Somalia Fisheries Development: Past, Present and Future

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SOMALIA

FISHERIES DEVELOPMENT
PAST, PRESENT and FUTURE

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MMA Candidate
October, 1985
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Major Professor
This paper is being presented in three distinct parts. Each section deals with fisheries development in Somalia, East Africa, past, present and future. The first section focuses on a project proposal by a World Bank / U.N. FAO joint effort. This proposal exemplifies a traditional approach to development. This traditional approach will be defined and then evaluated.

The second section is a report of the authors consultancy to the Somali government concerning the development of the fisheries within the Coastal Development Projects jurisdiction. The approach employed was one of first defining the problem and then working on solutions. This section is being offered as a comparison to the first.

The third section focuses on a particular portion of Somalia's fishing industry, namely the indigenous boatbuilding industry. This section is an effort to develop a development strategy which avoids some of the pitfalls pointed out in the first section on traditional development while incorporating the lessons learned and described in the second section.

Any comment or questions would be welcomed for discussion and may be directed to:

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SOMALIA - FACTS AND FIGURES

Population - 6,124,000
60% nomads
20% settled rural dwellers
20% urban dwellers

Work Force - 2,200,000
82% agricultural
13% industry and commerce
5% government

Budget - $380 million (US)
29% military

GNP - 1.884 billion (1982)

Annual Growth Rate - 9.6% (IMF estimate)

Inflation - 24.4% (1983)

Arable Land - 13%
1.2% - cultivated

Exports - $167 million
80% livestock
2% fish
7% crops

Imports - $510 Million
food grains, oil, industrial products

Aid Dispersed (1981) - $353 million
- U.S. AID $70 million (1981)
- 1980 military access agreement signed with U.S.

Classified by U.N. - Least-developed Country

Annual Per Capita Consumption of Fish - 0.2 kg.
Exchange rates

In January 1985, the Somali Schilling (Sosh) was devalued.

- **Official government exchange:** 37 Sosh/ 1 $US
- **Floating bank rate, May '85:** 83 Sosh/ 1 $US
# SOMALIA

## FISHERIES DEVELOPMENT

### PAST, PRESENT AND FUTURE

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PART I

FISHERIES EXPLORATION/PILOT PROJECT

An Analyses of a Traditional Approach to Fisheries Development.
INTRODUCTION

The 1981 Somalia Agricultural Sector Review identified the underutilized, underdeveloped fisheries resources as a potential area for development. At the request of the Somali government, the FAO/World Bank Cooperative Program sent a mission to Somalia in January 1981 to study the potential for a fisheries development project. Subsequently in March 1982 the Bank and the IFC sent a second mission to Somalia to identify ways to achieve better coordination among aid organizations in the fisheries sector and to encourage private sector involvement. This culminated in a project to create a "legally separate but integrated private sector Somali Companies to develop the exploitation of the Somali fish resources."(1) The companies proposed would be jointly owned by the Somali government, international financial institutions, Somali private business interests and a foreign technical partner. This Government of Somalia (GOS) proposal was again reviewed by the International Finance Corporations/International Development Agency (IFC/IDA) which concluded that there were still too many risks involved to attract "conventional commercial investment".(2) These uncertainties and risks led the IDA to recommend an exploratory/pilot project. This section of the paper will first describe the general approach and assumptions incorporated into this World Bank/FAO project proposal. The next step will be an evaluation of this approach determining the strengths and potential weaknesses inherent in a traditional approach to fisheries development.
This project proposal defines the problem of the development of Somalia's fishery resources as threefold: harsh environment, lack of infrastructure and inadequate subsector strategies.

The harsh environment and seasonal aspect of the fisheries are well documented. There is a general lack of natural harbours and fresh water in much of the coast. Temperatures can vary from 30 degrees to 40 degrees centigrade in the summer months, effectively stopping all fishing activities between June and September. During the months of December and January very high winds effectively keep even the largest vessels off the fishing grounds for days. The fish stocks themselves are highly variable, changing in abundance and distribution with the monsoonal seasons. The Somali current which creates a tremendous upwelling and consequent tremendous fishery resource, runs north half the year and south the other half. The continental shelf is very narrow averaging only ten miles from land and is very rocky making it (to a large extent) unsuitable for large scale trawling operations.(3)

In addition to these harsh environmental factors, this project proposal emphasizes the lack of infrastructure as the second major component of the problem. There are few landing facilities along Somalia's 3000km. coastline. Many fishermen must anchor their European designed, fiberglass, fishing vessels
beyond the breaking surf and hire young men and women to wade through the surf to offload the catch. There are no operating ice making machines, which are essential to the production of marketable, high quality fresh fish. Once the fish is landed there are few chill storage facilities to preserve and protect the fish from spoilage. There are also few roads connecting the coastal fishing villages with the interior, where a small potential market exists. The greatest impediment to further development due to infrastructure is a lack of workshops where the maintenance and repair of vessels is within easy access of all fishermen.

Beyond the lack of physical infrastructure, the proposal emphasizes the lack of institutional infrastructure as well. There are some 7,000 artisanal fishermen who are members of cooperatives that were set up during the 1970's (by the Russians) and are administered by the Department of Cooperative Development in the Ministry. These cooperatives were originally created for handling and marketing of catches as well as for the purchase of fish boats and gear. In practice however the cooperatives have no financial responsibility, their major function being that of distributing aid. The vessels were given free with little training for the appropriate use of the modern boats and gear. Combined with the lack of foreign exchange for spare parts and technical skills and facilities for maintenance and repair of engines and vessels, the cooperatives have been ineffective.

On the national level, the institutional infrastructure is made up of the Ministry of Fisheries, in Mogadiscio. It has two Director Generals: one responsible for operations (training,
development and research) and the other for administration (finance, general services and personnel), (see appendix 1). However, about one third of the senior posts are vacant due to a lack of suitably qualified personnel. The Ministry of Fisheries is heavily dependent on foreign technical and financial aid. There are no extension services and the distribution function is coming to an end due to changes in policy.

Thirdly, the report states that the fisheries sector is still largely underdeveloped not only because of environmental and infrastructural obstacles, but also because of inadequate subsector strategy. The existing subsector strategy was created by the GOS in the form of a three-year plan. This plan describes a number of rather lofty objectives which are inherently in conflict with each other. For example; creating employment through the utilization of the fishery resource and at the same time maximizing the efficiency of the fishing fleet. To increase efficiency would necessarily reduce employment. The means by which these objectives were to be met are sketchy at best.

In an attempt to remedy these and other problems the GOS created a five-year development plan (1982-86). Included in this plan are the following policy changes; privatization of vessel ownership; abolition of the fixed price system for fish marketing; liberalization of trade in fish and fish products; cessation of free supply of boats and gear, and rechanneling of export and royalty earnings for import purchases of needed spares and equipment. The Ministry of Fisheries, is said, to have recognized the need for GOS to relinquish its control over those
activities "which are better suited to commercial discipline and the private sector". (4)

1.2 PROJECT OBJECTIVES (AS STATED IN THE WORLD BANK PROJECT PROPOSAL)

"The project would lay the foundation for Somalia to:
(i) determine the feasibility and financial viability of offshore catching of a variety of pelagic species known to be present in great abundance.
(ii) test critical assumptions for the development of artisanal fisheries in the project area and to provide a framework for future income and employment generation to one of the poorest parts of the country.
(iii) develop an institutional framework for long-term public and private sector activities through the operation of an autonomous enterprise, providing services to the fisheries sector which would be established under existing Government institutional framework for autonomous enterprises.
(iv) reduce the risk of future investments." (5)
1.3 THE MEANS

The critical assumption mentioned in objective (ii) is that the key to unlock the artisanal inshore fisheries is to develop the valuable offshore pelagic fish stocks. This would provide adequate volume, quality and price required to secure both export markets and funds to support the costs of infrastructure for both offshore and inshore operations. Put more simply the project assumes the development of the inshore artisanal fisheries depends upon the future ability of the inshore fleet to market its' catches in export markets opened up by commercial scale operations.

However, at the same time, the project states that the operation costs of the processing facilities would be financed from the proceeds from the artisanal catch. The initial working capital to develop the offshore fleet would come through the Governments investments in the Enterprise, an autonomous government owned company which has ultimate control in the fisheries development process. The Enterprise will be governed by a Board of Directors chaired by the Minister of Fisheries and made up of the following members:

1. representatives of ministries of Fisheries and Finance
2. representative of the Private Business Community
3. representative of the Somali Development Bank
4. and the General Manager and Financial Controller.
The costs of the project are divided between the various sectors in the following way:

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<th>SECTOR</th>
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<td>Inshore Fisheries</td>
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<tr>
<td>Offshore Fisheries</td>
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<tr>
<td>Enterprise</td>
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<tr>
<td>Technical Assistance and Training</td>
<td>29%</td>
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The loan will come from the IDA to the GOS as credit in "standard terms"(6) in U.S. $13.5 million, at 12% per annum.

