up to one week, and (b) cold storage, to permit export by enabling the skipjack to be held for months without deterioration. Institutional development of PNPS was not an explicit objective./1

2.07 The main shore facilities would be: (a) an ice plant with capacity of 25 tons per day, primarily for the 30 fishing boats; (b) a cold storage, with fish freezing tanks, capable of freezing 25 tons per day and holding up to 600 tons of frozen skipjack; (c) a slipway for repairing both PNPS' and private boats; (d) a wharf for skipjack boats and carriers; (e) workshops, offices and staff housing; and (f) supporting utilities (fuel storage tank, water system, generator). The 30 skipjack boats were to be of about 30 GT apiece. Funds were also included for two, 500 GT carrier vessels for fish export, subject to later determination whether PNPS should own or charter carriers. The project also included three consultants:/2 (a) chief of project operations, to advise on management, procurement and marketing; (b) master fisherman; and (c) chief of shore facilities, to assist in the operation and maintenance of the ice plant and cold storage.

2.08 IDA disbursement was to be for direct and indirect foreign exchange, with international competitive bidding (ICB) for all contracts exceeding $20,000. The foreign exchange component was estimated at 80% of the total project cost of $4.2 million, and the IDA credit was $3.5 million. Part of the credit would be cancelled if either (a) the boats were built locally (and therefore had a much lower foreign exchange component),/3 or (b) carrier

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/1 However, at negotiations IDA obtained GOI agreement to increase PNPS' equity from Rp 60 million to Rp 260 million.

/2 IDA originally suggested that they manage the project, but GOI insisted on consultant status.

/3 At negotiations, IDA agreed to increase the credit from $3.0 million to $3.5 million to cover the possibility of foreign vessel construction.

vessels were chartered instead of built. Although PNPS was eventually to concentrate primarily on the shore facilities and marketing, provision was made for PNPS to purchase all 30 fishing boats should the private sector not be interested.

2.09 Identification through Board presentation took only 16 months, less than half the Bank Group average.

III. IMPLEMENTATION

3.01 Project implementation has been unsatisfactory throughout. There have been problems in design, procurement, construction, maintenance and operation of both the shore facilities and fishing boats. As each difficulty was overcome, a new one rose to replace it.

Initial Delays Involving Consultants

3.02 The first significant delay occurred before project effectiveness. The primary condition of effectiveness was employment of the (consultant) chief of project operations. GOI, with IDA's concurrence, requested FAO to recruit this and (later) the master fisherman and chief of shore facilities./1 Effectiveness was to be three months after credit signing on July 13, 1970. It took almost six months for FAO to recruit the chief of project operations, so effectiveness (January 15, 1971), was three months behind schedule; the consultant had other commitments, so actual implementation was delayed a further two months.

3.03 Unfortunately, the consultant had no experience either managing shore facilities or with the type of fishing planned for Aer Tembaga,/2 as his experience had been primarily as a master fisherman in Ecuador, where different boats and chilling systems are employed. He therefore proposed major design changes in the vessels (e.g., refrigerated storage instead of carrying ice), the overall layout, and the wharf/jetty which were unacceptable to IDA. Being almost fully occupied in Jakarta with design and procurement issues, he was also unable to help strengthen PNPS' management, and he received virtually no direction or back-up from FAO.

3.04 By February 1972 (the third supervision mission), with virtually no progress being made in implementation (agreement had not even been reached on the master plan for the layout of facilities), IDA concluded that there were serious failings on the part of PNPS, and the FAO and Pelita Bahari consultants. GOI was asked to strengthen PNPS' management, and IDA recommended,

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/1 It was felt that the only private firms likely to have expertise in skipjack pole and line fishing, primarily Japanese fishing companies, would not be suitable as they were likely to also be interested in purchasing PNPS' output.

/2 Discussions with FAO later revealed that his qualifications were not those originally understood by IDA and GOI.

with GOI concurrence, termination of the FAO consultancy, and provision of expatriate engineering consultants to assist Pelita Bahari. However, these changes became an additional source of delay: it took eight months (until October 1972) before expatriate engineering consultancy was arranged with Pacific Consultants International (PCI), a Japanese civil-engineering firm, and 17 months (until July 1973) before new management consultancy was obtained, also from PCI. In June 1973, GOI also appointed a new management team.

3.05 The massive delays dampened the private sector's interest in participation, damaged morale and made recruitment even more difficult for PNPS, and antagonized the provincial and local authorities, who were unable to obtain the expected export-tax revenue and to keep promises of rapid development made to the local people. To try to make up for lost time, GOI and IDA decided to proceed simultaneously with construction of the first ten vessels, instead of building first four and then six vessels; handling ten boats simultaneously subsequently proved difficult for both the boat builder and PNPS.

Shore Facilities

3.06 Three and a half years after credit signing, and more than three years behind schedule, the first major contract, for the wharf, slipway and related marine works, was signed in January 1974. The winner, an Indonesian firm, C.V. Gunung Mas, commenced in March 1974, and completed construction in August 1975 (six months late). To save money, the transshipment jetty, at which large ocean-going carriers were to load fish for export, was (wisely) dropped. The quality of the wharf is satisfactory - in fact it was probably over-designed, for a port with almost no waves - but the slipway foundation apparently was not strong enough, for the rails are no longer parallel, making it dangerous for larger boats to use.

3.07 Even more problems were encountered with procurement of the ice plant, cold storage and workshop. After the first bid evaluation in December 1973, three months were lost because the oil price increase made the bidders unwilling to stick to their offers. After retender, a contract with Seika Sangyo, a Japanese trading company, was signed in May 1974, with construction to take one year. But the roof of the partially completed facilities was blown off twice during storms, and water inside the ceiling and walls caused significant construction delays. When the cold storage was first cooled down, in September 1975, sections of the ceiling collapsed when accumulated water froze, requiring further repairs. Only in March 1976, 10 months late, were the facilities ready; PNPS successfully pressed for liquidated damages (equal to 9% of the contract amount).

3.08 Although operating, these facilities are in many respects substandard. The design of both the ice plant and cold storage is the least efficient among the four comparable complexes in Indonesia (Aer Tembaga, Sorong,

Ambon and Benoa). The ice plant was misdesigned to produce blocks of about 133 kg, instead of 50 kg as at Ambon and Sorong. As these large blocks take too long to freeze under tropical conditions, many leave the plant not solidly frozen, and actual peak ice production is closer to 20 tons/day than the 25 tons/day rated capacity. Between the brine freezing tank and the cold storage, due to the absence of an adequate conveyor system and the smallness of the door into the cold storage, excessive handling of the fish is needed, which slows down operations and can damage the fish. The absence of adequate facilities for stacking fish in cold storage makes 400 tons the maximum that can be stored, even though the rated capacity is 600 tons. And both rooms of the cold storage must be kept refrigerated, even when only one contains fish, to prevent cracking of the roof and walls.

Fishing Vessels

3.09 Although vessel design was largely completed in 1971, out of fear that the first vessels would be completed before the ice plant and cold storage were ready, IDA recommended postponing the start of vessel construction until April 1973. Further problems then arose because PNPS and its consultants wanted to over-equip the boats. IDA finally accepted the specifications, and bids were opened in November 1974. PT Pioneer, using Japanese Yanmar engines, was the successful bidder. The equipment was delivered for 6 boats in April 1975, and 12 each in September 1975 and February 1976. The equipment has proven satisfactory, although some of it was unnecessary (para. 3.18).

3.10 Project boat construction had a very checkered history. The first tender brought no response; apparently PNPS had discouraged bids, in part because the North Sulawesi government was insisting on the use of local wood. PNPS then proposed to build the boats itself, but IDA objected. Retendering took place, and nine bids were received, seven Indonesian and two foreign. The award was made to the lowest bidder, PT Wiradata, which operated a shipyard at Tanjung Priok, Jakarta. Just before contract signing, in April 1975, the Director-General of Fisheries insisted on changes in the contract, including an increased penalty for late delivery (from $100 per boat per day to $1,000) and a backwards shift in the payment schedule. Although the intention may have been to persuade Wiradata to withdraw, the company nevertheless signed the contract.

3.11 Wiradata subsequently realized that the boats would exceed 30 GT, but made no protest. In the expectation of future contracts, they also agreed to transport and store boat equipment, in excess of contract requirements. The second change in PNPS President-Directors, at the end of 1975, dashed these hopes, and a minor dispute, plus Wiradata's serious cash-flow problems (which resulted in part from the "adjusted" payment schedule) stopped construction in early 1976, with ten boats almost completed. After IDA intervention, these issues were resolved, and the first ten boats were delivered in August 1976, six months behind schedule. Quality was poor (excessive leakages; misaligned propeller shafts), due to (a) Wiradata's inexperience with skipjack boats, (b) inadequate supervision by PNPS and PCI, neither of

whom had relevant expertise, (c) DGF's failure to assign a naval architect to supervise construction, and (d) the decision to build the first ten boats simultaneously (para. 3.05).

3.12 The second ten boats were to be completed six months after the first. However, the first ten boats, as measured by the DG Sea Communication, were 43 GT (according to the Indonesian classification system) instead of "about 30 gross tons" specified in the contract. This difference, which neither PNPS, PCI, Pelita Bahari, DGF nor IDA had noticed, was due to differences in the way boat size was measured in Japan (where the drawings were purchased) and Indonesia./1 Wiradata then insisted upon additionalpayment to build the remaining 20 boats at the same 43 GT. As PNPS was already short of funds, the remaining boats were redesigned to avoid cost increase, or further delay by rebidding. Redesign and approval by the DG Sea Communication was expected to take about four months; it took ten, due to inefficiencies and some technical disagreements.

