


**BASIC DESIGN STUDY REPORT
ON
FISHERIES PROMOTION PROJECT
IN
THE FEDERAL REPUBLIC OF NIGERIA**

DECEMBER, 1980

**JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)**

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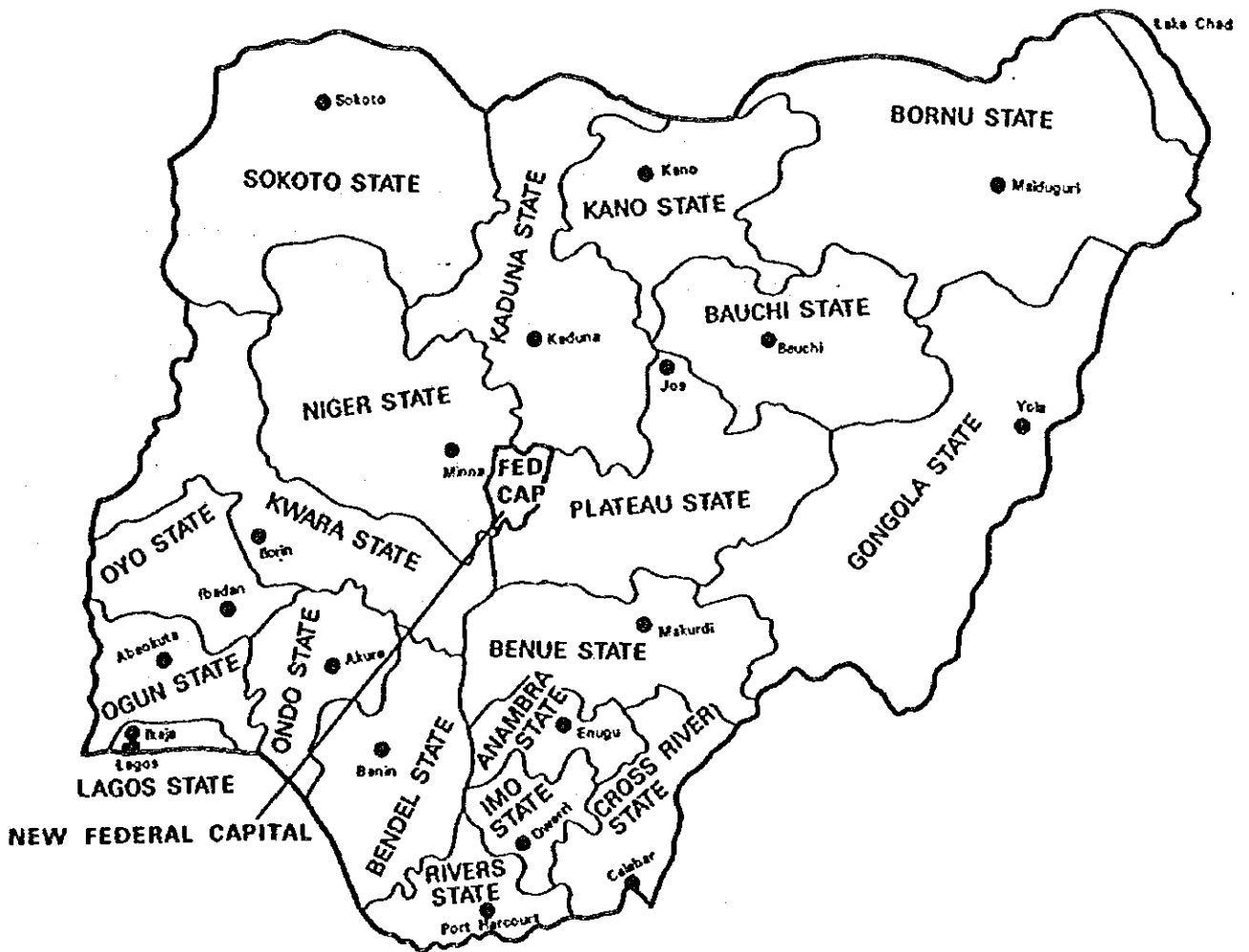
**JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)**

国際協力事業団	
受入 月日 '84. 3. 27	524
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Signing Ceremony of the Minutes

FEDERAL REPUBLIC OF NIGERIA
SHOWING THE 19 STATES
AND THEIR CAPITALS



P R E F A C E

In response to the request of the Government of the Federal Republic of Nigeria, the Japanese Government decided to conduct a study on a Fishing Cooperation Project in the Federal Republic of Nigeria and entrusted the study to the Japan International Cooperation Agency (JICA). The JICA sent to Nigeria a study team headed by Mr. Noriharu Nakamura, Fishing Boat Inspector, Fishing Boat Division, Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries from October 19 to 30, 1980.

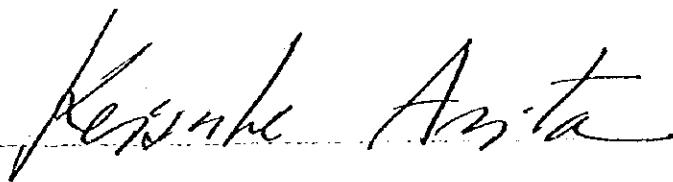
The team consulted with the officials concerned of the Government of Nigeria and conducted a survey in Lagos, Nigeria.

After the team returned to Japan, further studies were made and the present report has been prepared.

I hope that this report will serve for the development of the Project and contribute to the promotion of friendly relations between our two countries.

I wish to express my deep appreciation to the officials concerned of the Government of the Federal Republic of Nigeria for their close cooperation extended to the team.

December, 1980

A handwritten signature in cursive script, reading "Keisuke Arita", written over a horizontal dashed line.

Keisuke Arita

President,

Japan International Cooperation Agency

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SUMMARY

The Fourth National Development Plan of the Federal Republic of Nigeria aims at stimulating productivity in agriculture.

In the fishery sector, this Plan calls for the increased development of coastal fishing grounds and marine resources including fostering techniques for diffusing the specialized knowledge of the fishing industry. To help meet its target, the Government of Nigeria requested the Government of Japan for a research and training vessel as part of grant assistance.

In response to the request of the Government of Nigeria, the Government of Japan sent a study team to Nigeria starting from October 19 to 30, 1980 for eleven days to draft the most appropriate basic design necessary for the implementation of grant assistance.