1.4 BENEFITS AND JUSTIFICATION

Initially the project would benefit only about 1,000 families. The number would increase if the pilot project is successful. According to the proposal the primary beneficiaries of this project will be the fishermen. The project will encourage increased fishing activity and the fishermen will receive higher prices for their quality catch. This will be accomplished through the introduction of improved boats, gear, fishing methods and the export market links. New boats would be owned by rural entrepreneurs and groups of fishermen. Crew members and those employed at inshore facilities would also benefit from greater quantities and higher prices. The report estimates that prices would rise 5 to 7 times from present levels.

"A lack of other resources justifies the development of the
offshore pelagics as a means of ensuring the development of the inshore fishery, which could in turn have significant regional development implications for employment, income generation, modernization and poverty alleviation. The commercial fishery could lead to significant and profitable private sector opportunities after the pilot stage."(7)

Thus far this paper has focused on the project proposal definition of the problem, the stated objectives of the project and the chosen solution or means to reach the stated objectives. The next section of this paper will be an evaluation of this project proposal to determine the theoretical approach employed, to redefine the problem, to identify the unstated objectives and to question whether the means employed will be adequate for achieving the objectives.

2.0 THEORETICAL APPROACHES

How is Development Being Defined?

The project bias toward technological explanations of the source of the problem and technological solutions reveals the theoretical assumptions. The aim of the project is to develop the harvesting processing and marketing of the fisheries resources through the modernization of the technologies involved. This definition of development assumes that the people of the nation to be developed simply need to be modernized. It assumes that their attitudes are backward and a more modern outlook would lead to a happier more complete and rational lifestyle. A stated objective of the Somali Government is the detribalization
and sedentarization of the nomadic herdsmen, (the population of Somalia is made up of 60% nomadic herdsmen) (8). The initial goal of this type of development is the relationship between economic growth and technology, changing from simple traditional techniques, to the application of scientific knowledge. The acceptance and implementation of scientific knowledge and rational thought requires radical changes in every aspect of traditional social behaviour and social organization. A list of some traditional social norms and the opposing modern norms can be found in appendix 2.

This definition of development is a classic modernization approach to development. Modernization assumes that there are no fundamental contradictions between the interests of local people, government and multinational corporations. Modernists assume the what is good for one is good for all, that all will eventually be the beneficiaries of any development. That which is good for the local elite will be good for the artisanal fishermen. The trickle down theory of development.
3.0 ANALYSES

This brings us once again to the question of what is development? Development for whom? How should development be defined?

The primary goal of development should be to encourage, through whatever means appropriate, the self-reliance of the people in question. The first step in self-reliance is the ability of a people to produce their own food needs. Development should work towards the empowerment of people to make the decisions which determine whether they will eat or not. If that requires the improvement of technologies involved, the people most effected should decide the scale and magnitude of that technology.

This project approaches the problems from an international level. Consequently the analyses of this project will begin at an international level to determine the reason for the tremendous amount of interest in the area. In most development projects sponsored by nationally controlled agencies there is a hidden agenda. The development of Somalia's fisheries is no exception.

Somalia has drawn the attention of U.S. and European military strategists. There are Soviet advisors in Ethiopia and the U.S.S.R. maintains 25 warships in the adjoining Indian Ocean. In the words of the U.S. Central Command:

"Our principle objectives are to assure continued
access to Persian Gulf oil, and to prevent the Soviets from acquiring political-military control of the oil directly or through proxies." (9)

To meet these objectives the U.S. spent $54.4 million in Somalia between 1981 and 1983 to rebuild a naval base at Berbera, (built by the Soviet Union before Somalia broke off military relations with Moscow in 1977). In 1983 the U.S. provided $7.7 billion worth of assistance in the area in military sales, government financed arms shipments, military construction, training, grants, economic support for military programs and commercial arms exports to 14 of the 19 nations in the Central Commands operating area.

-1984 estimated $9.1 billion
-1985 projected $11 billion.

Somalia has strategic value. Somalia is also in debt to a number of aid organizations, U.S. and European. This debt has been referred to the International Monetary Fund (IMF) for another loan to pay off the original debt. In return for this service the Somalian government has agreed to implement stringent economic policies intended to create economic stability. Some of the techniques employed by the IMF include the official devaluation of the Somali Schilling (/-), the encouragement of foreign investment in Somali industries and other techniques outlined earlier in the GOS' Five Year Development plan. Liberalization of trade is another common theme of IMF economic restructuring schemes.
Liberalization of trade can be found within Somalia's recently refurbished basic investment law. This investment law is a very "liberal" package of guarantees and incentives to attract foreign investors. The government offers "productive investments", full tax exemptions for periods up to five years. It also guarantees investors the right to transfer profits abroad, equal to 30% of the original invested capital.

Furthermore, the GOS "has shown itself willing to negotiate private contracts with foreign investors calling for: guaranteed profits; shared foreign exchange earnings (up to 65:35 in favor of the investors); exemptions from Somalia's onerous labor laws, and in the case of joint ventures, full management control." (11)

The application of these liberalization of trade measures in other IMF member developing nations, have led to depressed wages, and escalation in the cost of living, increased unemployment and a reduction in the expenditure on education and social services. When the IMF's conditions are met, almost always, production falls, rioting and violence follow, and the borrowing country goes deeper into debt. (12) The Dominican Republic's recent upheavels as well as the food riots and toppled government in the Sudan are cases in point.

The planned outcome, proposed by this fisheries development project will be to increase the export of food and food products out of Somalia while increasing imports upon which the fisheries will be dependent. These include fuel, spare parts, fishing gear, boat building materials and the tools and skills to maintain and repair a modern fleet.

The structure of the Enterprise also reflects the influence
of the IMF. The Enterprise has the controlling interest in the development of fisheries along the lines which maintain control in the hands of a few. New fishing vessels will be made available through Enterprise at an approximate price of $20,000 U.S. (13) The annual per capita income in Somalia is below $300 U.S. (14) and fishermen are at the lower end of the Somali social structure. (15) Consequently the Enterprise has established a credit system requiring a "contribution" (16) of 10% down with 12% per annum interest accruing after a one year grace period. (17) The project feels local entrepreneurs and groups of fishermen will band together to purchase these modern vessels. The local fishermen obviously cannot afford the required $2,000 U.S. down payment. If the vessels are purchased at all they will more likely be purchased by entrepreneurs interested in a return on investment, through the extraction of rent from the fishermen.

This project effectively attempts to combine local entrepreneurial capital, government capital and foreign capital to gain control of the means of production. The means of production is specifically the fishing vessels, gear, markets and fishermen. The overwhelming share of the costs and the risks in development is handed to the artisanal fishermen. This is further reflected in the requirement that the costs of processing infrastructure would be financed from the proceeds of the artisanal catch. The artisanal fishermen would then effectively be shouldering the costs of the new vessel, gear and processing infrastructure. This approach has created endless problems for people in similar situations throughout the developing world,
Haiti is an extreme example of this. This approach creates an endless cycle of debt within which the individual rarely escapes. The fishermen must take out a loan to lease a new boat and gear the prices he receives for his catch is often controlled by the very person from whom he leases his vessel. To make his payments the fishermen must take out a second loan which is usually paid for in fish. The fishermen usually has little left over at the end of each day for more (if he's lucky) than his basic needs. Maintenance and repair of the vessel becomes secondary to simple survival. Before long half the fleet is tied up or being used for other more lucrative purposes. When the consultants are brought in to evaluate the situation and prescribe a solution (usually in a month or less) the obvious problems stand out and resound throughout the consultants report: lack of infrastructure, poor maintenance on vessels, lack of training, lack of fuel, lack of markets, lack of modern equipment.

The consultants recommendations invariably requires more of all the afore mentioned lacks, completing and beginning an endless cycle. It is certain that these problems of lacks exist, yet to merely approach the problem from a technological viewpoint at best continues the cycle at a more 'modern' level. At worst, the technological fix approach creates starving people fleeing their homes sometimes at the cost of their lives. The situation with the Haitian boat people is a tragic example.