3.13 Meanwhile, Wiradata, which had been leasing its boatyard, was forced to vacate by the owner, Pelita Bahari (PNPS' consultants), which had other uses for the land. Wiradata relocated near Banyuwangi, East Java, where land and local timber were cheaper. This should have taken two months but took twice as long because a GOI crackdown on overweight trucks reduced trucking capacity. When Wiradata resumed construction, all suitable local wood had been earmarked for export. Wood was obtained from Sulawesi, but the ship was diverted to meet a famine threat, resulting in further delay. It also took three months to import glue through customs. Wiradata delivered five boats in October 1978, and five in December 1978. These boats, although smaller, are better built and faster than the first ten (11 knots, compared to 8 knots).

3.14 Due to continuing cash-flow problems, Wiradata ceased construction of the remaining ten vessels in October 1978, when it failed to receive payments due for the earlier boats (para. 4.11). The partially completed boats deteriorated (without cover) until March 1979, when partial payment was received and construction recommenced; final delivery is now expected in October 1979.

Project Costs

3.15 At appraisal, total project costs were estimated at Rp 1,400 million ($4.3 million). Of this, Rp 1,140 million (81%), including boat hulls, was foreign exchange. The two fish carriers (Rp 430 million) and the transshipment wharf (Rp 30 million), were later dropped from the project, and the fishing boat hulls were procured locally. These changes reduced estimated total project costs to Rp 940 million, and foreign exchange to Rp 500 million (53%) (see Appendix 1 for details).

/1 In Japan, builders modify the boats' superstructure to reduce the listed tonnage, as license fees are high and based on tonnage. In addition, Japan uses interior measurements of certain spaces, Indonesia exterior.

3.16 The appraisal estimates included an annual 3% price increase, but actual inflation (blended local and foreign) averaged 15.3% per year. In addition the Indonesian Rupiah was devalued from Rp 326 = US$1 (which was used in the appraisal report) to Rp 378 = US$1 in April 1970, and to Rp 415 = US$1 in August 1971, while the Japanese yen, accounting for most foreign exchange costs, appreciated from US$1 = 360 yen at appraisal, to an average of US$1 = 305 yen over 1971-74. By adjusting for these inflation and exchange rate changes, estimated total project costs increased by Rp 480 million to Rp 1,420 million. Project implementation delays of about three years accounted for a further Rp 520 million cost increase, to Rp 1,940 million ($4.5 million, at Rp 415 = US$1), reflecting inflation and further yen appreciation (to US$1 = 290 yen).

3.17 Actual total project costs /1 were 86% higher at Rp 3,620 million (including Rp 2,260, [62%] foreign exchange) primarily due to costs omitted or underestimated at appraisal, unnecessary or overdesigned items procured, and padding of bids as a cushion against extra-legal demands and further inflation.

3.18 In the boat equipment contract, the echo sounder, one of two auxiliary engines with generator, and the bait pump have never been used. Elimination of these items would have reduced total project costs by Rp 210 million and simplification of the electric panel, lighting and engine remote control systems would have saved perhaps an an addition Rp 30 million. The excessive prices of the Aer Tembaga vessels can be seen by comparison with the Ambon boats (which are basically equivalent), and the Sorong boats (which are not quite as good) as follows:

Table 3.1: COMPARATIVE VESSEL COSTS - AMBON, SORONG AND AER TEMBAGA

	Ambon		Sorong	Aer Tembaga
	(Actual) /a	(April 1975 prices)	(Actual)	(April 1975 prices)
	(Rp '000,000 per boat)			
Hull	28.2	22.6	15.6	28.8
Equipment	20.5	17.8	18.2	28.3
Total	48.7	40.4	33.8	57.1

/a Contract signed September 1976.

/1 Including those needed but not yet incurred.

3.19 Of the shore facilities, unnecessary items included the ice conveyor, ice tower, and ice crusher, all of which substituted unnecessarily for work crewmen could do. In addition, the jetty was built to too high a standard.

3.20 Actual project costs, compared with appraisal, are summarized in Table 3.2. After adjusting for delays and inflation, there is still over 100% cost overrun on the main shore facilities and vessel equipment, and over 50% on the vessel hulls. This table includes certain items in appraisal estimates which were not included at appraisal, thus reducing the constant rupiah cost overrun to 71%.

Table 3.2: APPRAISAL AND ACTUAL PROJECT COSTS

	Appraisal, adjusted for inflation, devaluation, delays, and changes in project scope (Rp million)	Actual/a (Rp million)	Actual as % of adjusted appraisal
Wharf and slipway	79.4	173.0	218
Cold storage and building	291.6	660.5	227
Workshop equipment	78.2	100.4	128
Buildings, vehicles, utilities, etc.	270.0/b	284.7	105
Fishing vessel hulls	553.3	863.8	156
Fishing vessel engines & equipment	451.6/c	891.8/c	197
Consultants	267.0	426.7	160
Working capital	132.0	220.0	167
Total	2,123.1	3,620.9	171

/a Includes Rp 255.3 million not yet disbursed on hulls, and Rp 236.5 million for workshop equipment, bait catching equipment, consultancy and miscellaneous items not yet obtained.
/b Includes Rp 133.9 million for items not included in appraisal report.
/c Includes Rp 45.0 million for bait-catching equipment.

Project Financing

3.21 Serious financing problems arose for PNPS from these cost increases, coupled with operating losses due to delays, poor fishing performance, excessive overheads and loan interest payments. Through end 1978, these costs totalled some Rp 3,605 million, divided as follows:

Increased project cost	Rp	2,150 million
PNPS operating losses	Rp	351 million
Interest due	Rp	1,104 million
Total	Rp	3,605 million

They have been financed as follows:

Increased IDA funds due to rupiah devaluation	Rp	315 million
Nonpayment of interest by PNPS to state banks	Rp	1,104 million
Additional GOI finance	Rp	2,186 million
Total	Rp	3,605 million

3.22 As the Credit was to finance only foreign exchange costs, provision was made for cancellation of IDA funds for hull construction ($0.5 million) if a local shipyard was used, and the fish carriers ($1.2 million) if it was found more economic to charter vessels. However, by the time these developments took place, the foreign exchange cost of other items had substantially increased, and it was decided not to cancel part of the credit.

3.23 IDA disbursements were supposed to be for 100% of direct foreign exchange costs of imported items and foreign consultants, and 20% (the estimated foreign exchange component) of the cost of civil works and items procured locally. However, as the direct imports and technical assistance alone exceeded the $3.5 million available, funds were reallocated to these categories, as shown in Table 3.3 below.

Table 3.3: IDA DISBURSEMENTS

	Category	IDA Disbursements ($) Appraisal	Actual
I	Civil works	110,000	-
II	Imported equipment, materials and supplies	2,700,000	2,921,690
III	Equipment, materials & supplies procured in Indonesia	140,000	-
IV	Technical assistance	300,000	578,310
V	Unallocated	250,000	-
	Total	3,500,000	3,500,000

3.24 Because of long implementation delays, IDA disbursements were three and one half years behind schedule at one point ($0.3 million, cumulative disbursements as of December 31, 1974, should have been disbursed by June 30, 1971). Expenditures during calendar 1975 (when a further $2.6 million was disbursed) brought disbursements to within a year of appraisal estimates, and the final disbursement, in November 1976, was only a year behind schedule. This "improvement," however, merely reflected cost overruns on shore facilities and boat equipment; on average, boat operations have begun about four and one half years behind the original schedule. Although the credit was disbursed almost three years before project facilities were completed, IDA's "leverage" was no more successful in improving project implementation before November 1976 than after.

Reporting and Auditing

3.25 Quarterly project progress reports and annual audited accounts were to be sent to IDA, the former within three months after the quarter's end. Reports were sent (usually late) from early 1971 through March 1975; thereafter, quarterly reporting ceased. IDA did not complain because of (a) concern about more serious project problems, (b) the minimal use made of the earlier reports, which seldom contained key information about what was going wrong, and (c) lack of IDA staff continuity (para. 6.19).

3.26 Audited PNPS accounts, with the auditor's report, were to be sent within four months after the end of each (calendar) year. This requirement, which based on other experience of Indonesian state auditors is unrealistic, was met only in the first year. The average elapsed time for completion of the audit reports has become longer and longer, as shown below:

Table 3.4: SCHEDULE OF PNPS AUDITS

Calendar year	Date audit completed	Months since end of year	Calendar year	Date audit completed	Months since end of year
1971	3/22/71	3	1975	5/04/77	16
1972	8/08/73	7	1976	1/25/78	13
1973	9/30/74	9	1977	probably around 4/30/79	16
1974	11/01/75	10			

The delays reflected (a) PNPS' slowness in preparing accounts for audit (this takes about 9 months), (b) the state auditors' work backlog, and (c) the time to complete the audit report and clear it internally. The audits, which

involve three weeks' field work in Aer Tembaga by an accountant and two assistants from the DG State Financial Control, Ministry of Finance, Ujung Pandang, were never examined closely by IDA./1

Adherence to Covenants

3.27 The covenants which were not adequatly adhered to are the following:

Table 3.5: COVENANTS NOT ADEQUATELY ADHERED TO

Section No.	Scope of Covenant	Comment
4.01(a)	GOI to provide promptly necessary resources for project.	GOI procedures and limited commitment to project have led to frequent delays.
4.01(a)	Use of sound administrative, engineering, commercial & fisheries practices.	Poor management by PNPS precluded this.
4.01(a)	Project Committee to supervise PNPS.	Was inactive for several years, until reactivated in 1978.
4.01(b)	Schedule for completion of boat construction.	Actual schedule 4-5 years late.
4.03(a)	Experienced & competent management.	PNPS management has been very weak.
4.03(c)	Proper maintenance of facilities	Funds, trained personnel, equipment & system of inspection and reporting all lacking.
4.05(b)	Audit report within four months.	Now takes 12-16 months.

