

BASIC DESIGN SURVEY REPORT
FOR
SRI LANKA'S FISHERIES DEVELOPMENT PROGRAM

OCTOBER 1979

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

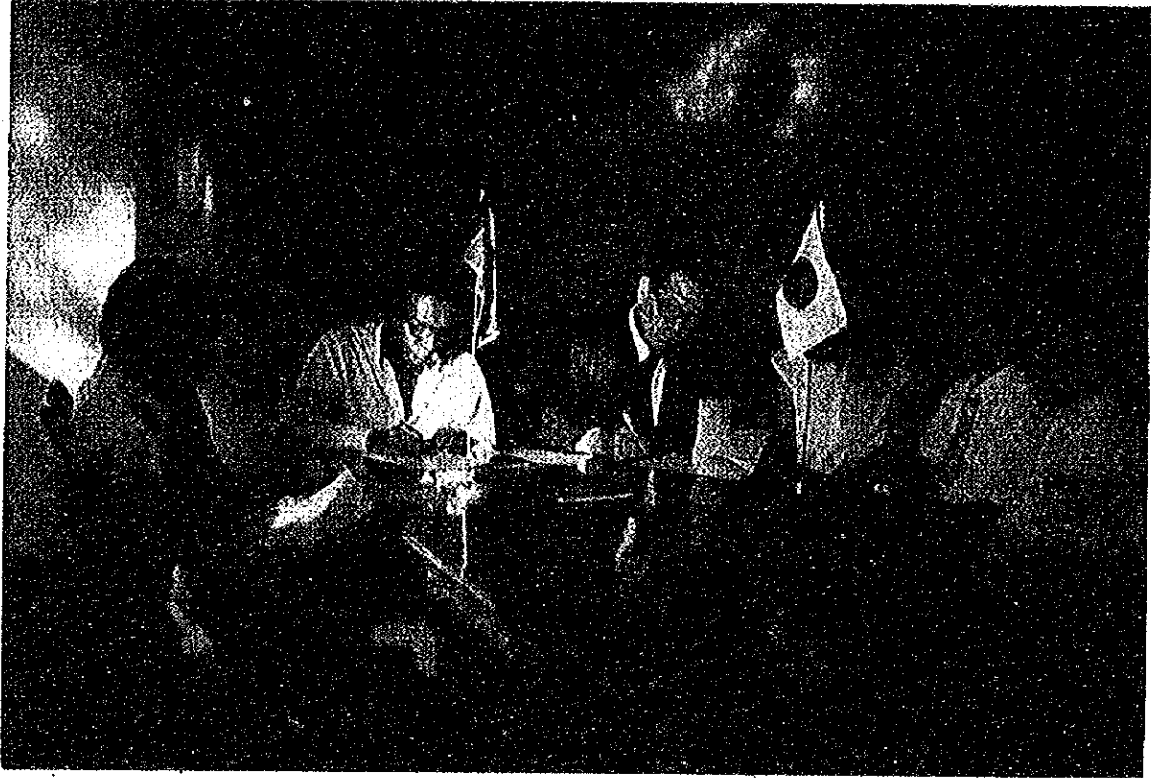
BASIC DESIGN SURVEY REPORT
FOR
SRI LANKA'S FISHERIES DEVELOPMENT PROGRAM

JICA LIBRARY



1026947E03

國際協力事業團		
受入 月日	'87. 4. 22	120
登録 No.	08518	89 FDT

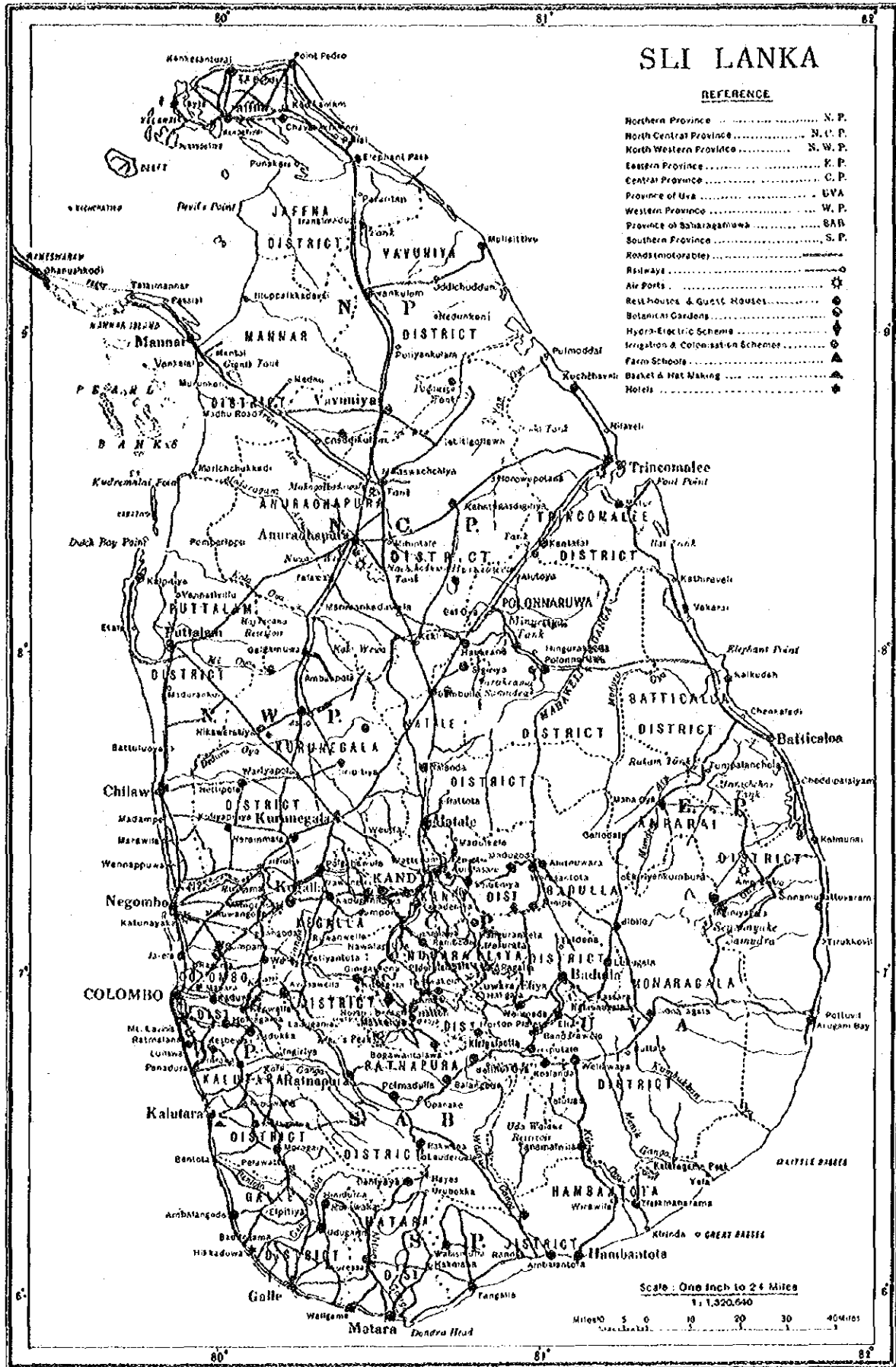


Signing Ceremony of the Minutes

SLI LANKA

REFERENCE

Northern Province	N. P.
North Central Province	N. C. P.
North Western Province	N. W. P.
Eastern Province	E. P.
Central Province	C. P.
Province of Uva	UVA
Western Province	W. P.
Province of Sabaragamuwa	SAB
Southern Province	S. P.
Roads (motorable)	—
Railways	—
Air Ports	✈
Rest-houses & Guest Houses	⊙
Botanical Gardens	⊙
Hydro-Electric Scheme	⚡
Irrigation & Colonisation Schemes	—
Farm Schools	⊙
Basket & Hat Making	⊙
Hotels	⊙



FOREWORD

The Government of the Democratic Socialist Republic of Sri Lanka has requested the Government of Japan for a grant aid necessary for its fisheries development project.