The basic assumption on which this project resides is that the offshore large-scale industrial fleet, targeting high price pelagic species will open up new markets in Europe and elsewhere
by its sheer volume and quality. These newly opened markets
would then be available to the artisanal fishermen, bringing
higher prices for their catch of selected species. The pelagic
species which the proposed leased industrial fleet would focus
require a different market than the demersal species harvested by
the artisanal fishermen. The pelagic species being considered
for exploitation are primarily scad, sardine and herring with an
estimated MSY of between 75,000 and 100,000 tonnes of catch per
year. (18) These species are usually canned, pickled or ground
up as fish meal. The demersal species include snappers,
groupers, squids, bream and shark all of which are usually sold
in fillet or in the round form, fresh or frozen. Assuming that
the pelagic species will open up markets for the demersal species
could be a costly miscalculation.

The large industrial fleet requires, by nature, a tremendous
support system to maintain the multi-faceted components involved.
Somalia simply does not have that support system. The
industrial sector will likely become a burden to the development
of the fisheries of Somalia. Since the benefits of this sector
are going to the government and other investors anyway, a more
viable option would be to negotiate a joint venture with a nation
whose long distance fleet is accustomed to such harsh operating
conditions and has an unfulfilled demand for protein at home.
Since the advent of the internationally accepted 200 nautical
mile Eclusive Economic Zone and subsequent coastal states
fisheries development programs, has created a world surplus of
long distance fleets searching for fishing grounds. One of the
requirements of these negotiations could be to open up markets
for the products of the Somali artisanal fisheries. There are a number of other problems inherent with joint ventures yet none as insurmountable as those which would be created by Somalia attempting, at this early stage of development, to support its own industrial fishing fleet.
Clearly development is necessary in many of the Third World developing nations. The question is how should this development be approached? Who should be the beneficiaries of development projects? What should the goals of development be? These are difficult questions to confront but should be addressed by anyone working directly or indirectly within the field of development.

If those responsible for development projects determine that the benefits of development should go to the poorest people, the people that are starving, then development should first and foremost work toward a people's self-reliance. The first step in securing a people's self-reliance is to remove the obstacles preventing these people from being able to produce their own food.

One of the major obstacles which consultants can look at and change are the assumptions which many of us hold as truth. It is from many of these assumptions that development projects are based because consultants generally write the project proposals. There have been 13 fisheries development projects in Somalia since the 1960's. Today there is little or nothing to show for the millions of dollars and unaccountable human effort which went into these 13 projects. Somalia is not alone there have been many development projects around the world which have been less than successful. Many of these projects have had well trained and experienced staff, up to date technologies which
thrive in western economies and substantial financial backing. Yet these same projects continue to fail over and over again. To find solutions to a problem one must first clearly define the problem before searching for answers. A part of the problem with the success rates of development projects may lie with the assumptions which were incorporated into the original project proposal. These projects may have had some common assumptions which were less than correct and impaired the successful growth of each particular project. Frances Moore Lappe has taken a close look at some of these assumptions in her works; Food First and Aid as Obstacle. Ms. Lappe has chosen to call these commonly held assumptions, "myths". Three of these "myths" are listed below as examples of basic assumptions which may alter the path of development.

**MYTH ONE:** People are hungry because of scarcity - both of food and agricultural land.

**FACT:** There is no scarcity of food in today's world. Enough grain alone is produced annually to feed everyone at the North American standard of 3000 calories a day. In Somalia there are abundant, unexploited fishery resources and less than 10% of Somalias arable land is cultivated.(18)

**MYTH TWO:** 'They' are having too many children. The sheer numbers make feeding them all impossible.

**FACT:** 'They' are not having too many children. Population growth is not outstripping potential food production.(20)
MYTH THREE: An underdeveloped country's best hope for development is to export those crops in which it has a natural advantage and use the earnings to import food and industrial goods.(21)

FACT: There is nothing natural about a developing nation concentrating its' production on low-nutritional crops. The same land that produces cocoa, coffee, rubber, tea and sugar could grow an incredible diversity of nutritious foods - grains, high protein legumes, vegetables and fruits.(22)

The list of myths goes on, the fact is, "there is no country in the world where people could not feed themselves from their own resources."(23)

Once a basic self-reliance is achieved where the people of a nation are producing enough food to meet their own needs then export luxury markets could be considered. To weigh the impact of exports one has to ask: who is in control of the return from those export earnings? Does the decision to focus on exports represent a choice to the local people themselves who have already achieved basic food security and who can deal with the uncertainties of the export market?(24)

To focus only on the improvement of a fisheries technology to raise production, without first confronting the issue of who controls and who participates in the production process actually compounds the problem. It leaves the majority of the people worse off than before.(25) Since there are no absolute answers to these types of questions it is the development of a
participatory, just, process in which people can search and experiment, that is the goal. (26) The enabling of the poor people to use their own skills and resources in a more effective manner, to consolidate the steps they have already taken toward asserting their independence from traditional forms of subjugation and to undertake new activities which they feel prepared to sustain is an appropriate approach. (27) Central to this approach is placing the primary emphasis upon allowing the poor to choose their own direction.

Development implies a process; a change towards an improved situation, growth. In the past many projects were based on very short time scales, usually three to five years. A factor in the failure of many development projects has been attributed to the short time scales to employ great technological changes in a non-mechanized society. This expectation of rapid growth was usually well intended. Any kind of rapid growth can have catastrophic effects. In the plant kingdom the toxin dioxin forces a plant to grow so rapidly that it literally bursts. Stable growth requires time. Time to make adjustments to the local environmental, political, economic, social and cultural situations. Development must begin with the fishermen themselves. The consultants involved must search out the operating organization of fishermen which has, officially or more likely unofficially, been working towards the removal of obstacles to development. Neither the development consultants nor the fishermen on the beach can by themselves be aware of and allow for all the various opportunities for and obstacles to successful fishing community development. This requires a close
and continuous collaboration, over an indefinite period of time.

An approach which has been attempted by a few African
governments has been through the creation of Community Fisheries
Centers. These centers approach fisheries development in
a coordinated, systematic, long term fashion. Rather than
simply being a dispenser of aid, these centers are service
oriented organizations fulfilling the needs of the fishing
industry which have not effectively been met by the private
sector. These fisheries centers are an example of the changing
awareness of fisheries development consultants and organizations.
This changing awareness is reflected in the following passage by
Dr. Saouma, Director-General of FAO, at the close of the 13th
session of the FAO Committee of Fisheries:

"The challenge we face is to provide a setting for something
better than a new colonialism of the sea. New fisheries can be
built as indigenous industries on traditional bases,
particularly the small-scale or artisanal fisheries. They can
grow without social disruption, without pollution, without most
of the painful side effects associated with over-zealous
industrial development. The skills are available, the
technology is within reach; the opportunity needs only to be
grasped. Let us do so now."
FOOTNOTES

(1) World Bank Report, Somalia Fisheries Exploration/Pilot Project, Staff Appraisal Report, Eastern Africa Projects Department, Northern Agricultural Division p. 9, March 5, 1985

(2) Ibid., p. 11


(4) Supra., at 1, p. 14.

(5) Supra., at 1, p. 16 (includes cost chart)

(6) Supra., at 1 p. 29

(7) Background Notes, Somalia, U.S. Dept. of State, Bureau of Public Affairs, p. 1, (March 1984)


(9) Ibid., at 8, p.61.


(12) Supra., at 1, p. 17.

(13) Supra., at 7, p. 1.


(15) Supra., at 1, p.18.

(16) Supra., at 1, P. 17.


(20) Ibid., p.2.

(21) Ibid., p.1.

(23) Lappé, F.M., *Food First: Beyond the Myth of Scarcity*. Institute for Food and Development Policy, p. 399, (1979)

(24) Ibid., p. 148.


(26) Supra., at 22, p.12.

PART II

SOMALIA

Report on the Consultancy

By U.S. AID

for the

Coastal Development Project
PART II
INTRODUCTION

Shortly after completing Part I of this work the author traveled to Somalia as a fisheries consultant for U.S. AID. Part II of this paper describes the terms of reference as assigned by U.S. AID, a brief description of the fishing industry of Somalia and the course of work we chose to follow.

The terms of reference can be summarized as an assignment to assist the Coastal Development Agency in planning the development of fisheries within its jurisdiction.

While the consultants had expected to just work in the four nomad/fishermen settlements of CDP, they were informed that the Minister of Fisheries had extended CDP's jurisdiction. CDP would now be responsible for fisheries development in the entire region from Brava to Ras Asail. This area includes not just settlement fisheries, but also many traditional ones.

It became apparent that the impediments to fisheries development from Brava to Ras Asail could not be addressed in any meaningful way without first modifying the goals and the organizational structure of CDP. Future resettling was a mandate given to CDP by the Government of Somalia, but was not a task in which USAID or the British Overseas Development Agency (ODA) could provide
assistance. On the other hand, CDP was evolving as the project implementation branch of the Ministry of Fisheries, without having a viable fisheries department. As a result, the emphasis of the work shifted from technical problems and solutions, to the reorientation of the Coastal Development Agency and the development of a capable fisheries department.