These are basically general covenants, related to implementation problems discussed elsewhere.

/1 There is no record of the audited acounts for 1972-75 being received by IDA.

Changes in the Project During Implementation

3.28 The Credit Agreement has never been formally amended, except for reallocation of proceeds and extension of the closing date from June 30, 1976 to June 30, 1978. However, sections dealing with boat purchases by the private sector have never been implemented. DGF/PNPS made no serious effort to obtain private sector participation in the project and IDA failed to pursue the matter. The private boat owners lost interest because (a) project boats cost almost twice as much as boats built privately, (b) relations with PNPS have ranged from cool to hostile (para. 5.03), and (c) PNPS' failure raised doubts about the advantages of longer fishing trips.

IV. FINANCIAL AND ECONOMIC IMPACT

Boat Utilization

4.01 The most telling project data are the boat utilization rates, i.e. total days actually spent fishing. The preparation report estimated 60% (220 days/boat/year), and the appraisal 55% (200 days). In 1978, the Ambon state fisheries enterprise (in its first year operating the new boats) achieved 36%, Sorong 59%, and the private skipjack boats at Bitung 50%. For PNPS, the rate was 12% in 1977 and 19% in 1978.

4.02 The primary reasons for this low utilization are poor boat quality, inadequate maintenance and lack of spare parts. Hull leaks, due to poor construction of the first ten vessels, are exacerbated by uneven pressure on the slipway, and use of low-quality local glue ensures that the boats will be back on the slipway within three to four months. There is no regular engine maintenance; when a vessel returns from fishing, there is no engine inspection or report. When an engine breaks down, PNPS' engineers often cannot repair it. Although a nearby shipyard has expertise, PNPS, because of poor personal relationships, shortage of funds and lack of incentive, seldom requests help. When spare parts are needed, PNPS, which has little stock and (until recently) no funds to acquire replacements, either takes it from a boat being cannibalized, or spends up to a month ordering it from PT Pioneer in Jakarta,/1 which demands funds in advance because of PNPS' bad payment record. Thus, boats remain idle for months - with little or no action from PNPS' management.

4.03 Boat utilization is further reduced by lack of discipline and incentives: captains and crews sometimes cannot be found when boats are ready to sail, and food, fuel and other supplies are not always available when needed.

/1 Private owners get the part flown out in two to four days.

Skipjack Catch

4.04 When boats go out, the average catch is about 350 kg/day, /1 compared to 750 kg/day for smaller local private boats, 800 kg/day at Ambon, and 1,000 kg/day at Sorong. There are a number of reasons for this poor performance:

(a) Bait supply: Bait fishermen prefer to sell to private boat owners who pay cash and provide credit. The project expected PNPS' crews to catch their own bait, and the master fisherman taught them how. Due to shortage of funds and lack of initiative, however, PNPS never purchased the necessary boukeami nets./2 However, bait has not been the main limiting factor: average skipjack catch per kg bait by PNPS fell to 4.8 kg in 1978, from 5.7 kg in 1977 and an average of 9.4 kg over 1969-76.

(b) Fishing grounds: PNPS' boats still take relatively short trips and compete with private boats for bait and skipjack, although designed to develop underutilized fishing grounds further away.

(c) Quality of captains and crews: Many of the best captains and crews recruited and trained for PNPS have left, due to the long delay before fishing commenced, and low income because of (i) idle boats, (ii) poor catches, and (iii) relatively low incentive payments for good catches. Some went to the local private boats, others to Sorong. PNPS' crews now tend to be those who prefer the security of a minimum salary (which private boat owners do not pay). PNPS' master fishermen are apparently not expert in locating, attracting and catching skipjack schools, and many hooked fish are lost. Furthermore, out of a crew of 20 only about 12 actually fish. Twenty fishermen would be ideal for boats of this size, but the relatively unskilled PNPS crews would get their lines tangled if more were fishing.

(d) Fleet management: Skipjack and bait populations shift from place to place, based on weather and other factors. With proper fleet management, boats could be directed promptly to resources other vessels had found. Furthermore, over time, data on bait and skipjack availabilities could be collected. PNPS has done neither of these things systematically. A recently-assigned Indonesian fleet manager should improve this aspect.

/1 1,250 kg/day was the preparation report estimate, and 1,600 kg/day the appraisal figure.

/2 As a start, it could obtain ten now available in Ambon, because the cooperatives there do not want them (as they buy bait from other members).

(e) Sale of fish at sea: The actual catch of PNPS' vessels probably averages above 350 kg/day, with the difference sold illegally at sea. Given the relatively small market in North Sulawesi, and that few foreign boats are around, the amount involved is unlikely to exceed 50-100 kg/day, but little information on this is available.

(f) Boat speed: The first ten vessels can achieve only about 8 knots (the last ten can do 11 knots). This reduces coverage and makes it difficult to catch up with skipjack schools.

Skipjack Marketing

4.05 The appraisal expected all the fish to be exported. So far, however, only about 75% have been of export quality (3 kg and above, iced promptly and not broken). Since devaluation, local wholesale prices have remained around Rp 200/kg, but the f.o.b. export price of about $540/ton is now worth Rp 340/kg (instead of Rp 225/kg pre-devaluation). The f.o.b. export price is 61% higher than the appraisal projection of $335/ton in 1979 prices ($183/ton in 1970 prices).

4.06 Skipjack export started in 1971 when Nichiro Fishing Co. of Japan stationed a small refrigerated carrier in Bitung. The carrier was withdrawn after 18 months, due to (a) inadequate skipjack supply and (b) provincial government objections to the resultant increase in local skipjack prices. In January 1978, PNPS exported 107 tons at $575/ton. In December 1978, PNPS, in a joint arrangement with the Sorong and Ambon projects, exported 200 tons. Competitive bids were obtained from about five trading companies; C. Itoh's offer of $520/ton f.o.b. was the highest. (The price f.o.b. Aer Tembaga is about $200/ton below c.i.f. California.) PNPS sells fish locally (a) at the Bitung auction, (b) to local traders, and (c) directly to consumers. PNPS has been at times instructed by the local government to sell to consumers at well below the market price.

Other Revenue

4.07 PNPS' other significant sources of revenue are sale of ice and rental of space in the cold storage and on the slipway. In 1978, these accounted for 33% of total revenue. This revenue is significant primarily because of PNPS' poor fishing performance: if it were operating near appraisal estimates, virtually all of the ice and cold storage space, and most of the slipway space, would be occupied servicing the 30 boats.

PNPS' Financial Performance

4.08 PNPS had a catch of 1,515 tons and was about breaking even when the project began in 1969; by 1978 its catch was down to 265 tons and it was losing Rp 479 million p.a. (details in Appendix 2). GOI's equity investment in PNPS rose from Rp 260 million projected at appraisal to Rp 748 million in

1975. To improve PNPS' financial position, GOI provided further Rp 691 million equity in 1978, and has agreed with IDA to convert the IDA credit (Rp 1,453 million) into equity. Still, PNPS is unable to meet its loan interest payments, and the cumulative interest (Rp 1,104 million) payable on its debts far exceeds its current assets.

4.09 PNPS' operating expenses are high, primarily because of overstaffing and wasteful use of electricity, but not out of line with those in Ambon and Sorong; overstaffing is endemic in state enterprises, but because of low salaries it is not too significant financially.

4.10 In September 1978, PNPS received Rp 400 million from GOI for various investment items, plus Rp 139 million for payments due to Wiradata. These funds had still not been spent as of early March 1979, despite PNPS' desperate need, due to bureaucratic inertia and red tape, especially confusion about Ministry of Finance regulations concerning post-devaluation price increases. These funds should enable PNPS to meet its most pressing needs, for spare parts and workshop equipment.

Projected Income Statements

4.11 Financial projections have been prepared for five production assumptions. Table 4.1 summarizes the results for 1980-86 with the full fleet of 30 boats. Case A represents continuation of the present performance; GOI would have to provide budgetary support of Rp 660 million p.a. Case B assumes boat utilization matching that of the private sector (180 day/year), but no increase in catch/day. The financial improvement is limited, as half the 350 kg/day catch is needed just to cover the marginal cost of the trips. Case C assumes the catch rate rises to 750 kg/day (the private sector average), but boat utilization remains as at present (66 days p.a.). Case D project PNPS' utilization and catch rates equal to the local private sector's; this should be achievable with improved management. PNPS would have an operating profit, but still need budgetary support for its loan interest payments. Case E is for 180 days p.a. fishing and a catch of one ton/day (the catch rate of Sorong). This is probably the "most optimistic feasible" case; PNSP would cover all expenses except part of the depreciation. With 180 days p.a. fishing, 1.1 tons/day would be the break-even rate, including depreciation, and 1.3 tons/day would enable PNPS also to pay off accumulated losses.