On the basis of the study and discussions with the officials concerned, the study team confirmed that the contents of the request were appropriate for the implementation of the project. The following mutual agreement was reached:

1. Main particulars of a research and training vessel

- | | |
|---------------------------|---|
| 1) Vessel type | Single decker with long forecastle |
| 2) Gross tonnage | About 170 G/T
(Based on International Regulations
for tonnage measurement of ships, 1965) |
| 3) Main engine | About 700 HP |
| 4) Complement | 25 persons |
| 5) Max. one training trip | 20 days |
| 6) Boat | One skiff |

2. Kinds of training

- 1) Purse seine fishing
- 2) Stern trawl fishing
- 3) Twin trawl fishing
- 4) Tuna long-line fishing
- 5) Squid jig fishing

3. Fishing gears and nets

One set for each type of training mentioned above.

CHAPTER 1 BACKGROUND AND PURPOSE OF STUDY

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1 - 1 Background

The Fourth National Development Plan of the Federal Republic of Nigeria puts emphasis on promoting the growth in the agricultural sector along with various investment activities. Owing to the rapid growth of population in Nigeria recently, a campaign to increase production in agriculture is one of the top priorities in the Fourth National Development Plan from the national point of view.

In the agricultural production campaign, targets have been set to increase the catch of fish. In order to meet the urgent and increasing national demand for fish, the Government of Nigeria requested the Government of Japan for a research and training vessel to be granted for developing coastal fishing grounds and marine resources, and for promoting the specialized knowledge of fisheries.

In response to the request from the Government of Nigeria, the Government of Japan through the Japan International Cooperation Agency (JICA) sent a study team to Nigeria starting from October 19 to 30, 1980 to carry out a basic design study.

On the basis of the above request, the study team conducted the field surveys and the discussions in accordance with the study itinerary to verify the following: the importance, appropriateness, and effectiveness of the contents of the request in terms of achieving the targets of the Fourth National Development Plan. The study team concluded that the research and training vessel would be very appropriate and proposed that detailed study of the request be made as one of the objects of the grant assistance from the Government of Japan.

In addition, the study team re-examined the contents of the request in terms of the scheduled amount of grant aid of the Government of Japan. The grant assistance was adjusted accordingly with the mutual agreement of both parties concerned. The details of the adjustments prescribed are listed in the Minutes attached herewith as Annex 4.

1 - 2 Purpose

The purpose of the study team is to draft the most needed and appropriate basic design for Japanese grant assistance. Consequently the team studied in Nigeria and Japan covering the following topics; relationship between the Nigerian National Development Plan and the Fisheries Promotion Project, the background, justification, contents of the request, local conditions, and how to select most effectively equipment & materials by both parties concerned to be utilized by government officials in the Federal Republic of Nigeria.

CHAPTER 2 OUTLINE OF REQUEST

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2 - 1 Background and Circumstances of Request

The presidential election on August 8, 1979 in the Federal Republic of Nigeria symbolized the termination of thirteen years of military government and the shift to civilian administration. Alhaji Chehu Shagari was elected president in October 1979.

Nonetheless, the Third National Development Plan which was issued during the period of the military government (April 1972) was inherited by the civilian government up to the end of 1980. Although the Third National Development Plan didn't achieve its target of developing agricultural production, the Fourth Development Plan being drafted at present aims at stimulating agricultural growth. A food production campaign was given top priority over all other important national schemes to meet the rising demand from the rapid growth of population in the country and also to shift the nation to being an exporter of agricultural products, especially those which have been imported in the recent years.

In accordance with the Plan, the fish catch was valued at 27% of the agricultural production in 1980 and is expected to be 34% in the year 1985. In order to meet the greater expectations of fisheries production, an urgent and fundamental restructuring of the fisheries administration systems is needed to exploit coastal fishing grounds and to develop marine resources. Consequently, the Fisheries Promotion Project is being drafted and will be examined by the departments concerned.

With the above background in mind, the Federal Republic of Nigeria requested the Government of Japan through the Embassy of Japan in Nigeria for a grant assistance for a research and training vessel necessary for implementing the Fisheries Promotion Project in Nigeria. Since the Federal Republic of Nigeria suffers from a shortage of seamen to engage in fishing, such a training vessel will play an important role in promoting the fishery industry in Nigeria.

2 - 2 Outline of Discussions

Through the meetings with officials of the Embassy of Japan in Lagos and the JICA Lagos Office, the general description of the Nigerian Government's request was outlined as introduced hereafter:

- 1) The population of Nigeria is estimated to be about one hundred million, and rapidly increasing along with Nigeria's influential role in Africa.
- 2) The Nigerian Government is launching the Fourth National Development Plan to cover the period from 1980 to 1985. The Plan outlines concrete measures to stimulate each sector of the economy to diversify from overdependence on oil .
- 3) A food production campaign is one of the most important capital investment schemes in the Fourth National Development Plan. Some of the marine products which are imported from abroad, are scheduled to be supplied by exploiting fishing grounds and developing marine resources.
- 4) To achieve the target of the food production plan, the Government recognizes that it is of vital importance to foster specialized knowledge of fisheries for government officials and fishermen by providing training courses and refresher courses.
- 5) The request for this project originated from the Nigerian Institute for Oceanography and Marine Research and the Federal Marine Fisheries School under the Ministry of Science and Technology, which is responsible for implementing the Project.
- 6) In order to determine the elements of the basic design study on the research and training vessel, it is necessary to exchange views with the Nigerian Institute for Oceanography and Marine Research.

Upon visiting the Institute, the study team explained their objectives to Director of the Institute,

- 1) The scheduled grant assistance offered from the Government of Japan will permit acquisition of the research and training vessel to be used as a vital tool in training.
- 2) The team's counterpart will be the Nigerian Institute for Oceanography and Marine Research which will act on behalf of the Nigerian Government. An officer in charge will be assigned to discuss the matter with the team on how the vessel should be built.
- 3) This will be the first cooperation program for a grant assistance in fisheries between the two countries.
- 4) The Nigerian Institute for Oceanography and Marine Research shall manage and operate the research and training vessel.
- 5) For smooth operation and management of the vessel after the delivery, the Institute realized the importance of acquiring full knowledge of the vessel and experience in actual operation prior to the delivery. Therefore, the Institute is ready to dispatch experts to Japan at its own expense.
- 6) The budgetary allocation for running the vessel has already been taken into consideration although additional requirements may arise.