The consultants spent the last ten days of their time in Somalia in negotiations with representatives from CDP, USAID, and ODA. Real progress was made, and the Coastal Development Agency decided to separate the implementation and the funding of its two tasks:

1) resettling secondary-school graduates and civil servants, and providing them with the skills which are required to be fishermen.

2) providing services to the existing fishing industry.

The final portion of the consultants' work then consisted of helping CDP plan the required strengthening of its fisheries department, and drawing up a plan of action for the next half year. Both USAID and ODA promised financial and technical support to CDP as a result of its initiatives.
1. Program of Work.

1.1. Terms of Reference.

Two commercial fisheries experts assisted the Coastal Development Agency in planning the development of fisheries in coastal settlements. The scope of the study was not confined strictly to the Somali coastal fishery, but also assessed the export potential for coastal fishery products.

The master fisherman addressed the following issues:

- What improvements in landing facilities, boatyards, and other infrastructure are needed by fishermen.

- Which improvements can be made in fishing methods, fishing gear types, boat design and construction, and types of motors or sails.

- How can on-board fish spoilage be reduced.

- What needs exist in boat, motor or sail, and fishing gear maintenance.

- What are fishermen's costs and earnings, and how do these affect fishermen's maintenance procedures and their ability
to change their way of fishing.

- How do fishermen learn their vocational skills and what are the most appropriate ways to develop this human resource.

The specialist in fish distribution addressed the following issues:

- How much fish is lost due to spoilage and shrinkage between the boat and the consumer, and how can this be reduced.

- What are the social and economic relationships between the fishermen, processors, distributors and consumers, and how do changes affecting one affect the others.

- What are the prices of fish and the level of profit at the various steps in fish processing and distribution.

- Which Somali markets for seafood can most easily be developed.

- What is the export potential of coastal fish.

- What access roads, cold storage facilities, credit institutions and other infrastructure is needed to improve fish marketing.
What are the levels of technical and managerial skills of fish processors and distributors.

How do fish processors and distributors learn their vocational skills, and would an extension service be useful to them.

Both consultants began their work with one week in Rome for orientation with FAO and INFOFISH. Both consultants worked in Somalia for four weeks. Finally, the fish marketing specialist spent one week in Paris, in discussion with experts from OECD.

A summary of the final report was prepared and discussed with the Coastal Development Agency before the two specialists left Somalia. The detailed final report was submitted upon completion of the work in Paris, and the consultants' return to the U.S.

1.2. Itineraries.

Itinerary of the fish distribution specialist.

<table>
<thead>
<tr>
<th>Arrive</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wakefield, RI, USA</td>
<td>May 5</td>
</tr>
<tr>
<td>Location</td>
<td>Start Date</td>
</tr>
<tr>
<td>-----------------------</td>
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</tr>
<tr>
<td>Rome</td>
<td>May 6</td>
</tr>
<tr>
<td>Mogadishu</td>
<td>May 13</td>
</tr>
<tr>
<td>Brava, El Ahmed, Merka</td>
<td>May 19</td>
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<tr>
<td>Mogadishu</td>
<td>May 22</td>
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<tr>
<td>Adale</td>
<td>May 24</td>
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<tr>
<td>Mogadishu</td>
<td>May 26</td>
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<tr>
<td>Kismayo</td>
<td>May 27</td>
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<tr>
<td>Mogadishu</td>
<td>May 30</td>
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<tr>
<td>Paris</td>
<td>June 10</td>
</tr>
<tr>
<td>Wakefield</td>
<td>June 14</td>
</tr>
</tbody>
</table>

Itinerary of the master fisherman was identical until June 9, when he returned to the U.S. directly from Mogadishu.
2. Agency Objectives.

2.1. Coastal Development Agency.

CDP was established in 1975 and given the task of resettling 15,000 refugees from the northern drought, and helping them to earn a living as fishermen. In Brava, El Ahmed, Adale, and Eyl, the settlers were given vocational training and equipped with hundreds of boats and fishing gear, free of charge. When the fishing gear was worn out or lost, it was replaced free of charge.

The settlement fishermen were not well motivated to care for their boats and fishing gear, and most boats ended up being stored on the beach, waiting to be repaired.

To resolve the situation, CDP adopted a policy of privatization in 1983. In November of that year, CDP began the process of selling its fishing boats for 25,000 Sosh each. Of the thirteen Sri Lankan fiberglass, diesel powered, fishing boats sold in Brava, five were sold to settlement fishermen and eight were sold to traditional fishermen.

By the beginning of 1985, most of the boats which were operating or repairable had been sold off. The settlers which had become fishermen, had purchased boats, and CDP's original task had been
completed.

The Minister of Fisheries, recognizing CDP's established infrastructure, and its project implementation capabilities, extended CDP's jurisdiction. CDP would now be responsible for fisheries development in the entire region from Brava to Ras Asail, about two thirds of Somali's coastline. This is the area remaining between the World Bank's North East Coast fisheries development project, (a joint venture company called NECFISH), and the Kismayo region development project sponsored by German aid, (a joint venture company called Somali Marine Products).

In the past, the civil service had been a dependable source of employment for secondary school graduates. However, in response to the International Monetary Fund's recommendations, the Government of Somalia is reducing the number of its civil servants. Thus, CDP was given the new task of resettling secondary school graduates and laid-off civil servants, and giving them the means to earn a living as fishermen.
3.2. USAID/Somalia.

In the 1987 Country Development Strategy Statement for Somalia (published in 1985), USAID stated that its previous experience in fisheries development on the north coast had been a failure. Due to the number of other donors who are working in fisheries, and due to USAID's need to restrict its work to a few sectors, USAID/Somalia had decided not to be involved in fisheries development.

One of the areas in which USAID/Somalia is concentrating is the encouragement of privatization and the expansion of small business under the Policy Initiatives and Privitization Project.

Fisheries has been one of the more progressive ministries in this respect. It has granted autonomy in management to several fisheries development projects. Somali Marine Products, GRP Products (a fiberglass boat factory), and NECFISH are all set up as joint ventures between the Government of Somalia and the donor organizations. While the Minister of Fisheries serves as the Chairman of the Board for all three companies, he does not have veto power. Thus the projects are removed from the direct control of any government agency and are run as parastatal companies.

The Coastal Development Agency's sale of its fishing fleet to
private individuals drew the interest of USAID, and was seen as part of the general movement towards privatization. Thus, USAID again considered the feasibility of working in the area of fisheries. Specifically, these two consultants were brought in to determine how USAID might assist the development the private sector in near-shore fisheries.
3. Description of Near-shore Fishing Industry.

Near-shore is taken to mean vessels up to 15 meters in length which operate within five miles of shore. It is in contrast to the larger off-shore vessels which habitually spend more than a week at sea per fishing trip.

3.1. Fishing

The major fisheries from Brava to Ras Asail are:

**Kingfish** caught by handline trolling, or occasionally by gillnets. The primary season is March - June, with a less important season during October and November. It is the most desired species for fresh consumption in the Mogadishu area.

**Tuna** is also caught by handline trolling. It has a minor season from March through June, and a major season in October and November.

**Shark** is primarily caught with gillnets. Small shark caught near population centers are consumed fresh. Fishermen frequently migrate along the coast, salting and drying shark meat and fins for export.
Lobster is caught primarily by divers, and incidentally by gillnets.

Demersals are fished when the preferred large pelagics have migrated to other areas. They are fished with handlines, and in Kismayo they are beach seined. Some traditional fishtraps, yemas, are still used. Yemas are set in shallow water along the beach, without the use of boats.

The following number of boats are currently active:

**Brava**
- 8 Sri Lankan, motorized, owned by traditional fishermen
- 5 Sri Lankan, motorized, owned by resettled nomads
- 21 houris, owned by traditional fishermen

**El Ahmed**
- 5 Sri Lankan, motorized, owned by traditional fishermen
- 4 Sri Lankan, motorized, owned by resettled nomads

**Merca**
- 11 Sri Lankan, GRP 6.4s and GRP 8.5s, all motorized
- 45 houris
Jesira
10 motorized fiberglass boats
6 houris

Mogadishu
20 motorized fiberglass boats
60 houris

Adale
26 motorized fiberglass boats
40 houris

Eyl
20 motorized fiberglass boats
1 motorized beddan
8 unmotorized beddan

Traditional fishermen far outnumber those who entered the industry through resettlement programs. None of the houris are fished by resettlement fishermen, since they are comparatively unstable and a high degree of skill is required to paddle them through the surf.