Based on this request the Japan International Cooperation Agency dispatched a survey team to Sri Lanka from July 28 to August 17, 1979 for consultation with officials concerned of the Sri Lanka Government as well as for collection of necessary data in designing the project.

Based on the field survey and discussion held with the officials concerned of the Government of Sri Lanka, the survey team has formulated the present report.

I hope that this report will prove to be useful for the development of this project and will contribute to promoting friendship between our two countries.

October, 1979

Shinsaku Hogen

President

Japan International
Cooperation Agency
(JICA)

TABLE OF CONTENTS

FOREWORD

Chapter 1. Objective and Processes of Survey	1
1-1. Objective of Dispatching Survey Team	2
1-2. Organization of the Survey Team	2
1-3. Survey Schedule	4
1-4. List of Persons Concerned in Sri Lanka	8
1-5. Outline of the Discussions	11
1-6. Minutes	13
 Chapter 2. Basic Design	 19
 Chapter 3. Merits of Inducing Equipment and	 26
Facilities as Grants, and Recommendations	
3-1. Merits	27
3-2. Recommendations	29
 APPENDIX	 31

Chapter 1

Objective and Processes of Survey

Chapter 1. Objective and Processes of Survey

The Government of the Democratic Socialist Republic of Sri Lanka has requested the Government of Japan, through the Embassy of Japan in Sri Lanka, for the Japanese Government's grant assistance for fisheries training vessels, fisheries training machinery and equipment in line with the fisheries development program in Sri Lanka.

In response, the Government of Japan has decided to consider the request as being a part of the fisheries project to be implemented under the fisheries grant appropriated for fiscal year 1979. However, upon studying the contents of the request from the Government of Sri Lanka, Japanese Government has found that a more detailed explanation is necessary for some of the contents and has therefore asked in September 1978 through the Embassy of Japan in Sri Lanka that such information be supplied.

The Government of Sri Lanka has supplied the necessary information and in addition has asked for ice plants, refrigerated trucks and other items. Upon a full study of the contents of the new request, the Government of Japan has decided to take it up as one of the projects to be implemented by Japanese grant in fiscal year 1979 and has assigned the Japan International Cooperation Agency to conduct a basic design survey on the request.

1-1. Objective of Dispatching Survey Team

The objective of survey is to study the background and contents of Sri Lanka's fisheries development program, by means of the observation of the Sri Lanka Fisheries Training Institute, the Fisheries Training Centers located in Negombo, Jaffna, Batticaloa and Tangalle, and the Ceylon Fisheries Corporation, and to prepare, upon exchange of views and discussion with the Sri Lanka authorities concerned, an optimum program with the necessary specifications and the amount of appropriations for each item together with its priority rating so that the Japanese Government's grant assistance may be undertaken in the most effective way.

1-2. Organization of the Survey Team

The survey team was organized by the following members with Mr. Takashi Yamamoto, Fishing Boat Inspector, Fishing Boat Division, Ocean Fisheries Department, Fishery Agency of the Ministry of Agriculture, Forestry and Fishery, Japan as Team Leader.

<u>Name</u>	<u>Assigned Duties</u>	<u>Incumbent Position</u>
Takashi YAMAMOTO	Team Leader, overall direction	Fishing Boat Inspector, Fishing Boat Division, Ocean Fisheries Depart- ment, Fishery Agency
Saburo MASAI	Cooperation planning	Chief, Fisheries Technical Cooperation Division, Japan International Cooperation Agency
Sadatoshi IIBUCHI	Ice making and refrige- ration	Overseas Agro-Fisheries Consultants, Co., Ltd.
Kenji OKAMURA	Fishing boat and gear	Overseas Agro-Fisheries Consultants, Co., Ltd.
Josuke YAMAGATA	Equipment	Overseas Agro-Fisheries Consultants, Co., Ltd.
Kenji ISHIWATA	Coordination of adminis- trative affairs	Fisheries Technical Cooperation Division, Japan International Cooperation Agency

1-3. Survey Schedule

Date	Place	Itinerary
1. July 28 (Sat)	Tokyo - Singapore	- Departed by JAL 711
2. July 29 (Sun)	Singapore - Colombo	- Arrived at Sri Lanka by SQ 39
3. July 30 (Mon)	Colombo	- Paid a visit to the Embassy of Japan
4. July 31 (Tue)	Colombo	- Paid a visit to the Secretary of the Ministry of Fisheries - Conferred with Japanese experts on the request by the Sri Lanka Fisheries Training Institute (SLFTI) - Conferred with officials of the Ministry of Fisheries on matters requested in relation to the Fisheries Training Centers (FTC) and Ceylon Fisheries Corp. (CFC)
5. Aug. 1 (Wed)	Colombo	- Paid a visit to the Minister of Fisheries - Meeting with the Secretary of the Ministry of Fisheries - Surveyed SLFTI and the Samudramaru
6. Aug. 2 (Thu)	Colombo	- Surveyed CFC - Only two members, Messrs. Yamagata and Okamura visited and surveyed SLFTI, the Samudramaru, the Sudaya (small training boat) and the Colombo Dockyard

Date	Place	Itinerary
		- Only the Team Leader and Mr. Masai held discussion with the Secretary of the Ministry of Fisheries
7. Aug. 3 (Fri)	Colombo - Tangalla	- Surveyed Tangalla FTC and other fisheries facilities at Beruwala. Principal of SLETTI and secretary/ the Secretary of the Ministry of Fisheries accompanied the team
	Colombo	- Only the Team Leader and Mr. Masai conferred with the staff of the Embassy of Japan
8. Aug. 4 (Sat)	Tangalla	- Surveyed Tangalla FTC and Galla Branch Office of the Ceylon Fishery Harbour Corporation (CFHC)
	Colombo	- Team Leader and Mr. Masai conferred with Japanese experts
9. Aug. 5 (Sun)	Colombo	- Compiled data and information collected. Also discussed various prearrangements
10. Aug. 6 (Mon)	Colombo	- Surveyed Negombo FTC, fish mart fishing boats and the Aquaculture Research Institute Principal of SLETTI, secretary/the Secretary of the Ministry of Fisheries and the Japanese expert accompanied the team Surveyed SLETTI and SIDA (Swedish Aid Institution) - Mr. Iibuchi alone surveyed CFC - Attended party sponsored by the Survey Team