The Nigerian Government and the study team agreed to the fundamental issues for the research and training vessel grant during a series of discussions in line with the study itinerary as follows:

- 1) In accordance with the scheduled amount of a grant aid from the Government of Japan, the vessel shall be of about 170 G/T with fishing nets and observation equipment for training together with a skiff for purse seine fishing.
- 2) The vessel shall be equipped with fishing gears & nets for purse seine fishing, stern trawlfishing, tuna long-line fishing, twin trawl shrimp fishing and squid jig fishing.
- 3) The vessel shall be capable of performing for a maximum of 20 days per training trip.

- 4) The complement shall be 25 persons including crewmen and trainees, a captain, an instructor, and a chief engineer.
- 5) A laboratory room shall be provided.
- 6) The vessel shall be equipped with the research equipment necessary for marine observation.
- 7) The vessel shall be built for easy operation and yet have cozy living quarters.
- 8) The equipment and the materials shall be selected in consideration of easy maintenance.

CHAPTER 3 BASIC DESIGN STUDY

CHAPTER 3 BASIC DESIGN STUDY

3 - 1 Outline of Basic Design Study

The Nigerian Government has been drafting the Fourth National Development Plan by investing funds in various fields. Fisheries is a prominent item in the plan since the government is trying to reduce its imports and diversify its economy from over-dependence on oil. The government has put emphasis on promotion of specialists in fisheries, and exploitation of fishing grounds and marine resources.

Consequently, the Nigerian Government requested the Government of Japan to grant funds for a research and training vessel which shall have the capability not only for training, but also for investigating fishing grounds and marine resources. The intention of this request is to enrich the training facilities and courses at the Federal Marine Fisheries School.

In response, the study team has conducted the basic design study for the research and training vessel through a series of discussions with the Nigerian officials. The vessel will be equipped with fishing gears and nets and observation equipment to effectively help exploit marine resources and train fishery personnel.

3 - 2 Selection of Equipment and Materials

Prior to the team's departure from Japan, the Nigerian Government requested the Government of Japan for a 200 G/T research and training vessel on which she omitted to mention fishing gears and nets necessary for training.

Upon actual study at site and through a series of discussions with the officials concerned, the team was able to justify the contents of the request with initially agreeable modifications as follows:

1) Research and Training Vessel

- | | |
|------------------------|---|
| 1. Gross tonnage: | About 170 G/T |
| 2. Main Engine: | 700 HP |
| 3. Complement: | 25 persons |
| 4. Private Rooms: | 3 rooms |
| 5. Laboratory: | one lab. |
| 6. Fish hold capacity: | 25 m ³ |
| 7. Cooling systems: | One unit each of air cooler & contact freezer |
| 8. F. O. T.: | About 50 m ³ |
| 9. Fishing gears: | Normal size |
| 10. Skiff | One boat |

2) Fishing Gears and Nets

1. Purse seine fishing
2. Stern trawl fishing
3. Twin trawl shrimp fishing
4. Tuna long-line fishing
5. Squid jig fishing

3-3-1-1 Objectives of Establishment

(1) Chronology of Establishment

- 1953 The Federal Fisheries Division was organized first time under the Federal Ministry of Economic Development and transferred to the management & control under that of Agriculture & Natural Resources.
- 1970 Promoted the old division to the Federal Department of Fisheries under the Federal Ministry of Agriculture and Regional Development.
- 1975 Nov. Renamed the Nigerian Institute for Oceanography and Marine Research (NIOMR) and separated from the Marine Biology Division, the Department of Federal Fisheries.

(2) Objectives

The NIOMR was established to survey marine resources and marine natural environments in the territorial waters of Nigeria and the open sea as follows:

1. Survey and research on the biological characteristics, distribution, density, and practical methods to exploit and use marine fish and living creatures.
2. Brackish water fishing and fish culture improvement.
3. Survey and research on socio-economic problems on the process of resources development in oceanographic and inland water fisheries.
4. Survey and research on public pollution in the coastal and territorial waters of Nigeria.
5. Survey and research on oceanographic environments, meteorological forecasts, seabed topography, accumulated seabed layers, seabed deposits, etc.
6. Survey and research on other related subjects.

(3) Other administrative organizations

The NIOMR also gives the supervision and guidance to:

1. The Research Institutes in Lagos
2. The Federal Marine Fisheries School in Lagos
3. The Bugama Station in the Niger Delta

(4) Research Areas

1. Marine Biology

Assessment of the economic potential of all marine living creatures is made by classifying, distributing, and evaluating the catching season and place, and its density. Particular attention is focused on control of the marketable species (i.g. shrimps, prawns, etc.) and through natural biological means and scientific study to develop them rationally.

2. Brackish Water Fish Culture

To develop and improve brackish water fish culturing to increase their productivity. To convert swampy areas which can't be cultivated for crops to fish breeding grounds. And to encourage fishermen to use efficient fish culture techniques.

3. Fish Processing

With effective processing methods, to improve the quality of catches and to expand the crustacean resources. This purpose is to lower the price and control the quality and the quantity of fishes and crustacean catches which will reduce dependence on imports and benefit consumers in general.

4. Public Marine Pollution

To grasp the actual state of public pollution caused by petroleum and industrial effluence in the coastal waters of Nigeria, to set up a checking system to control such public nuisances, and also to issue fundamental guidelines needed to protect the marine environments and resources.

5. Marine Physics and Chemistry

To grasp the fundamental knowledge of physical and chemical features of the Nigerian marine environments, to investigate the main changes in the marine resources and to develop a weather forecast system in the ocean.

6. Marine Topography and Geophysics

- a) To make a map of on-going soil erosion and accumulated formations along the coastal line of Nigeria and to recommend strategic countermeasures for Bar Beach, Lagos, Ports and harbours, and the resort areas by clarifying the physical cause of destruction.
- b) To make a map showing the on-going soil accumulation areas and to identify the quality, expansion and location of deposits (clayey soil, sand, gravel, sludge, shells, etc.).
- c) To make a chart which shows the distribution of hard seabed deposits.
- d) To collect data regarding economic mineral resources through the chemical and mineralogical analysis of deposits.
- e) Finally, to assess the potential resources of seabed deposits which have been already analyzed.

7. Fishery Statistics

To improve the existing oceanographic data collection system to help effectively support scientific appraisal of any development plan.

8. Fishery Economy

To assess the economic value of trawl fishery, brackish water fish culture and artisanal canoe fishery in brackish and coastal waters, and to promote their development by clarifying the main factors of production and adaptability.

9. Federal Marine Fisheries School

To foster the fishery knowledge of personnel and to provide an orientation course for newly employed officials and fishery

inspectors.