New recruits to the fishing industry usually come from the extended families of fishermen, and begin going to sea at the age of eight to ten. Their vocational training is received entirely on the job.
Houris in Brava carry a crew of two, while those of Merca and Adale are longer (5 meters) and carry a crew of three.

Six of Brava's 21 houris are owned by absentee owners.

The lay system for a Brava houri is:

1/3 of gross stock for the houri
2/3 of gross stock for the crew. These 2/3 are split equally if both crewmen are adults. A boy only gets 1/3 of these 2/3s, or 2/9s of the gross stock.

A Brava houri costs 15 - 20,000 Sosh new, it lasts 6 years, and requires 1,000 Sosh per year in maintenance materials,(caulking, nails, shark oil preservative).

The lay system for a Merca GRP motorized boat is:

- gross stock
  - less boat share (25% of gross stock)
  - gross crew stock
  - less actual fuel and food expenses
  - net crew stock, which is divided into 4 equal parts for owner/operator and 3 crew members.
The 1985 purchase price of a 8.5 meter GRP boat is 1,900,000 Sosh. The depreciation period of these boats is unknown since privatization only started one and a half years ago.

The motorized fiberglass boats could be equipped with outriggers for trolling, or with reels for demersal fishing. This is, however, not done and they currently use one handline per crew member.

Statistics on landings and catch per effort are scarce. A portion of biologist/statistician Stellan Elmer's findings are included in appendix 9.


In the past, the Coastal Development Project supplied most of the fishing gear used in Somalia. CDP distributed fishing gear directly to cooperatives of traditional fishermen, as well as to its own settlement cooperatives. Some settlement fishermen, who received replacement gear for free, "lost" their gear at a high rate and thus also helped to supply surrounding fishermen.

CDP stocks of the more desirable types of fishing gear are almost empty, and little has been distributed or sold during the last two years.

Private businessmen have been reluctant to import and sell fishing gear due to the risk that it will be confiscated. The
cooperatives wield a lot of power, and may claim that they have the sole right to distribute fishing gear.

A discouraging precedent was established when private businessmen imported livestock vaccines though the USAID Commodity Import Program. The vaccines were seized in the port by cooperatives, on the basis that only cooperatives had the right to distribute them. All that USAID was able to do was to get the importers a promise that they would be reimbursed.

Currently, Somali Marine Products in Kismayo has imported fishing gear for its fishermen. According to current practice, SMP would sell the fishing gear to the cooperatives from whom it buys fish, and the cooperatives would resell the fishing gear to their members. Although individual fishermen have expressed a desire to purchase the gear at SMP's prices, the cooperatives have stated that these prices are too high, and have refused to buy the fishing gear. When we visited SMP in late May, it had the gear in its warehouse and was unable to sell it.
3.3. Boatbuilding.

The free distribution of hundreds of imported fiberglass motorized fishing boats during the last ten years has hindered the Somali boatbuilding industry. Many of the traditional boatbuilders have since retired or entered other professions. GRP products is currently building 8.5 meter fiberglass boats in Mogadishu which are powered with Volvo diesel engines. Like NECFISH and SMP, GRP Products is a donor aid/Government of Somalia joint venture that is operated as if it were a private company. It is run by a board of directors, and the Minister of Fisheries holds the office of Chairman of the Board.

Until December 1984, the Somali schilling was traded at an artificially high value, and Somali fishermen purchased GRP boats. With the devaluation of the Somali Schilling, the Sosh price of fiberglass skyrocketed, and so did the price of GRP boats. The price of a new 8.5 went from 300,000 Sosh to 1,900,00.

Development projects, which require a large number of boats to be built in a short period of time, will continue to purchase GRP boats. Private fishermen, however, have not placed an order since the Sosh devaluation. GRP Products suggested that easy credit terms with a long period for repayment could boost sales. On the other hand, it may not be the lack of private capital
which is preventing sales; it may be that the boats are no longer economically viable.

The new economic conditions may revive traditional boatbuilding. A 7.8 meter sailing mashura can be purchased for 300,000 Sosh, and for another 700,000 Sosh, it can be equipped with a Yanmar diesel. In Eyl, a traditional Beddan was recently equipped with an outboard.

While most of the wood must be imported from Kenya, a wooden boat is less expensive than a fiberglass one, and it allows for variations in design to accommodate local conditions.


Somalia has a large number of very skilled diesel mechanics. When CDP's mechanics are unavailable to do the job free of charge, fishermen have hired private ones to re-engine boats for 25,000 Sosh.

CDP maintains workshops and mechanics at each of its four original settlements. These facilities are primarily used for minor repairs and for maintenance. The British Overseas Development Agency (ODA) assists CDP by providing a fisheries advisor/marine mechanic. He and an assistant travel to the settlements for the larger repairs, such as re-engining vessels. Major overhauls and re-bores are fielded to private machine shops in Mogadishu.
3.5. Seafood Handling and Transportation.

The system of official fish prices has been discontinued, and fish is now auctioned to retailers. In Mogadishu, this is done on the beach where the fish is landed. In other locations, it is done in cooperative-managed fish markets. Consumers may purchase fish at the auction, but most buy smaller quantities from retailers. The prices offered by the Modern Fish Market in Mogadishu have the effect of establishing price minimums locally.

The auctioneer and the cooperatives are paid by the fisherman at the time of the sale. The auctioneer may take 5% of the value, and the cooperatives take between 1 and 2.5 Sosh/Kg, depending on the location.

Brava fish prices range from 20 Sosh/Kg for less desirable species such as grouper, snapper and sardines, 30 Sosh/Kg for small sharks and tuna, to 40 Sosh/Kg for king mackerel. Lobsters bring 60 Sosh/Kg and a 200 liter barrel of shark oil brings 3,000 Sosh.

Prices in Mogadishu are significantly higher. King mackerel frequently reaches 140 Sosh/Kg.

Brava has two ten-ton cold store which were constructed by JICA, Japanese aid. They are not functioning, but are in generally good condition. These are part of an underutilized FAO-built fish
processing and drying complex. Brava produces and excess of
dried fish.

El Ahmed has JICA cold stores which are not being used. CDP is
considering moving them to Adale.

Merca is a very productive fishing center, surrounded by a large
rural population which is interested in buying fish. It does not
have an ice plant or cold stores, but these are not necessarily
needed since fish could reach the rural population by truck
without ice before it spoils.

Jesira is half an hour's drive from Mogadishu. It has a lot of
active fishermen, and fish can easily be transported to the
capital by truck.

Mogadishu has the JICA-built Modern Fish Market with an 8-ton/day
ice-maker, two cold stores and a chill room. One branch market
was also constructed by JICA, and there are 9 local markets.
JICA supplied four refrigerated trucks to bring in fish from
distant collection points and to distribute it among the markets.
CDP has one 6-ton/day flake ice maker.
Adale has an unused fish processing complex and an uncomplete cold storage. A private business man, who is also the leader of the Mogadishu fishermens' cooperative, leases the Mogadishu Modern Fish Market trucks, and transports fish on ice from Adale back to the capital. This business was only begun a few months ago, and is the result of a CDP demonstration that fish could successfully be transported from Adale by an flat-bed truck with ice-boxes.

Eyl is extremely remote, and takes three days to reach from Mogadishu by vehicle. Fishing there is based primarily on the dried-fish trade.

The potential European markets for Somali coastal fish are described in Appendices 10 and 11.
4. CDP's Changing Role in Fisheries Development.

4.1. Proposal and Counter-proposal.
After the consultants had visited the region from Kismayo to Adale, and gone out fishing in many of the locations, CDP's General Manager presented them with a request entitled "Special Programe for CDP", (appendix 6). This original request included 250 houses each year for the resettling of civil servants and secondary-school graduates. It also included the construction of cold stores, fish markets, and jetties.

The consultants, in response, presented "Possible Areas of Cooperation between CDP and USAID - a Discussion Paper", (appendix 7). This expressed USAID's inability to support CDP's resettlement efforts. If, on the other hand, CDP separated the implementation and funding for the resettlement task from the fisheries development task, USAID could be interested in providing assistance. The consultants had spoken with representatives of numerous donor organizations in Somalia, and many of them would be willing to assist CDP under these conditions.

The consultants suggested that CDP could provide the following services:

1) Fisheries equipment service
2) Boat building services
3) Mechanical services
4) Fish handling and transportation services
5) Communication and data collection services
6) A credit program for fishermen, boat builders, mechanics, and fish dealers.

The emphasis of all these services would be to provide support to private businesses in the fishing industry, rather than having COP perform the functions such as boat building and fish transportation itself. The fish handling service could, for example, develop markets for new products such as beche-de-mer, and then show Somali fish-dealers how to enter the market, (appendix 8).