Date	Place	Itinerary
11. Aug. 7 (Tue)	Colombo	- Sri Lanka national holiday (POYA-DAY) A meeting of all team members
12. Aug. 8 (Wed)	Colombo - Jaffna	- Surveyed Jaffna FTC, CFC, Jaffna ice plant, etc. Also, inspection trips to fishing ports and related facilities as well as CEY-NOR Development Foundation Limited (fishing net factory). Principal of SLFTI, secretary/the Secretary of Fisheries and Japanese experts accompanied the team
	Colombo	- Team Leader and Mr. Masai held a meeting with the staff member of the Embassy of Japan. Also had discussion with the Secretary of the Ministry of Fisheries
13. Aug. 9 (Thu)	Jaffna - Batticaloa	- Travel
	Colombo	- Team Leader and Mr. Masai conferred with the Embassy staff and discussed with the Secretary of the Ministry of Fisheries
14. Aug. 10 (Fri)	Batticaloa	- Surveyed Batticaloa FTC and CFC's ice plant - Made inspection trip to fish mart and fishing port
	Colombo	- Team Leader and Mr. Masai discussed with the Secretary of the Ministry of Fisheries. Made inspection trip to SLFTI, the Samudramaru and the Colombo Dockyard

Date	Place	Itinerary
15. Aug. 11 (Sat)	Batticaloa - Colombo	- Travel - Mr. Masai left for Japan by SQ 69 - A meeting of all team members
16. Aug. 12 (Sun)	Colombo	- Compiled data and information and prepared preliminary estimate
17. Aug. 13 (Mon)	Colombo	- Mr. Iibuchi surveyed CFC Messrs. Yamagata, Okamura and Ishiwata surveyed SLFTI - Team Leader held meeting with Embassy staff, then conferred with the Secretary of the Ministry of Fisheries - Attended party sponsored by the Secretary of the Ministry of Fisheries
18. Aug. 14 (Tue)	Colombo	- Team Leader held meeting with Embassy staff - Mr. Iibuchi surveyed CFC - Minutes of the Discussions signed - Paid farewell visit to the Minister of Fisheries
19. Aug. 15 (Wed)	Colombo	- Paid a visit to the Secretary of the Ministry of Fisheries to bid farewell - Visited the Embassy, reported progress and bid farewell - Compiled data and prepared for departure - Mr. Okamura surveyed UNDP fishing gear store

Date	Place	Itinerary
20. Aug. 16 (Thu)	Colombo - Singapore	- Team left for Japan by SQ 43
21. Aug. 17 (Fri)	Singapore - Tokyo	- Team arrived at Tokyo SQ 008

1-4. List of Persons Concerned in Sri Lanka

(1) - Ministry of Fisheries, Government of Sri Lanka

Excellency Festus Perera	Minister of Fishery
Mr. Anura Weeraratne	Secretary of the Ministry
Mr. C.R.B. Fernando	Director, Planning Division
Mrs. Swarna Silva	Secretary/the Secretary of the Ministry
Mr. K.M. Joseph	Advisor to the Ministry

- SLFTI

Mr. T.H. Gajanayake	Principal
Mr. A.R. Ganendra	Instructor, Fishing Course
Mr. M.N. Perera	Instructor, Engineering Course
Mr. U.H. de Silva	Instructor, Engineering Course
Mr. P. Vivekanandarajah	Instructor, Fishing Course
Mr. U. de Silva	Instructor, Engineering Course

- Tangalla FTC

Mr. S.J. Bodhiseela	Principal
Mr. K.A. Kingsley	Instructor, Fishing Course
Mr. R.P.D. Karunaratne	Instructor, Engineering Course

- Negombo FTC

Mr. N. Ganeshamoorthy	Principal
Mr. A.P. Senadhira	Instructor, Fishing Course
Mr. C.E.J. Edirisinghe	Instructor, Fishing Course
Mr. L.W. Perera	Instructor, Fishing Course
Mr. E.M. Dharmawardene	Instructor, Fishing Course
Mr. L.A.T. Perera	Instructor, Engineering Course
Mr. H.S. Attanayke	Instructor, Engineering Course
Mr. M.A. Dhammatilakaratne	Instructor, Engineering Course
Mr. N. Meddegoda	Instructor, Engineering Course

- Jaffna FTC

Mr. A. Rasanayagam	Principal
Mr. S. Ariaratnam	Instructor, Engineering Course
Mr. K. Dhamalingam	Instructor, Engineering Course
Mr. N. Navakumar	Instructor, Engineering Course
Mr. V. Kulasinham	Instructor, Fishing Course

- Batticaloa FTC

Mr. S.G.K. Jayawardene	Principal
Mr. Taul-Kelly	Instructor, Engineering Course
Mr. Maheswaran	Instructor, Engineering Course
Mr. Thevarajah	Instructor, Fishing Course

- CFC

Mr. W.A.B. Oscar Fernando	Chairman
Mr. T.G. Punchihewa	General Manager, Administration
Mr. R.T. Fernando	General Manager, Operations
Mr. Anton Rajasingham	Manager, Marketing Section
Mr. U. Selvaratnam	Chief Engineer

(2) Embassy of Japan

Excellency Keisuke Ochi	Ambassador
Mr. Makoto Asami	Counselor
Mr. Toshio Suzuki	Second Secretary

(3) Japanese Experts

Mr. Eiichi Haruta	Chief Advisor
Mr. Akira Origasa	Advisor in Fishing
Mr. Shoichi Kobayashi	Advisor in Engineering
Mr. Ryosaku Eguchi	Advisor in Fishing
Mr. Yutaka MATSUNAGA	Advisor in Fishing (Captain, the Samudramaru)
Mr. Tomiyasu Satoh	Advisor in Engineering (Chief Engineer, the Samudramaru)
Mr. Shoji Yoshida	Advisor in Fishing (Master Fisherman, the Sudaya)
Mr. Takahiko Kasama	Coordinator

1-5. Outline of the Discussions

At the outset of the meeting at the Ministry of Fisheries, the Secretary of the Ministry of Fisheries made a new request for assistance in fresh water fishery development and for the dispatch of experts from Japan. However, the request being beyond the scope of the objective of this survey, the team proposed to exclude this request from their discussions and obtained the understanding of the Secretary to this effect.

Also, upon ascertaining whether there was any change in the items requested by the Government of the Democratic Socialist Republic of Sri Lanka since its first request of 1978, the Secretary handed over to the survey team a new note of request.

The new note included the tuna long line fishing training vessel which Sri Lanka now sought as the first item on her list of priorities. As for the vessel's price, the Secretary forthwith instructed the Embassy of Sri Lanka in Japan to make investigations, and on the following day, produced the return cable from Japan to the survey team. The survey team expressed its concern that the vessel's price seemed somewhat lower than the market price, but at any rate expressed its appreciation of the Government's efforts in this matter.