10. Extension Research and Consultant Services

To disseminate the results of research and investigation and also to carry out investigations concerning any aspect of fisheries upon request.

11. Engineering

To conduct research activities and to improve the fundamental scientific facilities and instruments in every research Dept. of the NIOMR, so that they can be utilized easily and as much as possible.

12. Manpower Training

The NIOMR offers the following educational opportunities for government officials in general:

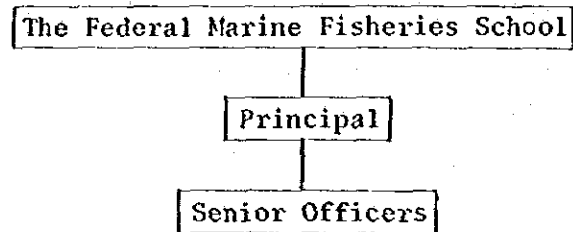
- a) To develop the technical knowledge of selected officials in a related fishery field as long as his ability permits.
- b) To assess the executional knowledge requirements of assigned work.
- c) To transfer the professional knowledge in any chosen related fishery field to improve the quality and maintain the highly polished ability of specialists taking up new work responsibilities.
- d) To upgrade the quality of manpower to be industrious and eager to work.

3-3-2 The Federal Marine Fisheries School

3-3-2-1 Outline

In 1967 the Federal Marine Fisheries School was established to foster trained manpower. In 1976, the School was transferred from the Federal Fisheries Department of the Ministry of Agriculture to the control of the NIOMR of the Ministry of Science and Technology.

3-3-2-2 Organization



Full-time instructors:

Mr. Kim	(FAO)	Navigation
Mr. Kahang	(FAO)	Engineering
Mr. Washizu	(FAO)	Fishing operation
Mr. Omotoyo	(Local)	Fishing gears/Fishing techniques
Mr. Okusaga	(Local)	Biology
Mr. Ugbor	(Local)	Biology

In addition, another more than 10 part-time instructors take part in teaching.

3-3-2-3 Objectives

Since 1976 the Federal Marine Fisheries School has been responsible for training fishermen, mates, coxswains, and motormen, and also for giving refresher courses to government officials such as fisheries inspectors and superintendents under the Nigerian Institute for Oceanography and Marine Research.

The objectives of the School are as follows:

- (1) To produce fishery experts necessary for expanding, investigating, training, developing the fishery projects in Nigeria, and also for establishing the foundation of fisheries.
- (2) To acquaint trainees up to the highest national and international levels in the fishery field of operation and management.

- (3) To produce personnel who will man fishing vessels and perform other allied duties.
- (4) To introduce the modern techniques to fishermen to help improve their socio-economic standard of living.

3-3-2-4 Training Curriculum

The school offers seven courses ranging in duration from 6 months to 2 years.

(1) Fisherman Proficiency Course

Period: 2 months (8 weeks)

Objectives: To educate artisanal canoe fishermen to acquire the up-to-date techniques concerning the handling of fishing gears and modern fishing methods.

Qualification of Applicants:

Elementary school graduates and/or equivalent;
able to swim; minimum one year actual fishing
experience; evaluated the actual fishing
experience even if they are illiterate fishermen.

Subjects: -Fishing gear techniques and fishing methods
-Basic seamanship
-Fundamental biology
-Fish handling
-Practical fishing (basic management system)

Certificate: Fisherman Certificate of Competency is
awarded to those who successfully complete the
course.

(2) Coxswain (Fishing) Course

Period: 6 months

Objectives: To acquire a license for the captain of a fishing
vessel less than 60 feet (18 m) long.

Qualification of Applicants:

Graduates from the fisherman proficiency course and minimum two years' experience in maritime affairs after graduation; lower secondary graduates who have experienced on a registered mechanized fishing vessel for more than 2 years.

Subjects: - Fundamental mathematics - Signalling
- Utilization of naval charts - Marine Affairs
- Fire fighting - Life saving

Certificate: Certificate of Competency awarded by the Federal Ministry of Transport.

(3) Mate's (Fishing) Course

Period: 9 months

Objectives: To acquire a license for the captain of a fishing vessel of less than 100 feet (30 m) long.

Qualification of Applicants:

Should have minimum 3 years seafaring experience as a coxswain after having obtained license to be a coxswain

Subjects: - Fundamental mathematics
- Utilization of naval charts
- Life buoys
- Marine affairs
- Sound Measuring equipment

Certificate: Mate Certificate of Competency awarded by the Federal Ministry of Transport.

(4) Motormen Grade II

Period: 9 months

Objectives: To acquire a license of "Chief Engineer" for a fishing vessel of engine up to 12 horsepower.

Qualification of Applicants:

Primary school graduates with minimum one year practical seafaring experience.

Subjects: - English
 - Elementary mathematics
 - Fundamental science
 - Diesel engine of ship
 - Practical repair techniques
 - Maintenance and management of engine room
 - Marine affairs (practical)

Certificate: Motormen Grade II Certificate awarded by the
 Federal Ministry of Transport.

Following courses are prepared for the government officials.

(5) Fishery Assistants Course

Period: 2 years academic course

Objectives: To produce junior and intermediate level fishery
 officers who are qualified in the management
 and operation of the up-to-date fishing techniques,
 the construction and management of culture ponds,
 and the small-scale fishery project.

Qualification of Applicants:

Graduates from the 5-year secondary school plus at
least 6-month seafaring experience.

Subjects: - Fundamental science
 - Fishery statistics
 - General ecology and oceanography
 - Management and operation
 - Fishery biology
 - Culture and fishing method
 - Fishing gear handling and catching techniques
 - Seafaring practice
 - Fish handling and preservation
 - On-the-job training

In addition, the following extra-curricula subjects are provided:

3 months Practice based on an individual theme
6 months Lectures (mainly on fundamental science)
4 months Lectures (mainly on fisheries)
2 months Practice on fishery project
3 months Lectures and a final assessment

Total: 18 months (2 academic years)

Certificate: Ordinary Diploma in Fisheries

(6) Fishery Superintendents Course

Period: 2 academic years

Objectives: To produce intermediate level fisheries personnel who will be able to train fishermen and other related persons, and also supervise fishery promotion projects.

Qualification of Applicants:

Ordinary Diploma in Fisheries and have at least one year practical experience.