Table 4.1: ALTERNATIVE FINANCIAL PROJECTIONS FOR PNPS

Case	Fishing days annually per boat	Average daily catch (kg)	Total income /a	Operating profit (loss)	Operating profit minus interest /b	Operating profit minus interest and depreciation
			(Rp million)			
A	66	350	273.0	(334.1)	(659.5)	(910.2)
B	180	350	603.0	(242.1)	(567.5)	(818.2)
C	66	750	513.1	(158.7)	(484.1)	(734.8)
D	180	750	1,252.7	221.8	(103.6)	(354.3)
E	180	1,000	1,646.9	491.3	165.9	(84.8)

/a Assuming export price f.o.b. of $540/ton, local price of Rp 200/kg, and 75% exported.

/b Assuming entire IDA credit gets converted into PNPS equity, but PNPS is charged interest on its Rp 1,104 million interest due.

Economic Impact

4.12 The economic analysis follows closely upon the financial. No significant foreign exchange adjustment is needed, as the present exchange rate approximates the opportunity cost of foreign exchange, and differences were relatively minor when most foreign exchange costs were incurred. PNPS' catch so far has been too small to diminish significantly the private skipjack boats' catch. The projected catch rates would also not hurt the private boats, provided most of the fishing occurred, as intended at appraisal, in more distant fishing grounds.

4.13 The project introduced into Indonesia a modification of the existing skipjack fishing technology - the carriage of ice, in insulated tanks, to permit fishing trips of one week instead of just one day. This system was adopted in the Ambon and Sorong projects as well, but is just now starting to spread to the private sector in Bitung; PNPS' performance has hardly had a positive demonstration effect.

4.14 Employment was created for boat crews, bait fishermen, PNPS shore staff, and boat and shore-facility builders. Crews average 20 per vessel; with 30 skipjack boats this will total 600 people, for about 10 years apiece. About 100 shore staff positions were created, for about 15 years (while the facilities last). Data on bait fishermen are limited. But assuming $300/year would support one fisherman, and PNPS buys half its bait

requirements, some 500 would be employed, for 10 years (assuming the boats catch 750 kg/day, 180 days/ year). Vessel construction has employed about 400 laborers for an average of 3 years, and shore facilities construction perhaps 550 people for one year. Thus total employment creation is equivalent to 950 jobs (at 15 man-years apiece). With project cost totalling $8.8 million, this works out at $9,250 per job.

4.15 Some adjustment in the economic rate of return (ERR) analysis needs to be made for this employment creation. The most significant element is for the boat crews (excluding the captains, engineers and other skilled members). Their average income so far has been about Rp 24,000/month; if fishing performance improves to 750 kg/day, 180 days p.a., this would rise to Rp 36,000/month. Using the opportunity cost of this labor (estimated at Rp 10,000/month) instead of the financial cost reduces operating costs by 16%.

4.16 A catch rate of about 1.0 tons/boat/day from 1980 onwards, with 180 days annual fishing per vessel, would be necessary for a zero percent ERR, and 1.6 tons/boat/day for a 10% ERR; the former might be achieved with excellent management but not the latter. At 750 kg/day, our likeliest projection, the estimated ERR is negative.

V. INSTITUTIONAL PERFORMANCE AND DEVELOPMENT

PNPS

5.01 Weakness in PNPS management has been the basic cause of the project's problems. Since appraisal in 1969, PNPS has had three President-Directors, each for about three years; a fourth was appointed in March 1979. Of the first three, two were demoted for poor performance, and one was retired prematurely, allegedly for financial malfeasance. The last President Director, who (for personal reasons) was spending about 75% of his time in Jakarta, seemed neither knowledgeable nor interested in matters such as the local skipjack price, how many boats were at sea, why certain boats had not sailed for several months, or when his final ten vessels would be delivered. The latest choice does not appear to be of the caliber to reverse PNPS' fortunes based on his performance as Director of Production of the state enterprise at Ambon. Also, for the past two and a half years there was no Finance Director, the last one having been forced out by the local government. GOI appears reluctant to assign top people to this project, which now has a bad reputation. Furthermore, good managers are unlikely to volunteer to go to Aer Tembaga/Bitung, a small town far from Jakarta, with limited education, recreation and outside employment facilities, and where outsiders are not always warmly welcomed.

5.02 PNPS has consistently been short of well-qualified technical and financial staff. Not only has it been difficult to attract them, but PNPS felt it could not afford them, being already burdened with a large, relatively uneducated and untrained staff, who were very difficult to remove under GOI procedures and political pressure from the local government. Staff

training to overcome these problems has been far from adequate, and many of the staff trained have subsequently left. Staff discipline, supervision and morale are poor. Office workers generally arrive 15-45 minutes late, and spend an inordinate amount of work time in social activities. Theft is a major problem - for example, most removable safety items on the vessels (life vests, life buoys, fire extinguishers, first aid kits) have disappeared, and military personnel have to be called in to guard against theft of fish when vessels are unloaded. No charts of machinery maintenance requirements are visible. No one seems to keep track of when boats are scheduled to depart or arrive.

5.03 PNPS' poor relationship with the local community, never very good, was exacerbated by various PNPS actions (e.g. selling spare parts with 100% mark up; taking an inordinate commission on the export of fish through the Japanese refrigerated carrier; allegedly demanding pay-offs to rent space in the cold storage). More fundamentally, although the project was intended to assist local skipjack fishermen (by giving credit to purchase 15 boats, with PNPS providing ice, boat maintenance, cold storage and export facilities), PNPS has been more a competitor than a collaborator. Much of its fishing has been close to Bitung, where bait and skipjack resources are limited. It has also been selling locally about 25% of its catch because it was not of export quality. Its management has tended to ignore the "personal approach" so important in Indonesia. Its' poor local relationships compound a long string of problems, such as obtaining crews, bait, local licences and clearance for its boats, and is a major reason why PNPS does not buy much fish for export from the private vessels.

5.04 PNPS' management has lacked the commercial orientation required for profitable operation. It could be (a) producing a lot of ice, which is in great demand locally, in empty ice and cold storage space which is kept refrigerated, (b) using its guest house, which is the best facility in the area, as a small hotel, and, (c) buying much more fish from the private boats when the local price is low, primarily for export, but even for eventual local sale /1 when prices are higher. This would enable much fuller use to be made of the cold storage, and would help stabilize local prices. (Monthly averages in 1978 ranged from Rp 135/kg to Rp 283/kg; the daily range, of course, was even wider.) These opportunities have generally been ignored.

5.05 In summary, this has been a case not of institutional development, but of institutional disintegration. Before the project, PNPS' management was able to handle its limited responsibilities; but it was quickly swamped

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/1 Local consumers now accept frozen skipjack, an unanticipated result of the project.

by the demands of the project. PNPS had no prior experience with consultants, ICB procedures, foreign contractors, or even GOI budgetary procedures (as it had been self-supporting for some years). The efforts to strengthen PNPS (consultants, management changes, more staff, training) have all been inadequate.

Consultants

5.06 Satisfactory consultants have also proved difficult for PNPS to obtain. Initially, management consultants were engaged through FAO, while local consultants (Pelita Bahari) were used for design and engineering. The FAO consultancy failed because the chief of project operations was not suitably qualified, and received virtually no backstopping (para. 3.03). Pelita Bahari, while experienced in boat building and repair, lacked expertise for preparation of the master plan or design of the shore facilities.

5.07 PCI was brought in to replace the FAO consultant and to assist Pelita Bahari. It therefore shares responsibility for the poor design of the cold storage and ice plant, the purchase of excessive equipment for the fishing boats and for ice handling, and the inadequate supervision of construction of both shore facilities and vessels. Certainly, PCI had to operate under difficult conditions: it came into the project late, had very few competent Indonesian counterparts to work with, and was confronted by a wide range of problems. Furthermore, as a civil engineering firm, PCI was not experienced in fisheries, and had to rely largely on staff recruited just for this project. But PCI compounded its difficulties by not recruiting staff of the requisite caliber. The team leader (chief of project operations) was not experienced in skipjack pole and line fishing, and both he and the other PCI staff were generally unable to communicate with and teach their Indonesian counterparts adequately. PCI made no apparent effort to substitute better staff, or to bring the difficulties it faced to the attention of other GOI agencies or IDA.

Government of Indonesia

5.08 Until late 1975, DGF had full supervisory responsibility over PNPS. PNPS' Directors were appointed by the Minister of Agriculture on the recommendation of the Director-General of Fisheries, and generally DGF staff were chosen. DGF was also deeply involved in procurement and consultant selection. The Subdirectorate of State Enterprises (in DGF's Directorate of Enterprise Development), which is responsible for supervising all six large and seven small state enterprises, has only four staff. It has not even been able to keep track of major project developments, such as boat delivery schedules. The simultaneous implementation of six foreign-assisted projects greatly over-stretched this unit's capabilities.