Meanwhile, the survey team requested the Government of Japan for instructions on this matter, and based on its cable reply, informed the Government of Sri Lanka that the tuna long line fishing training vessel could be made the object of the Japanese Government's grant assistance, and asked that four questions be answered by the Secretary.

At the meeting held the following day, the Secretary promptly answered the questions and emphasized that there would be no organizational or budgetary problem whatsoever in receiving grant of the tuna long line fishing training vessel since the deputy director of the Fisheries Training Division would be exclusively responsible for the maintenance, management and operation of said vessel.

At the same time, the Minister of Fisheries sent an official letter to the Ambassador of Japan explaining that the tuna long line fishing training vessel was Sri Lanka's foremost priority, and requested his cooperation.

With due respect to the request of the Ministry of Fisheries, the survey team cabled back the Secretary's replies to the Government of Japan. In the meantime, it also conducted surveys of SLFTI, its training vessels, FTC at each location and CFC and its related facilities.

On the basis of the results of these surveys and discussions with the Sri Lanka authorities concerned, the Minutes of the Discussions was prepared and signed by and between the Team Leader and the Secretary.

1-6. Minutes

The survey team, while discussing and consulting with the Ministry of Fisheries and other authorities concerned since July 30, has also investigated the local situations. Based on the results of same, Minutes covering the following three items was prepared by and between Mr. Anura Weeraratne, Secretary of the Ministry of Fisheries, the Democratic Socialist Republic of Sri Lanka and Mr. Takashi Yamamoto, Team Leader, Japanese Basic Design Survey Team, and signed by both parties on August 14, 1979.

- (1) General matters
- (2) List of equipment and facilities earmarked as grants by the Government of Japan
- (3) Obligations to be undertaken by the Government of the Democratic Socialist Republic of Sri Lanka

MINUTES OF THE DISCUSSIONS ON THE BASIC
DESIGN SURVEY FOR THE FISHERIES DEVELOP-
MENT PROGRAMME OF THE DEMOCRATIC SOCIALIST
REPUBLIC OF SRI LANKA

At the request of the Government of the Democratic Socialist Republic of Sri Lanka for the grant in order to contribute to the fisheries development programme, the Government of Japan has sent through the Japan International Co-operation Agency a basic design survey team led by Mr Takashi Yamamoto, Fishing Boat Inspector, Fishing Boat Division, Fishery Agency to conduct a basic survey on the Sri Lanka Fisheries development programme for 21 days from July 28, 1979.

The team had a series of discussions and exchanged views with the Sri Lanka authorities concerned on the fisheries development programme.

As a result of the exchange of views and discussions, both parties have agreed to recommend to their respective Governments to take further necessary measures on the contribution for accomplishing the fisheries development programme under the possible Japanese grant in fiscal year, 1979.

14th of August, 1979
Colombo, Sri Lanka.

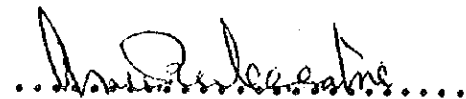
.....*Anura Weeraratne*.....
Anura Weeraratne,
Secretary to the Ministry
of Fisheries,
Democratic Socialist Republic
of Sri Lanka.


.....*Takashi Yamamoto*.....
Takashi Yamamoto,
Team Leader,
Japanese Basic Design
Survey Team

M I N U T E S

1. The authorities of Ministry of Fisheries expressed warm welcome and extended co-operation in all aspects of the survey activities.
2. The authorities concerned explained about the recent functional reorganisation of the Ministry of Fisheries and stated that the fisheries development programme of Sri Lanka is being planned and promoted by the Ministry of Fisheries.
3. The authorities concerned expressed that great emphasis is placed on the improvement of fisheries training programme and on the improvement of fish marketing system in the fisheries development programme.
4. The authorities concerned have presented to the team "NOTE ON EQUIPMENT UNDER THE JAPANESE GRANT 1978/1979" which is the modification of the initial note made by the Government of the Republic of Sri Lanka in July, 1978.
5. The survey team exchanged views with the Sri Lanka authorities concerned in the light of the note presented on the plan of operation of Fisheries Training Programme of Sri Lanka Fisheries Training Institute and the four Fisheries Training Centres. During the discussions the Sri Lanka authorities have stated that they have already created a separate division in the Ministry of Fisheries to look after training programme and this division is headed by a Director. In future all training programmes including the management and operation of fishing vessels attached to all the training institutions will be the responsibility of the Director/Training. The letter dated 9/08/79 from the Secretary/Fisheries to the Leader of the delegation supplements this information. It is therefore agreed that the recipient of all the equipment supplied for purposes of training will be the Director/Training of the Ministry of Fisheries and not individual institutes. The team also discussed the requirement of equipment for CFC on the basis of the note referred to above.

6. The survey team agreed to provide equipment and facilities as per annexe - (I) after giving due and careful consideration to the new priorities allotted by Sri Lanka authorities.
7. The survey team could achieve its objectives with active co-operation of staff members of Ministry of Fisheries, Sri Lanka Fisheries Training Institute, Fisheries Training Centres and Ceylon Fisheries Corporation.
8. The survey team expressed its utmost gratitude to the authorities concerned and recognized that the co-operation rendered by them facilitated its survey activities.


.....
Anura Veeraratne,
Secretary to the
Ministry of Fisheries.


.....
T. Yamamoto,
Team Leader

LIST OF EQUIPMENT AND FACILITIES


(I) For Director/Training


1. Tuna Long Line Fishing Training Vessel
2. 50' Gill netting Training Vessel
3. Marine diesel engines and equipment for 2 Nos 34' FRP boats
4. Audio visual vans
5. 160 h.p. Marine diesel engine
6. Fuel injection tester
7. Equipment for refrigeration training
8. Spare parts and equipment for Samudramaru
9. Micro buses
10. Fishing gear
11. Mobile repair vans
12. Tools for the workshops
13. Under water fishing lights and generators
14. Magnetic compasses
15. Fish finding equipment.

(II) For Ceylon Fisheries Corporation

1. Refrigerated trucks for fish transport
2. Ice Plants.


The authorities of the Ministry of Fisheries have stated that the items listed above are in the order of priority in which they want them and the first priority is for tuna long line fishing training vessel. If funds available are not adequate for the supply of all the above-mentioned equipment, the Ministry of Fisheries wants items which are given least priorities to be deleted or their quantities reduced so as to save fund for the supply of items which are given top priorities. The authorities have also requested that as far as possible the items of equipment meant for C.F.C. would be supplied.


..........
Anura Weeraratne,
Secretary to the
Ministry of Fisheries.

..........
T. Yamamoto,
Team Leader.

Annexe - (2)

The Ministry of Fisheries of the Democratic Socialist Republic of Sri Lanka will take necessary measures in accordance with the relevant laws and regulations of Sri Lanka for Japanese grant assistance of facilities and equipment.

..........
Anura Weeraratne,
Secretary to the
Ministry of Fisheries.