Subjects:

- Culture
- Teaching methods to Adults
- Fishery biology II
- Government secretarial procedures
- Fish handling and preservation II
- Management/operation
- Fishing gear handling techniques II
- Marketing of fish
- Fishery cooperatives

Breakdown of curriculum:

7 months Lectures
2 months Practice in the Fishery Project
2 months Practice in own state
2 months Lectures and a final assessment

Total: 13 months (2 academic years)

Certificate: Higher Diploma in Fisheries

(7) Induction Courses for Newly Employed Fishery Research Officers

Period: 6 months

Objectives: To educate newly employed officials in general fisheries practice (including marine and fresh water fisheries)

Qualification of Applicants:

Newly employed officers of the fishery offices

Subjects:

- Nigerian Fishery Development Project
- Survey techniques
- Fishing ecology
- Fishing method
- Marketing and distribution of fish
- Fishing gears/fishing method
- Fishery statistics
- Structure of fishing vessels
- Basic management and control
- Government secretarial procedures

Practical training is usually conducted where the Fishing Project is carried out such as at Lagos, Government Fishery Offices, or at fishery industries.

Certificate: Certificate of Participation

The instructors are from the Federal Fisheries Department, the various federal ministries, the State Fisheries Department, and the Nigerian Institute for Oceanography and Marine Research.

3-3-3 UNDP(FAO) Project

The main Project objectives are as follows:

1. To evaluate fishing methods, educational techniques and related matters so as to upgrade their qualities.
2. To provide educational training for general staff concerning the effective management of fisheries schools.

3. To set up facilities and assist them in financial management.
4. To conduct marine fisheries training.
5. To introduce effective audio-visual training techniques when necessary.
6. To conduct a short-term seminar on the up-to-date knowledge and techniques concerning related fishery subjects.
7. To directly provide the guidance on education.

The FAO has been conducting educational assistance for the Federal Marine Fisheries School under the Project.

3-3-4 Number of Graduates from The Federal Marine Fisheries School
(1975 - 1980)

(persons)

subject \ year	75/76	76/77	77/78	78/79	79/80	TOTAL
1. FISHERMEN	46	58	38	34	14	190
2. COXSWAIN	11	-	24	14	13	62
3. MATES	-	9	10	17	5	41
4. FISHERIES ASSISTANTS	-	27	61	99	76	263
5. FISHERIES SUPERINTENDENTS	-	14	39	57	62	172
6. MOTORMAN II	-	-	-	5	6	11
7. FISHERIES OFFICERS INDUCTION	31	33	39	23	35	161
TOTAL	88	141	211	249	211	900

As shown in the above table, the total number of graduates reached 900 of which 597 were officials of the federal/state governments undergoing refresher's course. Undoubtedly they will play an important role in executing the Fourth National Development Plan.

3-3-5 Present State of Economy and Fisheries in the Federal Republic of Nigeria

3-3-5-1 Present State of Economy

- (1) The Nigerian economy which experienced record-breaking years from 1977 - 1979 due to the "Oil Boom", has since seriously stalled in its bid for growth.

In the past two years, the Nigerian international balance of payment has been in the red partly due to the continuous depression of advanced countries in the western hemisphere and partly due to the decline in exports of petroleum from Nigeria. The trade balance of Nigeria recorded a deficit of US\$ 3.4 billion in 1978 because of the export slump of petroleum and the continuous high level of imports for the various investment activities in the Third National Development Plan.

As a result, the foreign reserve was reduced from US\$ 4.2 billion in 1977 to US\$ 1.8 billion in 1978. In order to cope with the aggravated international balance of payment, the Government of Nigeria introduced the loans of US\$ 1.0 billion in January and of US\$ 7.5 billion in September 1978, and announced a stage-by-stage import restriction policy banning the import of some articles which could be obtained in the domestic markets, and restricting the import of others by import licence limitation.

One of the reasons for the stagnation of the economy is due to the performance of the agricultural sector. Previously, agriculture has acted as a main growth area for the Nigerian economy; however, in recent years its growth rate of only 1.8%

has not kept pace with the 2.5% growth rate of population. Consequently, Nigeria has imported agricultural products.

Owing to the stagnant economy in 1977-78, scrutinies were taken place to the state concerning the overdependence of the economy on oil and brought them to realize the importance of the agricultural sector.

(2) The Fourth National Development Plan

The Third National Development Plan was scheduled to terminate at the beginning of 1980; however, due to the economic instability described above, it continued to be implemented until the end of 1980. The estimated amount of investment at the beginning of the Plan was 30 billion Niras (US\$ 5.3 billion). This amount was modified to 40 billion Niras (US\$ 70 billion) to correspond to the commodity price hikes and inflation.

The Fourth National Development Plan was drafted during the stagnant period of the economy and the latter stage of the Third National Development Plan by the military government and handed down to the civilian government.

The Fourth National Development Plan covering the 5 years from 1980 to 1985 has been under examination to determine whether to invest the total planned amount of about 35 billion Niras. The Shagari Government unveiled the objectives of the Plan as follows:

- (1) To reduce the volume of oil export from 2.18 million barrels/day in 1981 to 1.94 million barrels/day in either 1984 or 1985.
- (2) To review the causes regarding the decline of agricultural production, contrary to the original plan, and to achieve a growth rate of 5%/year by implementing various countermeasures.
- (3) To draft fiscal and financial policy to encourage industrial production as the Fourth National Development Plan targeted with the understanding that the low-rate import duties before 1978 induced too much import and discouraged production domestically.