5.09 In late 1975, responsibility for financial and managerial aspects of PNPS was transferred to an Assistant to the Minister of Agriculture, with DGF retaining only technical supervisory responsibility. The Assistant to the Minister, although lacking technical expertise, was nevertheless involved in

technical aspects too, e.g., recommending larger boats and arranging the lease of (unsuitable) carriers by PNPS. A new supervisory board (Badan Pembinaan) was created, consisting of the Assistant to the Minister and the head of the provincial agricultural service in North Sulawesi, to advise the Minister and provide guidance to PNPS. This board in part supplanted the Project Committee (created in accordance with the Credit Agreement and chaired by the Director-General of Fisheries), which, in any case, had never played a significant role and had fallen into disuse./1

5.10 Thereafter, neither the Director General nor the Assistant to the Minister took the lead in resolving PNPS' problems. For example, the inability of the third President-Director and his management team to improve PNPS' performance was obvious a few months after their appointment. Yet it took two and a half years before DGF and the Ministry agreed on the replacement. It also took two years for PNPS to get permission to sell its old, abandoned boats. The DGF/Ministry split was mirrored in PNPS' management. The third President Director was chosen by DGF, but the Finance Director was selected by the Assistant to the Minister. (Neither was fully qualified. The President Director had run a small state fisheries enterprise in Tegal, consisting primarily of a slipway. The Finance Director's experience was with estates, not fisheries - he promptly tried to introduce a salary system that worked on estates but had never been successful in fisheries.) These men never worked harmoniously as a team. After the Finance Director resigned, the position was left vacant for over two years. The appointment of a new Minister of Agriculture in late 1978 (the Director General was changed in 1975) has apparently improved DGF-Ministry coordination of this project.

5.11 The central agencies, BAPPENAS and the Ministry of Finance, did not play a major role in project implementation, except in approving PNPS' annual budgets. Delays in budget approval were in part due to PNPS' inability to supply supporting information in time, and from a reluctance to "throw good money after bad." In November 1977, IDA discussed the project's problems with senior BAPPENAS and Ministry of Finance officials; some additional equity was provided ten months later, but little other improvement resulted.

5.12 The North Sulawesi provincial government helped create many serious problems for PNPS (see paras. 3.10, 4.06, 5.01, 5.03). This resulted from personality conflicts between DGF and the provincial government, tension between local and central government agencies, and the provincial government's unhappiness at having been largely ignored during project planning.

/1 The Ministry of Finance and Bank Indonesia supplied only junior staff to the Committee, who were in no position to effectively coordinate with a Director General. And two agencies with whom coordination was a serious problem, DG Sea Communication and the North Sulawesi Provincial Government, were not represented on the Committee.

5.13 The DG Sea Communication was the source of delay in approval of boat redesign (para. 3.12) and in granting vessel operating licenses. (New PNPS boats lay idle for more than a month waiting for these licenses.) PNPS' boats have all passed safety inspections, after some delays, despite the absence of normal safety equipment, which brings the value of these inspections into question. And two to three months was often required to get imported materials through the DG Customs.

5.14 In summary, personality conflicts, bureaucratic procedures, and conflicting objectives in GOI compounded PNPS' problems, and GOI never made the special effort necessary to rescue the project and the enterprise.

VI. IDA PERFORMANCE

Appraisal

6.01 The project objectives and technical aspects were generally sound, but IDA seriously underestimated project costs (para. 3.20) and management problems, failed to come up with adequate proposals for stengthening PNPS' management and for promoting private sector participation, and was far too optimistic in its implementation schedule and production targets (para. 4.04).

6.02 IDA was aware that PNPS would have implementation problems unless management were strengthened but failed to recognize (a) the difficulty of managing a rapidly growing state fisheries enterprise, (b) the scarcity of good fisheries managers within the public sector, and (c) the difficulty of attracting suitable personnel to Aer Tembaga. IDA also assumed that the main management problems would arise in operating new vessels and shore facilities, which would leave sufficient time to strengthen PNPS management. In practice, procurement proved to be very difficult, and PNPS' management was in trouble as soon as the project started.

6.03 The appraisal tacitly approved the quality of both PNPS' President Director and the engineering consultants charged with designing the project facilities. In retrospect, both were clearly misjudgments. The mission should have appraised Pelita Bahari's capabilities more carefully; there were grounds for caution given Pelita Bahari's narrow range of expertise and its reliance on government contacts to obtain contracts, Pelita Bahari being staffed largely by naval officers./1

6.04 Although private sector participation was a major objective, inadequate arrangements were made to promote it. The private skipjack boat owners, who were skeptical from the beginning, were not consulted about overall project implementation. It was left to PNPS to convince them to participate; but PNPS had no interest in building up its competitors while restricting its own fleet to 15 boats.

/1 This situation is, however, not uncommon in Indonesia.

6.05 The appraisal was extremely optimistic in its timetable for construction of project facilities. This reflected lack of attention to the steps required from preparation of the layout master plan through design of facilities, obtaining IDA approval (with allowance for the possibility of disagreements), bidding and bid evaluation, contract award and contractor's mobilization.

6.06 Among the appraisal's technical weaknesses were: (a) giving dimensions corresponding to 43 GT boats, but calling them 30 GT (para. 3.12); (b) including carrier vessels, which would have added to PNPS' managerial burden, and whose viability was contingent upon PNPS achieving its production targets (fortunately, the appraisal included a study of whether owning carriers was cheaper than chartering, and the carriers were later dropped); and (c) having one large ICB contract for boat construction. The latter was presumably based on economies of scale, vessel standardization, the ease of managing one contract, and to make the contract attractive to foreign builders. However, this disqualified small local boatyards in Bitung, the only ones in Indonesia experienced in skipjack boat construction, as none could handle a large contract. It later turned out that the contract was also too large for the winning bidder to handle, both technically and financially. Furthermore, the private sector boat owners could have no say in the design (and equipping) of the 15 boats intended for them; given a chance to obtain less expensive boats (subject to certain minimal standards), they might have been more interested in participating. Finally, it locked PNPS into a large contract with an unproven shipyard, another case where allowance was not made for things going wrong.

6.07 A number of factors explain the weaknesses in appraisal. First, IDA appraised a project that was inadequately prepared - by a two-man, ten-day identification/preparation mission - and which was based on very limited sectoral knowledge. Second, there was only one experienced staff member, the mission leader, on the appraisal, assisted by a new Young Professional (YP) and two technical consultants. None of them had much background with the project or with Indonesia. The mission leader, assisted by the YP on financial matters, was also responsible for managerial, financial and economic aspects of the project - a considerable workload. Third, this was one of the Bank Group's first fisheries projects, and there were no fisheries experts in the Bank to review the identification/preparation and appraisal reports. Fourth, the Bank Group in 1970 had just begun lending to Indonesia, and had little experience of the problems of Indonesian state enterprises.

Supervision

6.08 Project supervision can be divided into three phases: an intensive early period (three missions within 13 months after effectiveness, averaging 28 man-days apiece in Indonesia); a far less intensive middle phase (three missions, spaced on average 11 months apart, averaging 23 man-days each);

and a final period, intermediate in intensity (five missions,/1 averaging eight months apart and 29 man-days each). The first period was while the project was under the Agro-industries Division, which was involved in numerous fisheries projects, and whose Division Chief strongly supported the project. After the October 1972 reorganization, interest in the project fell, as fisheries became a secondary activity of the divisions handling it. Between March 1972 and December 1974, no staff from the responsible divisions went on supervision missions (only a CPS staff member and a consultant). When the virtually total failure of the project attracted senior management attention, attempts were made for at least a partial rescue.

6.09 Over the first four missions, which covered a period of two years and seven months from Board presentation, the implementation timetable was pushed back a full three years. Although part of this was due to the unrealism of the original schedule, the rest was poor performance by DGF, PNPS and their consultants. Nevertheless, the missions remained optimistic about project prospects./2 Thereafter, each change of project management seems to have kindled new hopes. Not until the eighth mission was the project rated "three" (major problems).

6.10 The excessive optimism of early supervision missions was not without its price. IDA did not press DGF for any drastic measures to improve PNPS management - so given the political and bureaucratic difficulties of changing state enterprise management, it took three years apiece before any President Director was removed. When they were replaced, other important steps (e.g. to strengthen their staffs) were not taken. In addition, no effort was made (until the final missions) to enlist the support of top-level GOI staff, such as the Minister of Agriculture or senior BAPPENAS and Ministry of Finance officials, who might have been able to take corrective action (prompt provision of budgetary funds, higher salaries to attract technical staff, support from the local government and DG Sea Communication, etc.).

6.11 Besides being excessively optimistic, IDA (a) failed to recognize that management problems underlay everything else (even to the end, finance rather than management was listed as the most critical factor); (b) made very few specific proposals for managerial improvement - the usual proposal was merely to "strengthen management"; (c) was excessively cautious in making

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/1 Excluding brief discussions held only in Jakarta with DGF between the seventh and eighth missions.

/2 "Overall project progress is satisfactory ..." (mission No. 1); "Overall prospects for successful implementation are good and improving" (mission No. 2); "... prospects for successful implementation remain good" (mission No. 3); "In part ... because of strengthened local management, the overall prospects for successful implementation of the project remain good" (mission No. 4); "Very substantial improvements have occurred in almost every aspect of project implementation..." (mission No. 5, which gave no timetable).

recommendations - not until the third mission was any suggestion made for changes in consultancy, and not until the ninth mission did IDA press in writing for replacement of project management; (d) paid little attention to ways of achieving private sector participation, although this was an important project objective; and (e) lacked technical expertise regarding shore facilities.