.....:.....
T. Yamamoto,
Team Leader.

Chapter 2

Basic Design

Chapter 2. Basic Design

The Ministry of Fisheries of the Democratic Socialist Republic of Sri Lanka is now promoting fisheries development under a five-year program. By its recent functional reform, the Ministry which formerly consisted of seven divisions is now reorganized into ten divisions. What is worthy of note is the creation of the Training Division which now implements fisheries training program more suited to the real circumstances in Sri Lanka.

SLFTI has drastically revised its previous training curricula to emphasize the actual practice of skills. For this reason, the need of better training equipment has become a pressing problem; hence the request for the grant.

FTC also, in reality, has close ties with the local fishery industry and is therefore emphasizing a training policy directly conducive to the improvement of local fisheries technology. Teaching materials, however, are inadequate and being strongly sought for. Full consideration of these local peculiarities seems in order -- particularly in regard to the restoration of facilities at Batticaloa FTC which was seriously damaged by the cyclone in 1978.

CFC is also trying to stabilize fish prices and improve the distribution system under the fisheries development program mentioned previously. At present, however, CFC accounts for a only 3% of the total fish catch of Sri Lanka and has not yet reached the stage of assuming leadership in the markets. Yet, the role to be played by CFC is extremely important from the viewpoint of securing stable supply of the nation's protein in the future.

The survey team has fully reviewed the effectiveness of granting the requested equipment in the light of the prevailing circumstances and future prospects in Sri Lanka and has reached the conclusion that the granting of the following listed equipment and facilities seems most appropriate, on the basis of which the proposed basic design was also worked out.

List of Equipment and Facilities to be Granted

<u>Recipient</u>	<u>Description</u>	<u>Quantity</u>
Ministry of Fisheries	- Tuna Long Line Fishing Training	1
	- 50' Gill Netting Training Vessel	1
SLFTI	- 160 HP, Marine Diesel Engine	1 set
	- Fuel Injection Tester	1 set
	- Equipment for Refrigeration Training	1 set
	- Spare Parts and Equipment for the Samudramaru	1 set
	- Fishing Gear	1 set
FTC	- Marine Diesel Engine and Equipment for 34' FRP Boats	for 2 boats
	- Audio-Visual Vans	2
	- Mobile Repair Vans	2
	- Tools for the Workshops	1 set
	- Micro Buses	4
	- Fishing Gear	
	- Other Equipment	
CFC	- Refrigerated Trucks for Fish Transport	6
	- Ice Plants	3 sets

The above listed equipment and facilities can be broadly classified into the following first three items.

- (1) Tuna Long Line Fishing Training Vessel
- (2) Gill Net Fishing Training Vessel and Equipment
- (3) Equipment for CFC
- (4) Freight, Packing, Insurance, Shipping, etc.

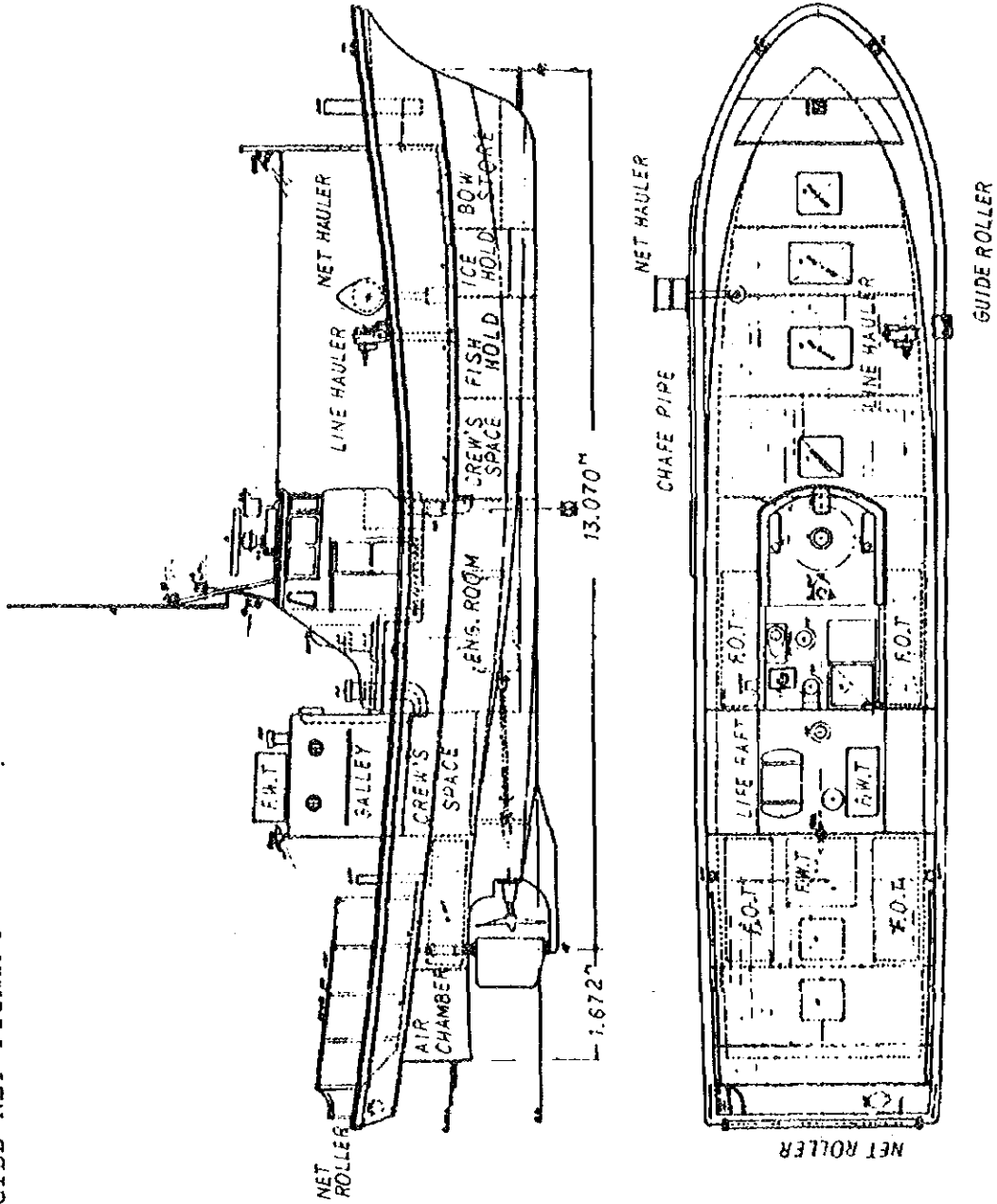
Item (1) not only reflects the needs of the new curricula but also the Government's strategy of being prepared to go into tuna long line fishing in the future.

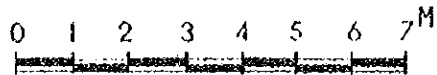
Item (2) is strongly oriented toward strengthening the current training program.

Item (3) intends to secure stable supply of fish at reasonable market prices.