COP does not currently have the capability to provide these services, and a strengthening of its fisheries department would be required. Specifically, the number of trained and skilled fisheries specialists within the department would have to be increased.

As COP is currently organized, the administration of the fishing-gear stores fall under the transportation department, and it is very difficult for fishermen to purchase and gear, or for the fisheries department to improve the fishing-gear services. Administrative control of the gear stores and the vessel workshops would have to be transferred to the fisheries department.

Finally, it was common knowledge that fishing gear was going
missing, and that receipts from the sale of fishing gear were not returning to the fund for new purchases. Several people had instituted inventory and bookkeeping procedures, and had trained CDP employees in their usage, but these were not being followed. ODA had a small amount of fishing gear coming in, and CDP would have to demonstrate the proper utilization of the previously established inventory and accounting procedures if it wanted to interest USAID in increasing the stock of nets.

Discussions.

The consultants held many discussions with CDP and USAID separately, and also organized a series of formal meetings between the two.

At the time of the first formal CDP/USAID meeting, CDP had decided, in general terms, to reorganize itself according to the consultants' suggestions. Expectations on both sides were that the meeting would be the first of a series, and that its purpose was just to get to know each other. While dropping its request for resettlement houses, CDP was not really sure yet how its list of requests fit into the proposed program of providing services to the fishing industry. USAID expressed an interest in helping CDP to assist the private fishing sector, and introduced the concept that CDP would have to write a proposal which would be competing against other proposals for funding.

"How the CDP list of requests fits into a Program", (appendix 9),
was prepared by the ODA fisheries advisor who has worked in CDP for several years, and who was invited by the General Manager to attend all of the meetings. It stated that the construction of regional cold stores, rural fish markets and canning factories was something which required study and further consideration. It was not something which USAID or any other donor group could agree to right immediately.

Several CDP staff-members became enthusiastic about the proposed functions of CDP, and requested that the consultants work with them, even during their Friday day-of-rest, to write the proposal for USAID. Together, a "New Program for CDP", "Proposed Reorganization of CDP", and a "Work Plan for First Year" were written, (appendices 10, 11 & 12). Work on a budget was also started.
4.3. The Result

The second USAID/CDP meeting was held just before the consultants departed. CDP presented a "New Program for CDP", stating that it would provide services for various branches of the private fishing industry. In order to have the capability to provide such services, CDP would:

a) increase the number of trained and skilled specialists in the fisheries department.

b) transfer management responsibility of fisheries related infrastructure to the department.

c) demonstrate the proper utilization of previously established inventory and accounting procedures.

d) allocate a budget to the fisheries department.

e) provide a floor of office space to the department.

To be able to accomplish this restructuring, CDP requested financing.

CDP also requested technical assistance in the form of two consultants and submitted terms of reference which were drawn up at their request, (appendix 12).
While a specific budget and specific requests were still needed, USAID agreed to their request in general.

The proposed plan of action would be for USAID to assist CDP financially in its restructuring. A boat-building consultant would determine ways in which traditional boat-building could be assisted, and organize CDP's boat-building service. Then a fish-handling and marketing specialist would assess how effective the restructuring had been, and assist them in seeking further funding if it was justified. The fish-handling specialist would also organize the fish-handling and data collection services. ODA would continue to provide long-term technical assistance, a small amount of fishing gear to test whether the revolving fund will revolve, and a mobil workshop for the mechanical services.
SECTION III

SOMALIA

DEVELOPMENT OF THE SOMALI
BOAT BUILDING INDUSTRY

-A Matter of Approach-
1. INTRODUCTION

The fishing industry of Somalia has great potential(1), little of which is presently being exploited. In the past, development agencies and government efforts have focused primarily on the resettlement of nomadic herdsmen(2). Until recently little effort had been extended to aid the traditional fishermen of Somalia. The Somali government has recognized the value of the traditional fishermen and has created a separate Fisheries Department within the Coastal Development Project (C.D.P.)(3). The Fisheries Department of C.D.P. functions as a service oriented organization. The services within the Fisheries Department are designed to encourage privatization of the fishing industry. This is being accomplished in many different ways such as: demonstration projects in marketing, a mobile workshop, training programs and the removal of obstacles in the way of self reliant development.

The focus of this paper will be on the boatbuilding service being offered through CDP. A brief history of the boatbuilding industry in Somalia will be followed by a description of the various vessels presently being constructed along Somalias coast. Next, potential approaches to the development of the boat building industry will be examined and particular services will be developed which CDP can offer within its' boat building service.
2. A BRIEF HISTORY OF SOMALIA'S BOATBUILDING INDUSTRY

The sailing Dhow still found transporting goods up and down the coasts of Somalia are from pre-historic origins. When Vasco da Gama and his small Portuguese fleet first entered the Indian Ocean the sailing vessels encountered were "sewn" ships(4). "Sewn" vessels are still employed in some remote areas of Somalia and will be discussed in some detail later on. For the most part these vessels were unable to hold guns or maneuver quickly enough to compete in battle with the European vessels(5). Consequently it was not long before East African boatbuilders were incorporating European techniques and materials into their vessels. The indigenous vessels now seen plying the waters of the Indian Ocean are a combination of traditional and European designs. This European influence can also be seen in most of the fishing vessels of Somalia, (see appendix). The traditional Somali fishing vessels are of three basic types; the houri (canoe), the mashura and the bedden. The houri can be found along the entire coast while the mashuras are isolated in the south and beddens to the north. Construction of these vessels have traditionally been built by local craftsmen employing local woods or timber supplied by the trading Dhows.

During the great drought of 1975 the Coastal Development Project (CDP), was created to resettle and train 15,000 nomadic herdsmen(6). Aided by the Russians, 600 diesel powered vessels, equipped with
fishing gear was given to these "instant fishermen". Since that time a great number of fiberglass vessels have been donated by a great number of donor countries including Sweden, Greece, the USA, Italy and Sri Lanka (8).

The effect of these "donated" vessels has been to extremely limit the demand for traditionally built boats. For the past 10 years most of Somalia's boatbuilders have had to find employment elsewhere as fishermen and farmers (9).
3. THE PRESENT CONDITION OF THE SOMALI BOATBUILDING INDUSTRY

The only powered vessels available new in Somalia are built by the GRP Factory in Mogadishu. The GRP factory is a joint venture between the government of Somalia and the Swedish International Development Agency, (SIDA). Two types of vessels are presently being built; the 8.4 meter and the 6.5 meter Swedish designed inshore fishing vessels(10). Since the devaluation of the Somali Schilling (/-) in 1984 the price of GRPs' 8.4 meter boat has increased from 300,000 /- to 1,900,000/- (11). No orders for either of these vessels have been placed by any individual fishermen since the devaluation(12).

The traditionally built wooden 7.8 meter sailing mashura can be purchased new for 300,000 /- and powered with diesel for an additional 700,000 /-(13).

Beyond price the traditional vessels offer some other important advantages over the European implants. One advantage is that the traditional vessels are built by numerous craftsmen over a broad area. This allows for variation in design and construction to fit local conditions and needs. Particular advantages will be described in the next section boat by boat. Many fishermen recognize these advantages which helps to explain why traditional fishing vessels still outnumber the fiberglass boats four to one (14).
4. TRADITIONAL VESSEL TYPES OF THE SOMALI FISHING INDUSTRY

4.1 THE HOURI

The houri or simple canoe is constructed within the entire range of CDPs’ jurisdiction(15). The houri varies in length from 3-5 meters and is constructed of natural crook framing with planked hulls or are partially or totally dugout. The dugout varieties have been imported mostly from India and Kenya. The houris are usually manned with two or three paddlers or rowers. During favourable winds a small lateen or lug sail may be employed(16).

Thwarts are set very low to increase stability and depending on local conditions the freeboard varies form 6 to 12 inches. The sides generally have little flare and the bow and stem are usually near plumb. After the boat is caulked with cotton and tar, shark liver oil mixed with lime is applied to the outside as a preservative, the hull itself is filled with the mixture and left to seal for one year(17).

Houris are the most common fishing vessel in Somalia and in many regions the most productive in terms of fish landed. These small canoes are used to break through surf created by an offshore barrier reef, occasionally overturned in the breaking waves. The fishermen simply pull the boat to calmer waters and with one man on either side of the houri, rock it back and forth, splashing the water out of the hull. Once the water is bailed
out, the fishermen will once again climb aboard and attempt to paddle through the surf. [The fiberglass vessels also often swamp but must be dragged ashore and the engines cleaned before they can set out again.]

Houri fishermen are highly skilled in the use of these tricky vessels. Most houris are used for day trips, trolling for tunas and mackerel and bottom fishing for snappers. During the spring monsoon a number of houris will drift north longlining shark from base camps. This shark is then dried and salted on the beach with the fins being exported to the orient and the meat throughout Africa and Saudi Arabia, (see appendix).