6.12 In between missions, IDA was involved only in procurement and consultancy matters requiring immediate action. This reflected (a) the absence of a major role for the Resident Staff in Indonesia (RSI) in project supervision, (b) the inadequate project reporting system, (c) lack of continuity in project responsibility in Washington, and (d) during a crucial period, the low priority given to supervision of this small project. And, with its limited technical expertise, especially in the design of the shore facilities, IDA was unable to provide sufficient technical support in procurement to compensate for the weaknesses of PNPS and its consultants. Furthermore, to minimize further project delay, IDA tended to accept lower standards in its reviews of procurement documents and consultants' qualifications.

6.13 IDA's recommendation to postpone boat construction until construction of the cold storage and ice plant had begun had very adverse consequences. It ignored both the need to start with a small number of boats, so that the builder and PNPS could develop gradually the necessary expertise, and the likelihood that there would be delays in this contract as well. It would have been much better to proceed with the vessel contracts in 1972, and have just four boats built first, as the appraisal intended. The fish could have been sold locally or possibly exported through a Japanese refrigerated carrier, which might have been induced to return by a larger supply of fish (para. 4.06). After IDA recommended postponement, vessel procurement was virtually ignored until after the shore facility bid documents were ready. It then took more than a year to finalize the vessel and equipment bid documents, so that the tender was about a year behind that of the cold storage and ice plant, and the latter (even after their long construction delays) were virtually idle for seven months until the first boats were delivered.

6.14 No systematic effort was made to coordinate with ADB, even though ADB had three projects with state fisheries enterprises, one of which was virtually identical to this project. Both institutions eventually learned much the same lessons, but the process could have been accelerated by sharing experiences earlier.

6.15 An underlying reason for IDA's relatively poor supervision performance was frequent changes in responsibility for this project, which resulted in large part from Bank Group reorganizations. The 11 supervision missions were led by 9 different mission leaders. This made it difficult to see trends, to learn from past mistakes, and to recognize when only symptoms had been dealt with. The project has been under six different divisions or sections (Agro-industries; Asia Crops, Forestry and Livestock; Asia Agricultural Credit; East Asia Agricultural Credit and DFC; East Asia Rural

Credit and Agro-business; and Indonesia General Agriculture). At one point, four successive missions were each handled by a different division. Except in the initial division (Agro-industries), fisheries was always a minor activity. The divisions had no fisheries expertise, and the Bank Group as a whole had relatively little expertise in the design of fisheries complexes and the specifications of ice plants and cold storages. Finally, the project came at a time when the rapid expansion of Bank Group lending limited the resources available for supervision.

6.16 On the positive side, IDA (a) pressed to keep project costs down by eliminating unnecessary items from both the vessels and the shore facilities, (b) succeeded in getting the transshipment wharf dropped, and agreed with GOI to drop the carrier vessels, (c) got boat construction to resume when PNPS and Wiradata were at an impasse, (d) got PNPS to initiate planning exercises, (e) helped obtain the necessary finance from GOI for cost overruns and essential items of expenditure, and got GOI to increase its equity in PNPS, and (f) induced GOI to obtain new consultancy when FAO and Pelita Bahari proved inadequate. Unfortunately, these many specific accomplishments were overshadowed by the fundamental, unresolved management problems, and by the weaknesses in project design.

VII. PERFORMANCE OF STATE FISHERIES ENTERPRISES

Comparison with Ambon and Sorong Projects

7.01 Four years after this project started, two nearly identical projects were initiated, at Ambon (Credit 480) and Sorong (with ADB financing). Both include shore facilities (slipways, wharfs, cold storage, ice plants and supporting buildings and utilities) and 30 GT skipjack fishing boats. Both are operated by state fisheries enterprises: Ambon by Perum Perikani Maluku (PPM) and Sorong by PT Usaha Mina. At Sorong, like Aer Tembaga there were 30 boats (3 have since sunk); at Ambon 20 boats, of which 10 are for PPM and 10 for cooperatives.

7.02 The one significant benefit of Credit 211-IND is that it helped pave the way for much more successful projects in Ambon and Sorong. Among the lessons learned at Aer Tembaga which have been applied in Sorong and Ambon were the need for: (a) more modern ice plant and cold storage designs; (b) more modest boat equipment to reduce cost; and (c) paying more attention to local government agencies. The President Directors of both Ambon and Sorong have followed the Aer Tembaga saga with interest, and no doubt learned of many pitfalls to avoid. DGF also gained many valuable, albeit expensive lessons, especially regarding procurement procedures under ICB, that helped in Ambon and Sorong.

7.03 Aer Tembaga was selected as the first project site because it had more certain bait supply, and long experience with skipjack fishing. Ambon and Sorong have had certain advantages also. Both had commercial areas quite separate from the staff residential areas, which made theft easier to

control. At Sorong, a Perseroan Terbatas (PT) was set up; PTs have somewhat more autonomy and are more clearly fully profit oriented than Perusahan Negaras (PN), such as PNPS, which are regular state corporations. Perums, as at Ambon, are somewhere in between. Furthermore, the DGF-Ministry split of responsibility was applied first and most extensively to Aer Tembaga.

7.04 The fundamental differences, however, have been project management and relationships with local authorities. Ambon has had a dedicated and competent President Director for the past decade, who has received strong support from the provincial government. Sorong, on the other hand, had serious management problems until November 1977, primarily because its President Director was available only part-time and spent most of his time running the state fisheries enterprise in Riau. His successor brought in a team of four other people (from the Fisheries Training Center in Tegal, Central Java), established discipline, morale, incentives and an overall more effective system, and increased production by 167% in one year./1

7.06 The success in turning around the Sorong operation has convinced DGF that the same could be achieved by new management in Aer Tembaga, without more radical measures. But while better managers at Aer Tembaga would certainly make a great difference, the breadth and depth of PNPS' problems appear to require more far-reaching changes (see Chapter VIII).

Disadvantages of State Enterprises for Fishing in Indonesia

7.07 Even the best-managed state fisheries enterprises, (e.g. Ambon and Sorong) have great difficulty operating profitably; poorly-run ones (e.g. Aer Tembaga and Riau) can be disastrous. These enterprises are generally less successful than the private-sector for a number of reasons:

(a) Most are run by bureaucrats who lack the necessary imagination, flexibility, dedication and risk-taking necessary for fisheries enterprises, where production is uncertain, fishermen at sea are difficult to supervise and work hours are irregular. As the management and shore staff generally receive no bonuses unless the enterprise is profitable, they have relatively little incentive to reduce losses - and all these enterprises are still at the loss-reduction stage. Low salaries make it difficult to attract good staff, and both GOI regulations (such as six months' severance pay) and local political pressure make it hard to dismiss unsatisfactory employees.

(b) Public sector procurement, in Indonesia and elsewhere, is intrinsically complicated, and the decision makers are not using their own money, both factors leading to high costs and long delays. The private sector can shop around, negotiate, purchase second-hand engines, etc., to keep boat costs

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/1 Although part of this increase was probably due to ecological factors.

low. Bureaucratic slowness, exacerbated by the DGF-Ministry split in responsibility, affects other decisions as well (e.g. budget approval; sale of unused vessels and equipment).

(c) Private boat owners often ensure a supply of good crews and bait by providing credit (in cost or kind) to the captains, crews and bait fishermen; this is difficult (but not impossible) for state enterprises to do.

(d) State enterprises are under much more pressure from local and national government agencies to create employment for local people, sell fish and ice below market prices, use local wood, etc. Their President-Directors must spend much of their time as diplomats, maintaining good relations with and diverting pressure from all the local and national officials whose cooperation is required.

(e) Private fisheries enterprises have generally expanded gradually; state enterprises, receiving project finance, have grown in quantum leaps, which puts much more pressure on management.

VIII. RECOMMENDATIONS AND CONCLUSONS

Recommendations to GOI /1

8.01 The new PNPS management team (President Director, Financial Director and Production Director), appointed in March 1979, should be given one year to demonstrate its capability by meeting challenging but realistic targets: a 40% utilization rate for the first 10 boats and 50% for the newer boats, an average catch of 600 kg/day, and operating profit at an annual rate of Rp 100 million (adjusted for price changes). Bonuses should be given for exceeding these targets; dismissal for falling short, followed by a caretaker management to supervise dismantling of PNPS (para. 8.06).

8.02 For the present management to have a fair chance, it should be given: (a) a clear mandate to operate on a purely commercial basis - the concurrence of the North Sulawesi Governor should be obtained, to protect PNPS from continued local pressures; (b) authority to make sweeping personnel changes, within its present budget, including dismissal of unsatisfactory staff and general reduction in staff numbers, higher salaries to attract good technical and financial people, and introduction of an incentive system for shore staff; and (c) funds for a consultant engineer to supervise facilities maintenance, and an expatriate fleet manager experienced in skipjack fishing.

/1 Only some of these recommendations have been discussed yet with GOI; none have been accepted yet.

8.03 Six specific suggestions to the new management are to: (a) establish, perhaps monthly, a floor price at which it will buy all export-quality skipjack delivered to it, and a ceiling price at which it will sell its non-export-quality skipjack; (b) set up a system for operating each section of the enterprise (vessels, cold storage, ice plant, slipway) on a commercial basis, with accounts kept of inter-section transactions, as a way of determining each section's performance and profitability, and the price at which its services should be offered to outside customers; (c) to obtain adequate bait, purchase from PPM Ambon the ten unused boukeami nets there, and provide the nearby bait-fishermen communities with small two-way radios, so that they can inform PNPS when they have bait, and PNPS can tell them when fishing vessels will come by; (d) sell promptly the substantial boat equipment (auxiliary engines and generators, pumps, echo sounders) now lying idle; (e) fence off just the commercial area, with entry only for business, instead of the entire compound; and (f) visit Sorong to learn how that enterprise was rejuvenated.