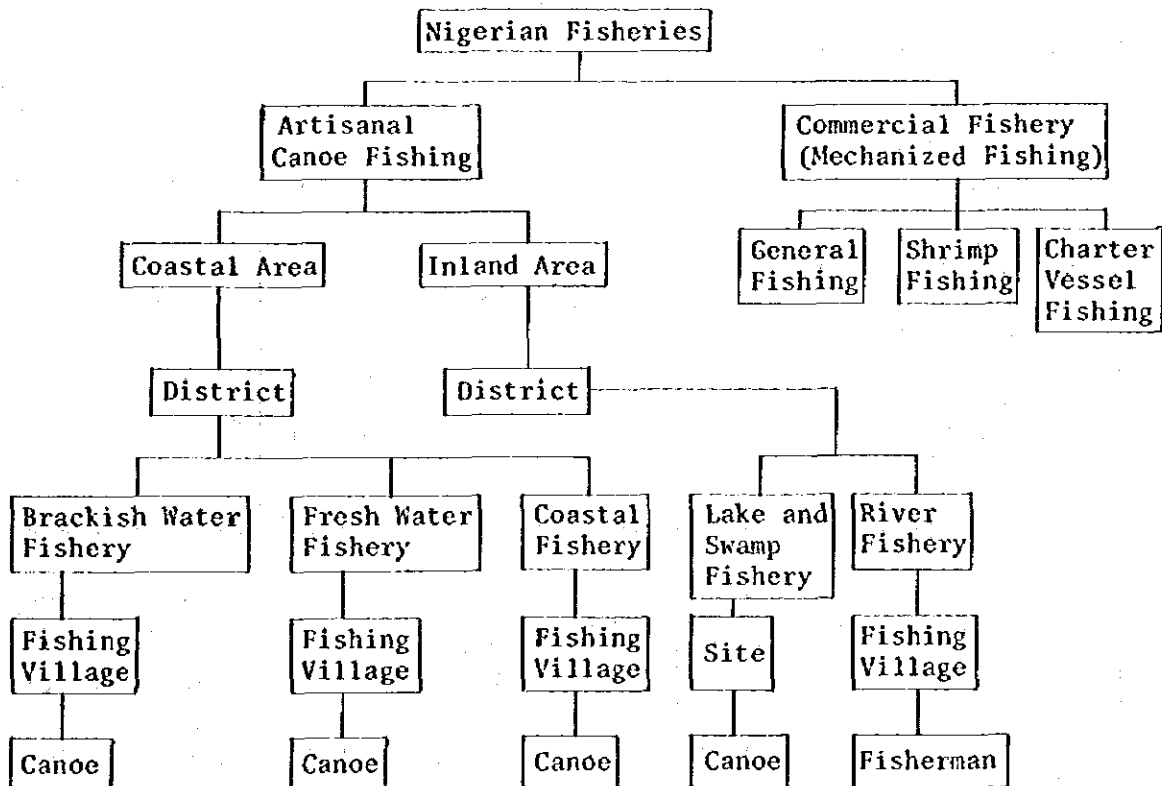
- (4) To rely less on petroleum as the major source of public revenue and foreign currencies. To achieve this objective by promotion of agricultural products, textiles, tires, plastics, etc. and the pursuit of new revenue sources.
- (5) To restrict the growth rate of ordinary Federal and local government expenditures to no more than 10%.

In the above objectives, reviews and examinations to the previous plan have refocused economic efforts away from overdependence on oil to self-sufficiency and the restoration of the agricultural production.

3-3-5-2 Present Condition of Fisheries

(1) Nigerian fisheries can be classified as follows:

1. Distant water fisheries
2. Coastal and brackish water fisheries (artisanal canoe fishery)
3. Inland water fisheries



(2) Fishery Production

As shown in the table below, artisanal canoe fishery is the major production source in Nigeria. Large mechanized fishing vessels have yet to be mobilized to catch fishes.

(Unit: M/T)

item \ year	1974	1975	1976	1977	1978	1979
A Artisanal Fishery						
1. Coastal and Brackish water fishery	226,004	256,034	245,336	247,858	255,426	264,495
2. Inland water fishery	239,350	240,028	240,823	240,164	245,986	259,632
Subtotal	465,354	496,062	486,159	488,022	501,412	524,127
(Index to the previous year)	(100)	(106.6)	(98)	(100.4)	(102.7)	(104.5)
B Commercial Fishery						
1. Coastal fishery (fishes)	5,768	8,056	8,725	13,767	15,245	9,406
2. Coastal fishery (shrimps)	2,098	2,117	1,763	2,225	1,910	1,902
3. Pelagic fishery (import)	74,905	114,186	133,977	164,449	202,208	218,000
Subtotal	82,771	124,360	144,465	180,441	219,363	229,308
(Index to the previous year)	(100)	(150.2)	(116.2)	(125)	(122)	(105)
Total	548,125	620,422	630,624	668,463	720,775	753,435
(Index to the previous year)	(100)	(113)	(102)	(106)	(108)	(105)

- (1) The growth rate of artisanal canoe fishery, production has rather low, namely, 2.3% as a mean average from 1974 to 1976. Future growth is uncertain unless changes and new techniques are introduced.
- (2) The growth rate of commercial fishing production has kept stagnant while the import rate has grown sharply reaching as high as 55.4% for 1975.
- (3) It is said that the annual volume of fish consumption was 1.5 million M/tons, of which the domestic production only reached 540,000 M/tons in 1979; the balance is expected to be imported.

(3) Number of Fishing Vessels

Year	Coastal fishing vessel		Canoe	
	Fishes	Shrimps	With power	Without power
1971	13	26	4,204	90,923
1972	26	29	5,364	90,523
1973	27	30	6,224	91,732
1974	33	39	7,850	110,032
1975	33	30	8,240	120,381
1976	30	29	11,704	122,633
1977	43	36	12,187	125,256
1978	38	49	10,118	128,129
1979	44	48	12,510	121,218

- (1) There are quite a large number of canoe mostly without outboard motors, being mobilized even in the small-scale inland fishing. These vessels are a main means of catching fish.
- (2) In order to increase the fishery productivity, it is necessary to increase the number of coastal fishing vessels which are growing at a sluggish pace.

(4) Outline of Fisheries

1. Coastal canoe fishing

Coastal fishery is engaged in by canoe fishermen scattered over the coastal zone facing the Atlantic Ocean. They employ purse seine, gill net, trawling and long-line fishing techniques.

2. Brackish water fishery

It is mainly engaged in by canoe fishermen scattered in the creeks and lagoons in the southern coast of the Atlantic Ocean. They employ throwing nets, gill nets, and long-line fishing techniques.

3. Fresh water fishery

As with brackish water fishery, fishermen employ throwing nets, gill nets, and long-line fishing techniques in the main fishing grounds (e.g. rivers and swamps in the Niger catchment area and its tributaries, and swamps).

4. Fish culture

It is in an infant stage and development is expected in the future.

5. Commercial fishery

There are two kinds of commercial fisheries: namely, coastal fishing and shrimp fishing. The former is operated by six companies and the latter, ten companies. The catch of shrimps is export-oriented.

6. Distant water (pelagic) fishery

About 100 large-scale foreign trawling vessels are based at Lagos. When licences are issued to trawling vessel registerers, they are responsible for unloading their catch which is treated as imported from abroad.

(5) Fish marketing

A primitive fish collection system is being made by canoes. There is no special entity to be called "a centralized fish market", and there is even no fishing port in the capital city of Lagos. Only some small-scale cold storages are scattered here and there. The improvement of the marketing system will undoubtedly be a tremendous task for promoting fisheries in Nigeria.