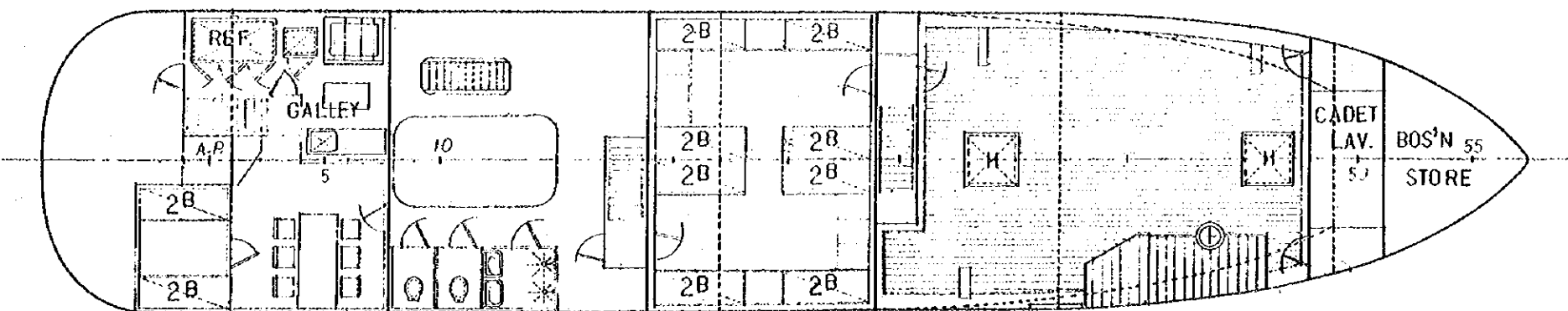
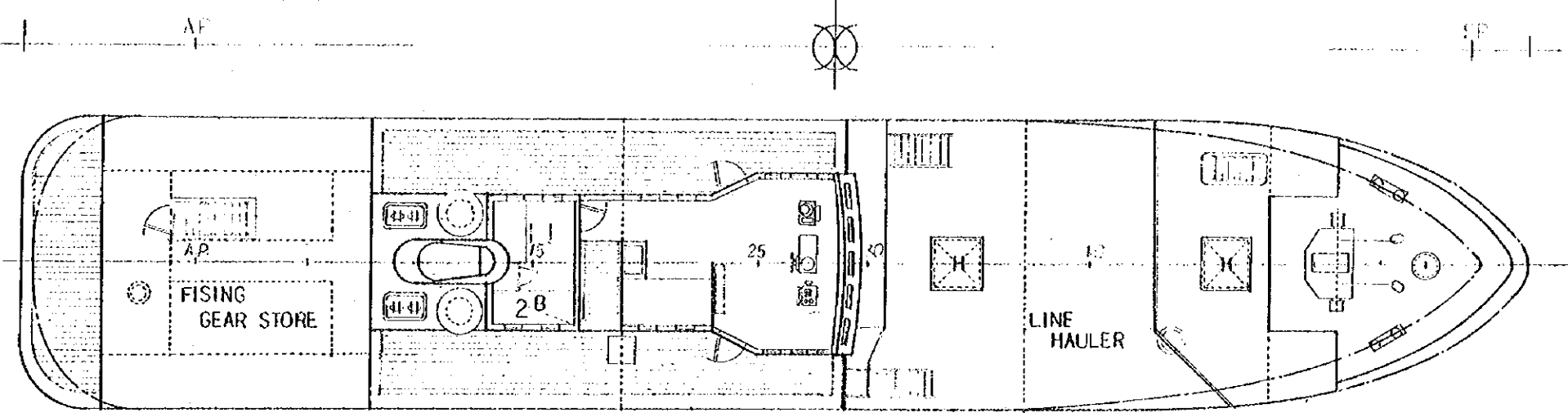
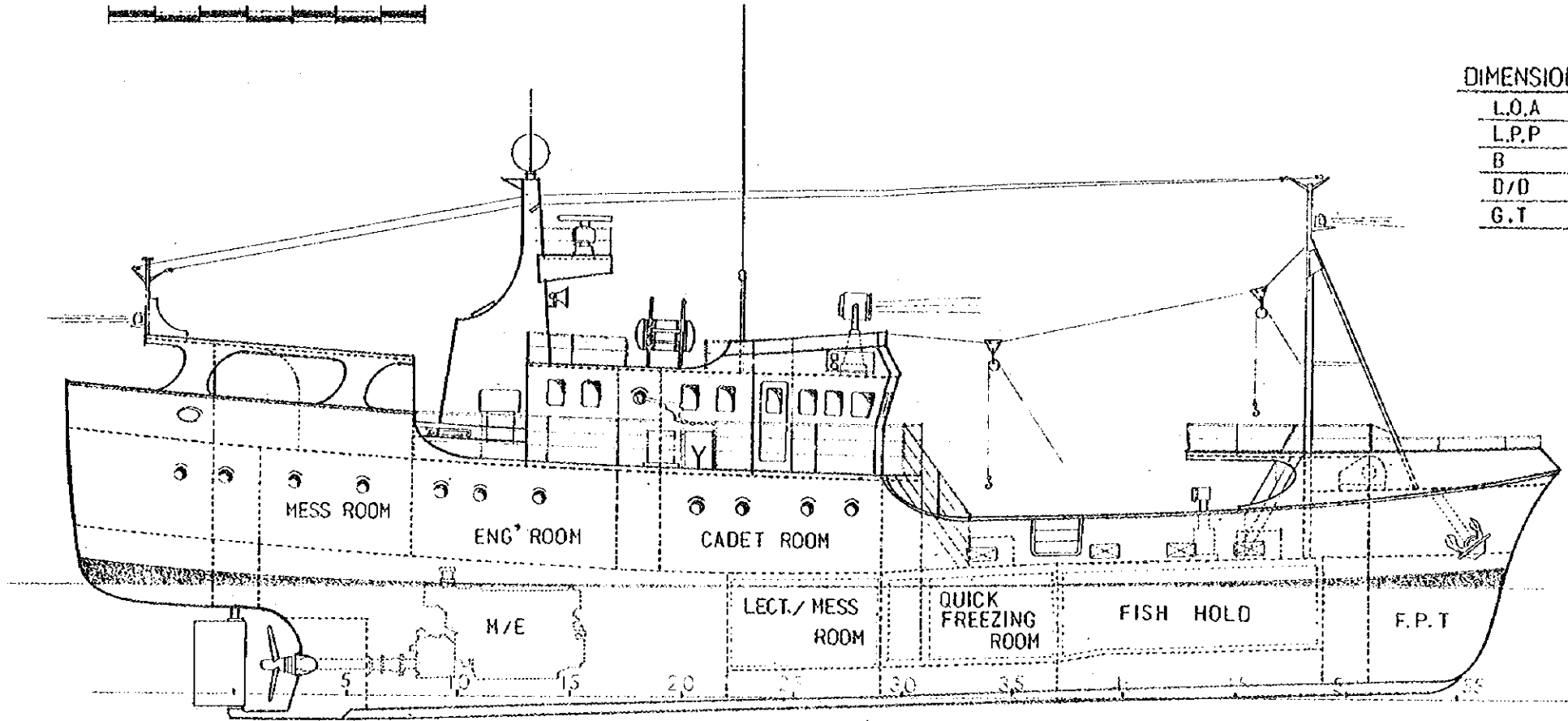
The above distribution of the grant is considered appropriate in view of the current situation and prospect for future growth in Sri Lanka.