8.04 In addition to these changes at Aer Tembaga, primary responsibility for supervision of PNPS should be allocated either to DGF or to the Assistant to the Minister; dual responsibility has been unsuccesful. DGF would be the logical choice, as it has the technical expertise, but allocating clear responsibility to almost anyone would be an improvement. In addition, whomever receives responsibility must be given the staff to exercise it properly - both DGF and the Assistant to the Minister now have inadequate staff for this purpose. One specific task which DGF must oversee is ensuring the quality of fish exports. Long-term harm would be done if Indonesian skipjack gets a poor reputation overseas; now, with exports just beginning, is the crucial time.

8.05 The project calls for 15 vessels to be sold on credit to the private sector; every effort should now be made to carry this out, and, if the demand is there, to sell even more of the boats. (In the Riau project, even some vessels intended for the public sector have now been sold to private fishermen, because the state enterprise operated them unsuccessfully.) The private boat owners generally regard the second ten PNPS boats as being of high quality; the final ten boats should be the same. The November 15 devaluation has increased the attractiveness to them of producing fish of export quality, which is much easier with the PNPS vessels, since they carry ice. The devaluation, by increasing the cost of imported engines and other equipment, also gives PNPS the opportunity to sell its boats at a relatively small loss. Some loss is practically inevitable, for which Ministry of Finance approval would be necessary, but it is vastly preferable to recover most of the money spent on the boats, than to continue to own boats which are likely to incur only further losses, with little hope of generating enough operating surplus to cover interest and depreciation costs. (Selling a new boat for, say, 75% of its cost would be equivalent financially, over the long run, to having that boat cover its operating costs plus 75% of depreciation and interest on the boat cost.) As the private owners would have incentive to buy ice from and export their fish through PNPS, the boat sale would not reduce utilization of those facilities - if anything, due to more efficient boat management, it would increase it. As an absolute minimum, at least a few

boats should be sold to provide a yardstick for measuring PNPS' fishing performance, and to see how private owners handle this improved technology. GOI should therefore now explore with the private skipjack boat owners in Bitung the price they would be willing to pay for PNPS' boats, either new or used.

8.06 Should this fourth management team prove no more successful than its predecessors, GOI should examine ways of handing over operation of the remaining boats and the shore facilities to the private sector. Japanese and other foreign firms are unlikely to want to operate the facilities, given all the political and administrative problems involved, but local entrepreneurs have expressed some interest, and this should be pursued, if necessary, at the appropriate time.

Recommendations to IDA

8.07 Should GOI demonstrate willingness to cary out the main recommendations given above, IDA should be prepared to provide such reasonable assistance in this respect as GOI might request, to salvage as much as possible from the project. But should these recommendations have no more impact than those of previous missions, further supervision, except as incidental to other activities (e.g. supervision of Credit 480-IND) would not be warranted.

Lessons for the Bank Group

8.08 The Bank Group can learn many lessons from the failure of this project. The most important are as follows:

(a) More careful attention needs to be paid to project management in both appraisal and supervision, including not only the quality of the project managers, but the organization, staffing and procedures of the implementing unit, and its relationship to other agencies. Bank Group staff or consultants (including perhaps local consultants) should be asked to look specifically at management on missions.

(b) Project design should, as much as possible, make allowance for possible delays and other problems (e.g. not building carriers whose viability depends upon achieving output targets; not putting a cold storage on landfill to be provided by jetty construction; not getting locked into a single large contract for many boats when there are no appreciable economies of scale).

(c) Implementation timetables should be drawn up carefully, making allowances for likely delays. Falling significantly behind schedule can lead to (i) loss of morale and support for the project; (ii) incaution and lowering of standards in an effort to catch up, and (iii) project components being out of phase with each other.

(d) Local governments and the local private sector should be involved more at all stages, especially where the project specifically calls for private sector participation. This could improve both project design and implementation.

(e) Once a project starts going bad, special efforts are needed to save it before a vicious circle of problems takes hold. Lack of continuity in supervision, and supervision reports too concerned with diplomacy, may prevent the alarm being rung until too late.

(f) The search for consultants should be as wide as possible, to provide sufficient choice and to have other firms more quickly available if the initial consultants are unsuccessful. Especially in fisheries, efforts must be made to find people with the specific expertise required, as experience in one type of fishing is often of little use in another.

(g) Even quite small agro-industries projects can be very complicated. Before undertaking such projects in the public sector, the Bank Group must make sure that:

(i) it is willing and able to devote the necessary time to project supervision, and

(ii) the private sector could not do the job.

INDONESIA

FISHERIES PROJECT - CREDIT 211-IND

Project Cost Analysis

	Local	Foreign	Total
	----- Rp'000,000 -----		
1. Costs as Per Appraisal Report			
Wharf and slipway, including winch house and fuel tank	71.4	6.3	77.7
Cold storage, icemaking, ice storage, freezer, generators & cold storage building	18.3	118.3	136.6
Workshop equipment	-	42.4	42.4
Buildings and other construction works	51.1	15.7	66.8
Fishing vessel hulls	-	234.7	234.7
Fishing vessel engines	-	176.0	176.0
Consultants	-	97.8	97.8
Fish carriers	-	391.2	391.2
Subtotal	140.8	1,082.4	1,223.2
Physical contingencies (10%)	63.6/a	58.7	122.3
Subtotal	204.4	1,141.1	1,345.5
Working capital	58.8	-	58.8
Total	263.2	1,141.1	1,404.3

/a The appraisal report distributed physical contingencies to obtain a foreign exchange component of 80%.

	Local	Foreign	Total
	----- Rp'000,000 -----		
2. Costs /a Adjusted for Reductions in Project Scope			
Wharf and slipway, including winch house and fuel tank	43.3 /b	7.0	50.3
Cold storage, icemaking, ice storage, freezer, generators & cold storage building	20.1	130.1	150.2
Workshop equipment	-	46.6	46.6
Buildings and other construction works	56.2	17.3	73.5
Fishing vessel hulls	258.2 /c	-	258.2
Fishing vessel engines	-	193.6	193.6
Consultants	-	107.6	107.6
Subtotal /d	377.8	502.2	880.0
Working capital	58.8	-	58.8
Total	436.6	502.2	938.8

/a Costs include 10% physical contingency.

/b Transhipment wharf (Rp 32 million) was dropped from Project.

/c Fishing vessel hulls were procured locally.

/d Fish carriers were deleted from the project.

	Local	Foreign	Total
	----- Rp'000,000 -----		
3. Costs Adjusted for Higher Inflation /a			
Wharf and slipway including winch house and fuel tank	43.1	7.2	50.3
Cold storage, icemaking, ice storage, freezer, generators & cold storage building	20.0	133.9	153.9
Workshop equipment	-	47.9	47.9
Buildings and other construction works	56.0	17.8	73.8
Fishing vessel hulls	396.0	-	396.0
Fishing vessel engines	-	215.7	215.7
Consultants	-	119.2	119.2
Subtotal	515.1	541.7	1,056.8
Working capital	67.7	-	67.7
Total	582.8	541.7	1,124.5

/a Inflation for foreign component based on figures for Industrialized Nations from World Economic and Social Indicators. Inflation figures for local component based on World Bank Report 2093-IND dated February 20, 1979. Appraisal estimates included 3% p.a. inflation.

	Local	Foreign	Total
	----- Rp'000,000 -----		
4. Costs Adjusted for Devaluation /a			
Wharf and slipway including winch house and fuel tank	43.1	9.2	52.3
Cold storage, icemaking, ice storage, freezer, generators & cold storage building	20.0	198.2	218.2
Workshop equipment	-	61.0	61.0
Buildings and other construction works	56.0	26.3	82.3
Fishing vessel hulls	396.0	-	396.0
Fishing vessel engines	-	345.4	345.4
Consultants	-	194.4	194.4
Subtotal	515.1	834.5	1,349.6
Working capital	67.7	-	67.7
Project cost	582.8	834.5	1,417.3

/a Devaluation of the Indonesian rupiah against the Japanese yen.