CHAPTER 4 BASIC DESIGN

CHAPTER 4 BASIC DESIGN

4 - 1 Basic Design Policy

The study team observed the following guidelines in formulation of the basic design regarding the scheduled grant assistance.

- (1) To conduct the basic design within the scheduled amount of grant assistance prepared by the Japanese Government.
- (2) To study the actual needs regarding the contents and the background of the request in Japan and Nigeria.
- (3) To determine the management and operation plan concerning the equipment to be granted.
- (4) To investigate the necessary technical levels of the officials to be in charge of the research and training vessel which will be equipped with fishing gears and nets.
- (5) To give full consideration to help train fishery specialists who will engage in fishing and the field of marine resource development.
- (6) To design the research and training vessel to be both comfortable to live and as easy to operate as possible in full consideration of Nigerian conditions.

4 - 2 Contents of Equipment and Materials

The study team consulted with government officials regarding the contents of the request in accordance with the above basic design policy and the mutually agreed matters introduced in Chapter 2-2, and conducted the basic design as follows:

4-2-1

- | | |
|------------------------------------|---------------|
| (1) A research and training vessel | One unit |
| 1. Tonnage | About 170 G/T |
| 2. Main engine | About 700 HP |
| 3. Observation equipment | One set |

4. A skiff for purse seining One vessel

(2) Fishing gears and nets:

- | | |
|---|-------------------|
| 1. Purse seine net | One complete set |
| 2. Trawl net with otterboards | Two complete sets |
| 3. Twin trawl nets for shrimp
with otterboards | Two complete sets |
| 4. Tuna long-line | 100 complete sets |
| 5. Squid jigging by hand | 6 sets |

4-2-2 Reasons for selection of the equipment and materials

- (1) The size of the research and training vessel shall be scaled down to about 170 G/T, due to the budgetary limit and the need for fishing gears and nets, a skiff for purse seining, and the oceanographic observation equipment which were not included in the original estimation.
- (2) The fishing gears and nets, and the oceanographic observation equipment and materials were selected to meet kinds of fish, fishing grounds, and marine resources development activities in the coastal waters of Nigeria.

CHAPTER 5 CONCLUSION

CHAPTER 5 CONCLUSION

5 - 1 Feasibility of Project

The Government of the Federal Republic of Nigeria has been drafting its Fourth National Development Plan putting an emphasis on agricultural development in the light of the fact that Nigeria has turned into the country of importing provisions due to the poor growth rate of agricultural production (1.8%) compared with that of population (2.5%). Poor growth has also been experienced in the field of fishery, since the domestic fishing catch amounts to only 540,000 M-tons in 1979 out of the estimated annual fish demand of 1.5 million M-tons.

Nigeria has been striving hard to develop marine resources and fishing grounds to meet the national demand for animal protein and to be self-sufficient in the supply of fish.

In response to the request of the Government of Nigeria, the study team carried out the basic design study on the research and training vessel and confirmed that it has been appropriately selected and will contribute to the multi-purpose training and research activities to pursue the targets of the Fourth National Development Plan.

5-1-1 Marine Resources and Fishing Ground Development

Fisheries in the Federal Republic of Nigeria are mainly classified into brackish water fishery in lagoons, inland water fishery and distant water fishery which is relatively less advanced. In view of the fact that half million tons of domestic production at this stage can be regarded as fairly high level, it is quite natural for Nigeria to look forward to developing its marine resources and fishing grounds of distant water fishery. The research and training vessel that has been proposed will be most appropriate to achieve its assignment.

5-1-2 Fostering Manpower

Manpower resource development is indispensable for exploiting marine resources and fishing grounds. The expected research and training vessel shall be equipped with fishing gears and nets, and observation equipment (i.e., purse seine nets, stern-trawl nets, twin trawl nets for shrimp, tuna long-line, squid jigging line, current meters, electric calculators, pH meters, etc.). The study team confirmed that they will promote development of manpower under the designated training programmes.

5-1-3 Promoting Fishery Knowledge

In promoting fishery in Nigeria, there will be a strong demand for those who are well qualified for implementing the predetermined targets of the projects. It is no need to say that the expected research and training vessel will be able to provide an ideal chance for attaining the required theoretical and practical knowledge.

5 - 2 Recommendations and Suggestions

5-2-1 Effective Use of Equipment

It is advisable to arrange manning and budgetary allocation to operate the expected research and training vessel prior to the delivery, and if possible, to despatch a well experienced instructor or two of the Federal Marine Fisheries School who are expected to participate in training programmes, to the designated port in Japan where the vessel will set sail for Nigeria, so that they will be able to obtain knowledge of the vessel in actual operation by the time it arrives in Nigeria.

5-2-2 Effective Use of Informative Data

Regarding the training trips, it is also recommendable to refer any informative accumulated data available not only in Nigeria but also in other countries for operating the vessel to that extent that the training objectives will be able to be achieved.

5-2-3 Educational Training

The study team understand that it is an urgent need for the Federal Republic of Nigeria to develop the related fishery industries to secure animal protein, to stimulate the opportunities of employment, and, as a result, to act as a restrictive measure to fish imports.

For the various important measures under the Fourth National Development Plan, the door should be kept open for government officials from the ministries and the local governments to obtain knowledge regarding the theoretical and practical subject matters in fishery by means of the expected research and training vessel. At the same time when they are through, the best use of the vessel should be made by those who have vested, well-versed, specialized knowledge and long-term views for promoting fishery in Nigeria.

5-2-4 Development for Coastal Marine Resources and Fishing Grounds

According to the common understanding, fishery in Nigeria has mainly been practised by artisanal canoe fishing, and, unlike distant water fishing, has only been operated by a few joint-venture enterprises. Therefore, few data can be found that will be useful for the development of marine resources and fishing grounds. In the Fourth National Development Plan, the annual fishing productions are expected to achieve a total growth rate of 35% for the five years from 1980 to 1985. Since canoe fishing production has almost reached a saturation point, it is quite clear that active measures should be employed to promote distant water fishery in the country.

Judging from the above, it is quite timely for the team to conduct a basic design study on the research and training vessel to be granted, and to realize that some FAO experts will participate in effectively utilizing her for various development activities in marine resources, fishing grounds, and oceanographic researches.

5-2-5 Development for Distant Water Fishery

Since the Federal Republic of Nigeria imported a large quantity of fish which would in all livelihood tend to increase corresponding to the growth of population, the country has come to the stage when

it should seriously examine the promotion of distant water fishery to release it from the shortage of food and to secure marine fish protein.