Houris cost fishermen between 15,000 and 20,000 Somali Schillings (/-). (18)
THE MASHURA

The mashura is a traditionally built wooden sailing vessel with a straight stem and a transom stern. Most of the timber for its construction is imported by Dhow traders or from Kenya, yet some wood comes from Somalia. These boats bear considerable resemblance to the inshore fishing craft of Northern Europe, in the 19th century. (19) These 19th century vessels employed a dipping lug rig whereas the Somali mashura uses a lateen rig, which has been demonstrated to be easier to handle (see appendix). (20) The mashura is often equipped with an auxiliary 12-18 horse power diesel inboard, yet is generally sailed. A number of different fishing gears are employed including, gill nets, trolling, beach seines (more like hand hauled Scottish seining) and longlines. Each boat can hold up to 12 fishermen and in the off season is used as a cargo vessel.

These fine boats are presently being built in Somalia by Somalian craftsmen and may be purchased for between 250,000 and 300,000 /-. (21)
4.3 THE BEDDEN

The bedden is a traditional Somali fishing vessel primarily used in the isolated northern section of the country. The construction of this vessel is extremely unique and deserves some attention.

The northern section of Somalia is very rugged desert with little woody growth. Shrubs and trees rarely grow more than two or three feet tall. The beden which is built to lengths of over thirty feet is constructed of these short pieces of wood. Each piece is cut into a plank and formed to fit closely with the adjoining pieces. Tiny holes are drilled along the edges of each piece and caulked with plant fibers and when available cotton. Each piece is then sewn together with nylon twine. All seams are then coated with tarballs found along the beaches from offshore oil spills and tank cleanings. In 1984 the largest producing individual inshore fishing vessel in the northern region was a bedden.(22)

These vessels can be rowed, sailed and one has been powered with an outboard. As one might imagine these boats are highly flexible and tend to bend with each passing wave, giving a little with each impact rather than pounding. The beddens primarily fish shark for export with long lines but also troll for King Mackeral and tunas.
5. DEFINITION OF THE PROBLEM

As can be seen there are a number of highly skilled boat builders in Somalia, (see appendices 15-17). There is also a tremendous fishery which could easily employ many more operating vessels. (23) There are however a number of limiting factors holding down the production of indigenous fishing vessels.

1. lack of materials (wood, nails and tools)
2. government interference /harassment
3. lack of operating capital.
4. inappropriate aid projects.
5. lack of support infrastructure.

There have been a number of approaches proposed to handle the problems of developing the Somali boat building industry, a brief review of a few of these follows.
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There have been a number of approaches proposed to handle the problems of developing the Somali boat building industry, a brief review of a few of these follows.
6. TRADITIONAL AND "ALTERNATIVE" APPROACHES

FERRO-CEMENT BOATS

This approach at first glance seems to be very logical in approaching the first problem, lack of materials. Cement and sand are plentiful in Somalia. This technological solution does not hold water however. Ferro-cement boats are really steel boats with a cement coating. Somalia does not have a ready supply of steel. This type of boat building also requires a fairly high level of skill in the application of the cement. This adds another problem of training to the project. Transporting the finished vessel would be another problem to solve. The point is that any new technology has grown from a more simple form, support infrastructure and specialized skills also grew with the technology. When this developed technology is imposed in an environment which has not grown-up with the technology many assumptions become apparent in the form of problems to solve. It would be nice if ferro-cement boats worked as well as they sound, but they don't. The problem as previously described goes much deeper than a simple technological fix could handle. We must develop an approach which incorporates skills, materials and interests already working or at least struggling to work in Somalia.
6.2 THROW-BOAT STYLE

This has been the traditional approach to fisheries development. A large number of vessels are given free or nearly free to fishermen in the hopes of by-passing the initial investment costs of purchasing new boats. (24) However, since the fishermen have little invested in them the vessels are generally neglected with poor maintenance and repair practices. Those fishermen that see the value of maintaining their boats find that parts are hard to come by as are the necessary oils and fuels. There simply is not enough support infrastructure to maintain these vessels. The infrastructure must develop as a part of the industries growth.
6.3 MODERN MATERIALS COMBINED WITH THE CONSTANT CAMBER TECHNIQUES

With the advent of epoxy resins, micro baloons etc. (made popular by the Guidgeon brothers West System) a very tempting approach is developing. This is again a technological approach to problem solving, and therefore has some inherent problems. Again problem #1 is solved through the use of resins. Fast growing, readily available soft woods are cut into lathe. These thin strips of wood are then coated with resin and glued together on a "constant camber" mold. Constant camber sheets are produced which can be "sewn and glued" together forming a stable, solid craft requiring little maintenance. These vessels can be used singly but are primarily designed for multi-hull applications. There are some obvious draw backs in supplying the expensive resin regularly in any third world developing country. The processes involved are fairly simple yet require tools and materials which are generally hard to come by, materials we here in the U.S.A. take for granted, such as plastic sheets.

After a boatbuilding industry has developed the ability to produce small traditional vessels regularly, at a profit, I beleive that this approach could be the next step in long term development.
DEVELOPING AN "APPROACH"

As we have seen most of the traditional and alternative approaches to fisheries development have employed technological "fixes" as the basis for development. The problem, as defined in this paper is of a much broader scale than any technological solution could approach. The problem is already complicated enough without adding problems, which new technologies tend to do.

Consequently an approach I believe may be more appropriate would start with that which the Somali boat building industry already has. Somalia already has a number of skilled boat builders. Unfortunatly these boatbuilders have not been considered in past projects and were nearly run out of business by the "throw-boat" approach. They simply could not compete with free boats. Many of these boat builders were forced into other jobs such as fishing and farming.

Somalia already has Dhow traders which move with the monsoons from India to Madagascar. These traders would certainly be interested in increased trade in boat building materials from Kenya and Sri Lanka. There is also a small indigenous timber industry which could not continually supply boatbuilding in Somalia but could aid in getting it re-started.

The Somali government has an agency working on services for the fishing industry. This agency (CDP) could supply boat
builders, fishermen and traders with small low interest loans to
get past the initial investment hurdle which tends to trap many
small-scale entrepreneurs.

The next step would be to determine what other obstacles lie
in the way of the industries growth. The third step would be to
build the framework necessary to remove the obstacles.

This approach is an ongoing process, which must constantly
work at each of the steps, one step leading back and forth to the
other as needs arise. The problems with this type of approach
are many and may be why people have leaned toward technological
solutions. Some of the potential problems are explored below:

1. requires a long period of time of constant attention
   by all parties involved. The time scale for appropriate
development is 15 to 20 years, rather than 3 to 5 years.
2. There is not initially a large sum of money involved.
   Thereby making the project less appealing politically
to the donor agency and the host country.
3. requires cooperation between many sectors within a
country and many international donor agencies in and
   outside of the host country.
4. requires government officials and aid agencies to
   change their perceptions on how and how quickly aid
   projects should be employed.

These few obstacles listed here are very important
considerations for a large amount of "development" work will be
in changing the attitudes of donor agencies and host governments.
This work has a chance today for it is becoming very obvious to
most people working in development that the traditional approaches do not work. In Somalia there have been 13 fisheries development projects since the 1960's costing millions of dollars, today, there is little if anything to show for these efforts. There is a new syndrome called "donor shock" which seems to effect different donor agencies in different ways. Some agencies have become very tight and restrictive about giving funds in the hope that this will pressure projects into working. Other agencies have thrown up their arms and glibly given away millions of dollars with little or no hope of return. It appears that the donor agencies are ready for a change in approach to development.

The government of Somalia is most interested in receiving enough money to maintain its tremendous bureaucracy. Many government officials have dreams of Somalia as an industrial giant and may be initially hesitant to start with what they already have, seeing this step as a step backward rather than a step forward.
8. CONCLUSION

The Somali boat building industry has great potential for development as do other industrial sectors within Somalia. (25) The success of the development will be determined by the degree that the local entrepreneurs are included and encouraged in development. (26) Some of the major obstacles are to be found within the donor agencies and the government itself. Consequently successful development also rests on the amount of cooperation between all parties involved. The roles which CDP could fill include:

- working towards strengthening its fishery department and its influence within the Somali government.
- establishing a credit system which could supply boat builders with the necessary capital for tools and supplies at fair interest rates.
- could push for better trading relations with Kenya and Sri Lanka.
- could supply infrastructure in the form of demonstration projects to encourage private entrepreneurs to invest.