	Local	Foreign	Total
	----- Rp'000,000 -----		
5. Costs Adjusted for Delays			
Wharf and slipway including winch house and fuel tank	69.0	10.4	79.4
Cold storage, icemaking, ice storage, freezer, generators & cold storage building	37.4	254.2	291.6
Workshop equipment	-	78.2	78.2
Buildings and other construction works	104.6	31.5	136.1
Fishing vessel hulls	553.3	-	553.3
Fishing vessel engines	-	406.6	406.6
Consultants	-	267.0	267.0
Subtotal	764.3	1,047.9	1,812.2
Working capital	132.0	-	132.0
Project cost	896.3	1,047.9	1,944.2

	Local	Foreign	Total	Incurred to date	Balance
			Rp'000,000		
6. Actual Project Costs					
Wharf and slipway	95.7	77.3	173.0	173.0	-
Cold storage and building	170.4	490.1	660.5	660.5	-
Workshop equipment	-	100.4	100.4	28.1	72.3
Buildings, vehicles, utilities, etc.	182.2	102.5	284.7	264.6	20.1
Fishing vessel hulls	603.8	260.0	863.8	608.5	255.3
Fishing vessel engines	-	846.8	846.8	846.8	-
Bait-catching equipment	45.0	-	45.0	-	45.0
Consultants	47.7	379.0	426.7	276.7	150.0
Subtotal	1,064.8	2,256.1	3,400.9	2,858.2	542.7
Working capital	220.0	-	220.0	159.3	60.7
Total	1,364.8	2,256.1	3,620.9	3,017.5	603.4

APPENDIX 2
Table 1

INDONESIA

FISHERIES PROJECT - CREDIT 211-IND

PROJECT COMPLETION REPORT

PNPS Comparative Balance Sheet - 1969 to 1978
(Rp million)

	1969	1970	1971	1972/b	1973/b	1974/b	1975	1976	1977	1978
Assets										
Current Assets										
Cash	0.4	1.2	0.2				1.3	2.1	5.4	74.6
Bank accounts	1.2	5.0	210.3				200.8	77.2	56.5	552.7
Account receivable	10.1	10.7	3.9				57.6	60.8	56.9	45.4
Prepayments	1.7	2.7	2.0				3.4	3.6	3.8	40.5
Inventory	2.1	1.1	4.2				15.6	42.4	42.0	67.1
Subtotal	15.5	20.7	220.6				278.7	186.1	164.6	780.3
Fixed Assets										
Nonproject assets	74.2	79.7	94.2				125.1	111.5	112.9	118.7
Accumulated depreciaion on nonproject assets	-	-	-				(68.5)	(69.1)	(75.0)	(81.8)
Project assets	-	-	-				2,306.7	2,876.2	3,137.3	3,460.3
Accumulated depreciation on project assets	-	-	-				(12.4)/c	(99.5)	(234.3)	(376.7)
Subtotal	74.2	79.7	94.2				2,350.9	2,819.1	2,940.9	3,120.5
Total Assets	89.7	100.4	314.8				2,629.6	3,005.2	3,105.5	3,900.8
Liabilities										
Current Liabilities										
Accounts payable	9.2	13.1	16.5				13.3	21.9	26.8	28.5
Due D.G. Fisheries	-	-	-				36.8	39.5	39.5	39.5
Interest payable	-	-	-				99.9	373.1	687.0	1,104.2
Subtotal	9.2	13.1	16.5				150.0	434.5	753.3	1,172.2
Long-Term Liabilities										
BRI loans	-	-	-				-	-	-	76.0
Eksim Bank	-	-	-				405.1	663.5	850.2	934.8
IDA credit	-	-	-				1,383.7	1,452.5	1,452.5	1,456.0
Subtotal	-	-	-				1,788.8	2,116.0	2,302.7	2,466.8
Capital Reserve										
Due to revaluation of nonproject assets	70.0	70.0	70.0				70.0	70.0	70.0	70.0
Equity										
Equity capital	0.002	0.002	200.0/a				747.8/a	747.8	747.8	1,438.8/a
Retained earnings	10.5	17.3	28.3				-	-	-	-
Accumulated loss	-	-	-				(127.0)	(363.1)	(768.3)	(1,247.0)
Subtotal	10.5	17.3	228.3				620.8	384.7	(20.5)	191.8
Total Liabilities	89.7	100.4	314.8				2,629.6	3,005.2	3,105.5	3,900.8

/a Capital invested by the Government.

/b Details for these years not available

/c Depreciation is charged only on the operational part of the project.

INDONESIA

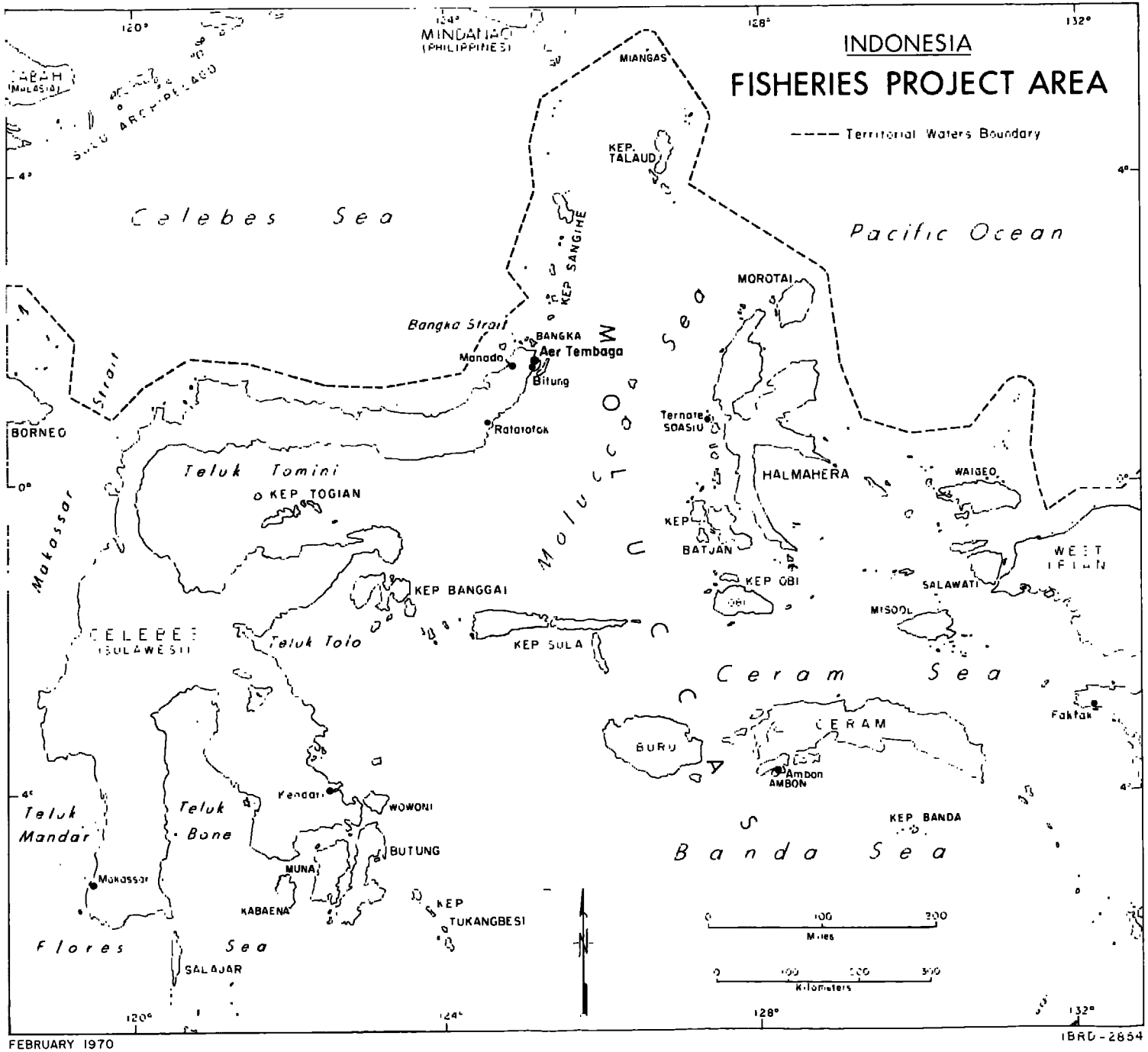
FISHERIES PROJECT - CREDIT 211-IND

PROJECT COMPLETION REPORT

PNPS Comparative Income Statement - 1970 to 1978
(Rp million)

	1970	1971	1972	1973/a	1974/a	1975	1976	1977	1978
Revenue									
Fish sales	65.9	53.0	36.4	43.2	73.1	63.8	65.0	67.5	104.0
Ice sales	-	-	-	-	-	-	15.2	31.6	38.9
Workshop & dock	8.8	9.4	4.6	4.0	8.3	1.2	5.2	1.6	8.4
Other	0.4	16.2	10.0	4.5	2.3	17.1	15.7	15.9	19.3
Total Revenue	75.1	78.6	51.0	51.7	83.7	82.1	101.1	116.6	170.6
Expenses									
Selling expense	0.2	-	-			1.4	3.7	5.0	-
Vessel operating cost	45.5	36.9	34.8			56.7	47.4	66.6	133.2
Workshop & dock	3.9	0.5	0.9			-	2.0	3.9	12.5
Cold storage	-	-	-			-	13.8	26.9	15.1
Vehicle costs	0.9	4.4	2.0			6.2	11.5	12.0	11.3
Salaries	8.4	8.5	9.0			44.4	38.1	48.5	48.5
General expense	4.4	12.9	20.0			3.8	32.3	33.6	29.1
Nonproject depreciation	-	-	14.0			12.4	8.4	6.0	6.9
Project depreciation	-	-	-			12.4	87.1	134.8	142.4
Other expenses	5.0	4.4	1.5			-	-	5.6	-
Total Expenses	68.3	67.6	82.2	79.6	118.7	137.3	244.3	342.9	399.0
Interest expense	-	-	-			6.0	92.9	178.9	250.3
Net Income (Loss) Before Taxes	6.8	11.0	(31.2)	(27.9)	(35.0)	(61.2)	(236.1)	(405.2)	(478.7)

/a Detailed expenses not available, figures based on unaudited accounts.



FEBRUARY 1970

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