50' TYPE GILL NET FISHING TRAINING VESSEL



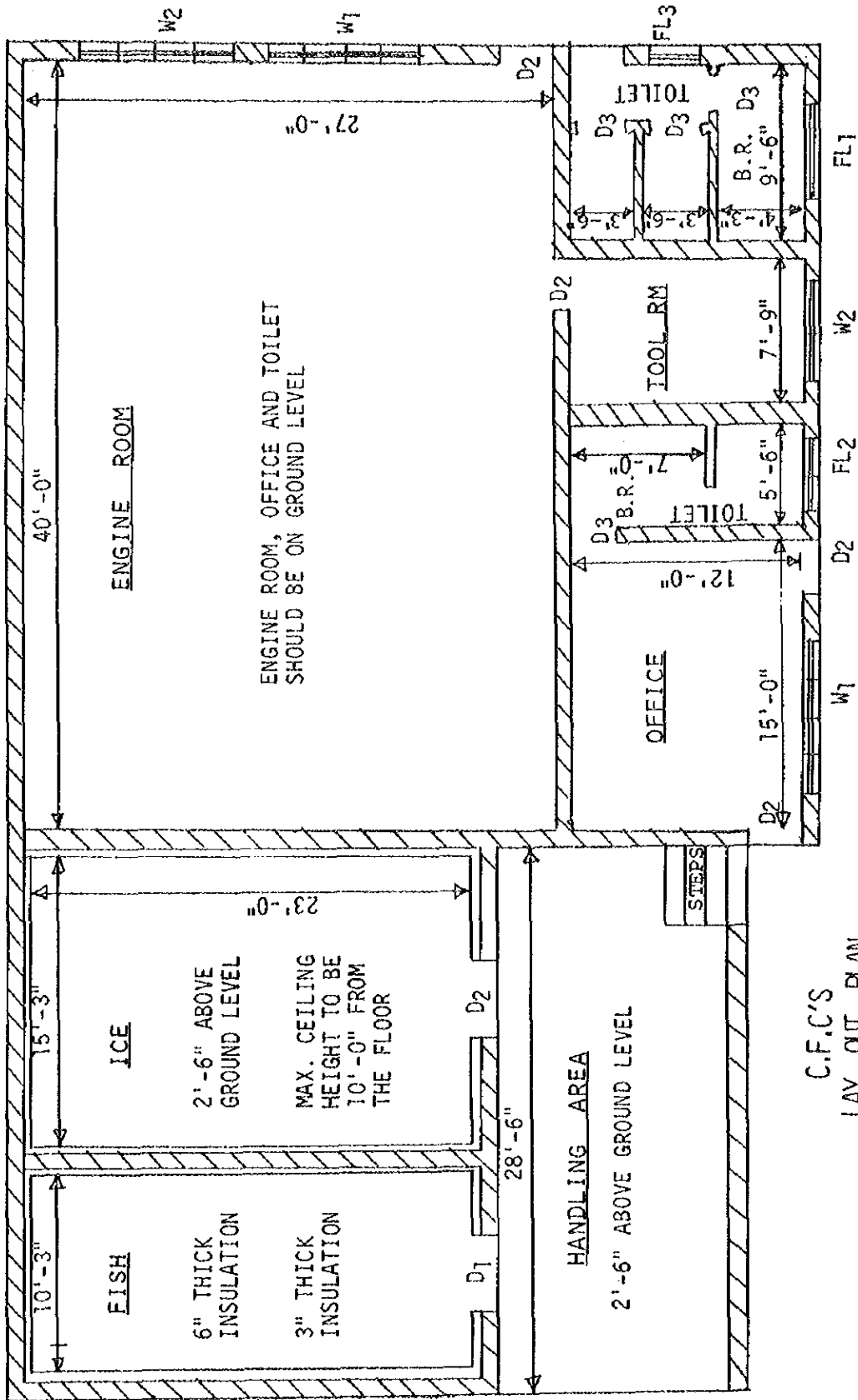


DIMENSION	
L.O.A	33.5 M
L.P.P	28.4
B	6.4
D/D	2.8 / 2.5
G.T	APPROX. 130 T



PRELIMINARY GENERAL ARRANGEMENT

PROPOSED FIVE-TON ICE PLANTS
IN DISTRICT BASIS



C.F.C.'S
LAY OUT PLAN

Chapter 3

Merits of Inducing Equipment and Facilities as Grants, and Recommendations

Chapter 3. Merits of Inducing Equipment and Facilities
as Grants, and Recommendations

3-1. Merits .

The Government of the Democratic Socialist Republic of Sri Lanka, in striving to promote the growth of its fishing industry to secure the supply of animal protein for the whole nation as well as conserve foreign exchange by limiting the import of marine products, has formulated the Fisheries Development Five Year Program.

The granting of the tuna long line fishing training vessel was reviewed by this survey team upon the strong request of the Government of Sri Lanka who has expressed its intention of assuming full responsibility for the operation of said training vessel. In fact, the Ministry of Fisheries of Sri Lanka has promised to assign the deputy director of the Training Division to assume exclusive responsibility for the effective and proper utilization and custody and maintenance of the equipment and facilities under grant. Founded on such circumstances, the anticipated merits of inducing this training vessel and its associated equipment and facilities under grant are as follows.

SLFTI

(1) The addition of a new tuna long line fishing training vessel to the existing fleet consisting of the Samudramaru, the Sudaya, the Mutkumari and other vessels will establish the foundation of an overall fisheries training program ranging from coastal, offshore to deep sea fishing. Since the Samudramaru (about 75 tons) principally aims at the training skipjack of pole-and-line fishing while the Mutkumari (about 28 tons) the gill net and purse seine fishing, the new training vessel which is for tuna long line fishing, will complete the full line-up of training vessels selected as appropriate for the respective fishing ground of offshore and deep sea fishing.

By the granting of this tuna fishing training vessel, SLFTI's training objective with emphasis on fishing practice at sea will be established, the curricula and syllabi determined, the position of the local instructors and Japanese advisors clarified and thus mark its first step forward toward a better coordinated training program.

(2) By the granting of equipment for refrigeration training and internal combustion engine (diesel engine) for practice in the workshop, the engineering course will

be equipped with much better training equipment and facilities. This will contribute to the development of trainees with higher practical skill and thus supply useful manpower to the fishing industry.

(3) In addition to the above, spare parts and equipment for the Samudramaru will be granted. Since the vessel, since its building, has not undergone full testing and inspection to date, these spare parts and equipment are considered to be necessary for her maintenance, control and operation. These will contribute greatly to the effective operation of the training vessel.