5-2-6 Development for Fish Culture

Fish culture which is a means of increasing the productivity of fish is a research assignment of the Nigerian Institute for Oceanography and Marine Research and is also included in the curricula of the Federal Marine Fisheries School. It is hoped that these courses will be the forerunners to devise concrete promotion measures to propagate fish culture throughout the country.

Generally speaking, there isn't any natural barrier to the promotion of fish culture in the country since there are abundant waters in the rivers and swamps in the Niger catchment area and its tributaries, and also in the lagoons and the creeks in the coastal areas. Prior to the commencement of fish culture promotion in any location either inland or in coastal waters, however, it is a prerequisite to carry out the preliminary basic study on the quality of water (pH, O₂, feeding stuff), environments (the degree of contamination and pollution), and also on the selection of useful types of fish, an artificial hatching system, volume of production, and to draft the rules and regulations for the management and operation. It is one of the most important assignments for the Government of Nigeria to determine how to activate and promote the fish culture industry in the country since fish culture is one of the most effective methods to increase productivity in fisheries in the world over.

The study team sincerely hopes that the research and training vessel will contribute to spanning and deepening closer relationships between Japan and Nigeria.

ANNEX

1. Basic Design Study Team

Name	Task	Current Position
NAKAMURA, Noriharu	Leader	Fishing Boat Inspector, Fishing Boat Division, Oceanic Fisheries Dept., Ministry of Agriculture, Forestry and Fisheries
KONDO, Yoshihisa	Planning and Coordination	Project Coordinator, Social Development Dept., Japan International Cooperation Agency
MATSUMARU, Ryo	Fishing Operation	Manager, Fishing Operation Planning Office, Nichiro Gyogyo Kaisha Ltd.
OKADA, Hideo	Engines and Shipbuilding	Staff Manager, Ships Engineering Dept., Nichiro Gyogyo Kaisha Ltd.
TAKAYANAGI, Hisao	Fishing Nets and Gears	Staff Manager, Overseas Operations Dept. Nichiro Gyogyo Kaisha Ltd.

2. Study itinerary

- Oct. 19 (Sun) Av. at 21:00 by WT 907.
- 20 (Mon) Courtesy call to JICA Lagos Office.
General orientation on the socio-economic state of Nigeria and fishery in Nigeria.
- 21 (Tue) Courtesy call to the Embassy of Japan in Lagos.
General orientation on the state of fishery in Nigeria.
Discussions with counterparts.
- 22 (Wed) Courtesy calls to the Ministry of National Planning, the Ministry of Science and Technology, and the Nigerian Institute for Oceanography and Marine Research (NIOMR) together with the Federal Marine Fisheries School (FEFS).
Salutation, briefings and discussions with government officials.
- 23 (Thu) Discussions with NIOMR officials regarding a research and training vessel and the Minutes (draft)
- 24 (Fri) Study tour to a fishing net manufacturing company and Lagos Ports and Harbours.
- 25 (Sat) Study tour to fishing villages.
- 26 (Sun) - ditto -
- 27 (Mon) Visit to the Ministry of Science and Technology.
Director in charge of agriculture, Ministry of Science and Technology and Japanese team leader signed and exchanged the Minutes, and informed this to Under-Secretary of International Cooperation, Ministry of National Planning and the Embassy of Japan in Lagos.
Lv. Lagos to London at 23:55 by BR 362.
- 28 (Tue) Av. at Paris at 9:25 by BR 882.
- 29 (Wed) Lv. Paris at 12:30 by AF274 for Japan.
- 30 (Thu) Av. at Narita at 14:25 via Anchorage.

3. Roster

3-1 Government Officials

3-1-1 Ministry of National Planning

Mr. E.T. Ibanga Under-Secretary

Mr. Goddy I. Olumba Principal Assistant Under-Secretary

3-1-2 Ministry of Science and Technology

Mr. D.E. Iyamabo Director of Agricultural Science
for Permanent Secretary

3-1-3 Nigerian Institute for Oceanography and Marine Research

Mr. Eddie O. Bayagbona Director

Mr. John G. Tobor Assistant Director

Professor B.N. Akpati Chief Research Officer

3-1-4 Federal Department of Fisheries

Mr. M. A. Obakin Chief Fisheries Officer

Mr. Ade Adesioye Statistician

3-1-5 UNDP

Mr. K. Washizu Instructor

3-2 Japanese Officials

3-2-1 Embassy of Japan in Nigeria

Mr. Shoichi Nakamura Counselor

Mr. Norihiro Kobayashi First Secretary

3-2-2 JICA Lagos Office

Mr. Kozo Tomita Representative

MINUTES OF DISCUSSIONS ON A MARINE FISHERIES TRAINING/
RESEARCH VESSEL FOR NIGERIA

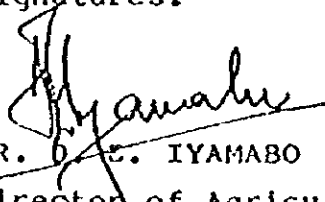
In response to the request made by the Government of the Federal Republic of Nigeria for technical assistance in Marine Fisheries training and research, the Government of Japan sent a study team headed by Mr. Noriharu NAKAMURA, Fishing Boat Inspector, Fishing Boat Division, Oceanic Fisheries Department, Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries, to the Federal Republic of Nigeria in order to carry out a basic design study of a training/research vessel from October 19 - 27, 1980.

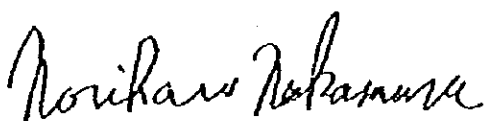
The team conducted the field study and had a series of discussions and exchange of views with officials of the Federal Government of Nigeria regarding the above-mentioned Fisheries Training/Research vessel.

As a result of the study and the discussions, the Japanese team and the Nigerian Federal Ministry of Science & Technology agreed that the Japanese team will prepare and submit a report to both the Japanese and Federal Nigerian Government for their further study on the proposed implementation of the project.

The major issues regarding the contents of the minutes, confirmed by the Nigerian and Japanese counterparts are attached herewith in the annex.

In confirmation of mutual agreement we fix our signatures.


MR. O. E. IYAMABO
Director of Agricultural Science
for Permanent Secretary,
Ministry of Science & Technology
Lagos, October 27, 1980.


MR. NORIHARU NAKAMURA
(Leader), Japanese Basic
Design Study Team

JICA