FTC

The Ministry of Fisheries of Sri Lanka is also planning to promote basic coastal fishing while it also hopes to develop deep sea fishing. Accordingly, for the growth of its coastal fishing, the Ministry desires to fully equip the four fisheries training centers as well as promote the fishing skills of the local fishermen. The survey team is in full accord with the Ministry's plan.

In view of the above, the team has decided to grant vans for audio-visual education and mobile repair vans for the benefit of the local fishermen, in addition equipment for small coastal fishing boats, fishing gear and

tools for engine workshops. It is believed these will contribute greatly to the future growth of coastal fishing in Sri Lanka.

CFC

CFC is making every effort to improve the distribution system and stabilize the fish prices based on the Fisheries Development Five Year Program of Sri Lanka, but the shortage of ice plants and systematization of distribution means are particularly notable.

From such a viewpoint, the team has decided to grant refrigerated trucks and equipment for ice plants. It is believed that this will enable CFC to achieve the objectives of its activities more efficiently and thus eventually contribute to the growth of the fishing industry of Sri Lanka.

3-2. Recommendations

In conclusion, the survey team wishes to make the following recommendations to the Government of Sri Lanka in connection with the grant of the tuna long line fishing training vessel for its fruitful utilization.

(1) For the maintenance, control and operation of the tuna long line fishing training vessel to be granted, appropriate manning of personnel skilled to the highest extent and necessary budgetary measures shall be taken as soon as possible.

(2) In operating the said fishing training vessel, past data accumulated by the Ministry of Fisheries and CFC must be adequately reviewed so as to assure effective utilization of same and thus achieve the fishing training objectives.

(3) The Japanese experts dispatched to SLFTI of Sri Lanka must be fully consulted in order to achieve the expected training results.

(4) For effective utilization of the equipment and facilities granted by Japan, including the tuna long line fishing training vessel, the Ministry of Fisheries, SLFTI, FTC and CFC must maintain close linkage at all times and act as an integrated whole to attain the best results.

APPENDIX

Details of Equipment

* Items are in the order of the list of equipment and facilities in the Minutes.

Item	Specification	Quantity
Tuna Long Line Fishing Training Vessel	Principal particular Length overall Breadth moulded Depth moulded	1
	approx. 33.5 m approx. 6.4 m approx. 2.8 m	
	Capacity Fish hold Fuel oil tank Fresh water tank	
	approx. 40.0 m ³ approx. 50.0 m ³ approx. 10.0 m ³	
	Marine diesel engine	
	approx. 550 HP	
	Gross tonnage	
	approx. 130 t	
	Refrigerating plant (quick freezing system)	
50' Gill Net Fishing Training Vessel	Principal particular Length overall Breadth overall Depth overall	1
	approx. 16.60 m approx. 3.72 m approx. 2.00 m	
	Capacity Ice hold Fish hold Fuel oil tank Fresh water tank	
	approx. 1.2 m ³ approx. 2.5 m ³ approx. 2.0 m ³ approx. 650 L	
	Marine diesel engine	
	approx. 100 HP	

Item	Specification	Quantity
Fishing apparatus		
Wheel house fittings		
Galley fittings		
Accommodation arrangement		
Engine room fittings		
Electrical fittings		
Radio communication system and navigational equipment		
Life saving appliances and fire fighting instrument		
Spare parts and tools		
Marine Diesel Engines and Equipment for 2 Nos. 34' FRP Boats	Marine diesel engine approx. 55 HP Accessories for main engine and engine installation Propulsion apparatus Spare parts and tools	2 sets
	Trawl winch Hydraulic motor driven with warp 400 FM in length	2 sets
	Line hauler Hydraulic motor driven	2 sets
	Hydraulic system Hydraulic pump, clutch, tank and other accessories	2 sets

Item	Specification	Quantity
Radio transmitter SSB complete set		6 sets
Other equipment	Fisk finder, magnetic compass, visual educational instruments, tools, etc.	
Audio Visual Vans	Light van	2
Projector	16 m/m projector with screen, A/C 230 V, 60 Hz	2 sets
Other equipment	Generator, amplifier, speaker, etc.	each 2 sets
160 HP Marine Diesel Engine	6ES DGGG-HT Supercharged 4 cycle diesel engine, with intercooler 160 HP x 1800/591 r.p.m. Dynamometer, standard spare parts and accessories	1 set
Fuel Injection Tester	Integrate fuel injection testing unit Standard spare parts and attachments	1 set

1
3
1

Item	Specification	Quantity
Equipment for Refrigeration Training	Ammonia compressor Motor driven, 4 cylinders high speed Prefabricated cold storage (-30 °C) with 5.5 kW refrigerating compressor, unit cooler, cooling tower, cooling water pump, etc.	2 1
Spare Parts and Equipment for the Samudramaru	Emergency signals Mooring rope 45 m/m x 200 m 30 m/m x 200 m Transceiver, output 25 W VHF Portable generator Diesel engine driven A/C 230 V, 5 kW, 3 phase Compressor for galley Rotary blower Motor 0.5 kg/cm ² 0.2 kW, A/C 100 V Other equipment Battery, portable blower, vinocular, etc.	6 6 12 1 set 1 1
Micro Buses	Diesel engine type 20 seats with standard equipment	4

Item	Specification	Quantity
Fishing Gear		
Nylon net		
Vinylon rope		
Nylon twine		
Vinylon twine		
PVC floats		
Plastic floats		
Nylon mono-filament		
Stainless steel wire		
Fish hooks		
Swivel		
Whale bone jig		
Artificial bait		
Tuna long line: main line, branch line		
Others		

Item	Specification	Quantity
Mobile Repair Vans	Load 2.0 ton, flat body, diesel truck with crane, out reach min. 2 m	2
Tools and accessories	assorted spanner, fuel nozzle tester, etc.	2 sets
Tools for the Workshops	Blower, electric motor driven 0.2 kW capacity 5.5 m ³ /min.	4 sets
	Gear puller 3 jaws, 200 m/m dia.	4 sets
	Hand grinder A/C 220 V, 5.5 A	3
	Pipe wrench Standard type 200 m/m, 350 m/m, 600 m/m	5 each
	Other instrument Files, box spanner, drill, chuck, etc.	
Under Water Fishing Lights and Generators	Under water fishing light 110 V, 500 W	3 sets
	Voltage regulator Sliding type	3 sets
	Generator Portable, gasoline engine driven 110 V, 5 kW Drip proof type	3 sets

Item	Specification	Quantity
Magnetic Compasses	Portable type, card dia. 150 m/m	10
Fish Finding Equipment	Echo sounder/fish finder range 0 - 600 m (6 steps)	6
Refrigerated Trucks	2.5 ton refrigerated truck cooling range -18 - +2°C	6
Ice Plants	Ice storage 15 ton (-5 °C)	3
	Fish cold storage 2,400 cu.feet	
	Opaque cubic ice 5 ton/day, high speed 4 cylinders with motor	
	Condensor, receiver, ice making tank, brine agitator, ice can, hoist, unit coolers for ice storage and fish cold storage, control panel, ice crusher, etc.	

JICA