Somalia has great potential to become self-reliant. Given time and the appropriate approach to development, remembering to use and invest in that which is Somalia will surely lead back to Somalia's self-reliance.
FOOTNOTES


and


and


2. Vincent M., Barbour, B., Results of the Consultancy for the Coastal Development Project, Somalia. June 27, 1985

3. Ibid., at 2.


5. Ibid., at 4, pg. 16.


7. Ibid., at 6. pg., 12.

8. World Bank "Somalia's Fisheries Exploration/Pilot Project; Staff Appraisal Report". March 5, 1984


11. Ibid., pg 9.


14. Supra., at 2, pg. 14

15. Supra at 2, pg. 2.


17. Personal Interview with boatbuilder in Adale fishing settlement, May 1985.
Footnotes (con't.)


20. Supra., at 16.


23. Supra., at 1.

24. Supra., at 8.

25. Supra., at 1.

"Reconnaissance survey for the establishment of fish landing centers from Brava to Ras Hafun". (FI:DP/SOM/73/005/3) FAO, Rome.


"Somalia: Fisheries development and training". (SOM/75/008) FAO, Rome.

"Development of Mogadishu old port as an integrated fishing harbor". A project outline for discussion between the European Economic Community and the Somalia Ministry of Fisheries.

"Inland fisheries development phase II".

Field guide to the commercial marine and brackish water species of Tanzania. (TCP/URT/4406) FAO, Rome.

"Final technical report, fish handling and cooperative expert". (SOM/028/SOM) FAO, Rome. February.

Fish marketing and the prospects for market development in the Gulf area. (FI:DP/RAB/71/278/13) FAO, Rome.

"Development of the National Fish Factory at Kismayo". (FI:DP/SOM/75/008) FAO, Rome. April.


"Fisheries project identification study for Somali artisanal fisheries". Rome. July.


__a__

"A master plan for the development of fisheries in Somalia". Mogadishu. October.

__b__

"Training for the fishing industry in Somalia". Mogadishu. December.


__me, T__


__son, I__

"Assistance for the fishing communities of Brava, El Hamed and Merca". (SOM/029/SOM) FAO, Rome.

Industry


Policy initiatives and privatization project. A project paper. Mogadishu. September.

"USAID, financing for Somalia's Commodity Import Program". Mogadishu.


Department

Unclassified cable from Mogadishu Embassy. April.

Commerce.


Bank.

"Somalia's Fisheries Exploration/Pilot Project; Staff Appraisal Report". March 5.

/FAO.

S. "An approach to dry salt fish processing". A paper presented at Fish Utilization Programmes in Africa. Lusaka, Zambia. 5-23 May.

United Nations.


r-Brunner, A. "Local and scientific names of fishes collected on the coast of Somalia", an appendix from an unknown publication.

J. F. "Fisheries project". (SOM/75/008 HQ) FAO, Rome.

J. and nsen, J. "Demonstration of the use of sail power in small Somali fishing vessels". FAO, Rome. March.


M. "Fish trade in the near east region". (IOP/TECH/79/25) FAO, Rome.


Register of import regulations for fish and fishery products. FAO, Rome.
Directory of fish exporters and importers. FAO, Rome.

r, J.

"Somalia, prospecting surveys and demonstration fishing". (FI:DP/SOM/75/008/FD2) March.

son, K.

"Fish for refugee feeding". FAO, Rome. 26/9-13/11.


is, I. M.


3 Foreign Analysis Division. "The Somali Fishing Industry". Washington, D.C.

"Opportunities for investment in Somali fisheries". Washington, D.C.

pentier, S.

"Somalia: fishing boat maintenance, repair and training". (FI/DP/SOM/008/FDI) FAO, Rome. February.

conti, G.

"Fisheries development and training in Somalia, final report". (SCM/75/008) FAO, Rome.

eres, A.


ki, M. K.


es, G. T.

"Somalia - technical assistance for marketing and cooperatives". (SOM/78/008) FAO, Rome.

"Marketing and cooperatives advisor; final report". (UTF/SOM/028/SOM) FAO, Rome.

Geste Centrale l'equipement territorial.


<table>
<thead>
<tr>
<th>PEOPLE MET</th>
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**Somalia**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Title</th>
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<tbody>
<tr>
<td>Abdikarim Hashi Igal</td>
<td>General Manager, Coastal Development Project (CDP)</td>
</tr>
<tr>
<td>Aaden Mohamed Ali</td>
<td>Minister of Fisheries</td>
</tr>
<tr>
<td>Ahmed Mohamed Abicar</td>
<td>Director of Fisheries, CDP</td>
</tr>
<tr>
<td>Abdi Hassan Jama</td>
<td>Gear Technologist, Ministry of Fisheries</td>
</tr>
<tr>
<td>A. Sanders</td>
<td>Fisheries Adviser, CDP</td>
</tr>
<tr>
<td>J.F. Arrundale</td>
<td>Managing Director, Somali Marine Products (SMP)</td>
</tr>
<tr>
<td>J.R. Christiansen</td>
<td>Master Fishermen, SMP</td>
</tr>
<tr>
<td>H. Widman</td>
<td>General Manager, GRP</td>
</tr>
<tr>
<td>J. Kraft</td>
<td>EEC, Mogadishu</td>
</tr>
<tr>
<td>Abdulkadir Mohamed Faroh</td>
<td>Chairman Brava Settlement, CDP</td>
</tr>
<tr>
<td>Pierconti</td>
<td>Project Manager, FAO</td>
</tr>
<tr>
<td>Abdi Kulmive Hassan</td>
<td>Chairman Elahmed Settlement, CDP</td>
</tr>
<tr>
<td>Mohamed Haji Yusuf</td>
<td>Director of Boatbuilding, Ministry of Fisheries</td>
</tr>
<tr>
<td>Yusuf Abdulah Nur</td>
<td>Manager, Modern Fish Market</td>
</tr>
<tr>
<td>Sufi Ali Sheek</td>
<td>President, Fishermans</td>
</tr>
<tr>
<td>Jeylani Sheek Abdi</td>
<td>Cooperative, Merca</td>
</tr>
<tr>
<td>Osman Mohamed Hirase</td>
<td>Accountant, Fishermans</td>
</tr>
<tr>
<td>Mohamed Ali Mohamed</td>
<td>Cooperative, Merca</td>
</tr>
<tr>
<td>Mohamed Cali Jaamac</td>
<td>Commissioner of Cooperative, Adale</td>
</tr>
<tr>
<td>Hadi Baamunge Mesuwo</td>
<td>Chairman of Settlement, Adale</td>
</tr>
<tr>
<td>Hassan Hrabin Ahmed</td>
<td>Regional Officer, Ministry of Fisheries, Kismayo</td>
</tr>
<tr>
<td>Shleb Ahmed Yusaf</td>
<td>President Fishermans</td>
</tr>
<tr>
<td>Lorrying Waggoner</td>
<td>Cooperative, Kismayo</td>
</tr>
<tr>
<td>Mohamed Ali Sherrieh</td>
<td>Regional Extension Officer, Kismayo</td>
</tr>
<tr>
<td>G.J. La Bombard</td>
<td>Chief Accountant, SMP</td>
</tr>
<tr>
<td>Gary Nelson</td>
<td>Program Economist, US</td>
</tr>
<tr>
<td>Klaus Niemann</td>
<td>USAID</td>
</tr>
<tr>
<td>J. Kraft</td>
<td>Commodity Import Program, USAID</td>
</tr>
<tr>
<td></td>
<td>Deputy Director, USAID</td>
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<tr>
<td></td>
<td>Resident Rep., World Bank</td>
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<td></td>
<td>EEC</td>
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</table>

The numerous fishermen we met with in Brava, El Ahmed, Merca, Mogadishu, Adale, and Kismayo are not listed by name.
PEOPLE MET

Rome

Jan Johnson
J. Fyson
N. Vikanes
B. Bjarnason
Ian Robertson
D. James
J. Nierentz
Helga Josupeit
R. Zeisler
Stig Valand

Fishery Industry Officer, FAO
Senior Fishery Industry Officer, FAO
Naval architect, FAO
Fishery Industry Officer, FAO
Senior Fishery Industry Officer, FAO
Fishery Industry Officer, FAO
Fishery Industry Officer, FAO
Project Operations Officer, FAO
Private marketing consultant

Paris

Schmidt
E. Vergara
E. Schneider
H. Lindsey

Head of Fisheries Section, OECD
Commercial Officer, US Embassy
President, Schneider Overseas Foods
President, Marketsource Company
APPENDICES

1. Ministry of Fisheries - Organizational Chart
2. Proposed Organizational Chart for the Enterprise
3. (a) Distribution of Fish stocks N.E. Monsoon
   (b) Distribution of Fish stocks S.W. Monsoon
4. Eight Questions to Ask About Development Projects
5. Traditional v. Modern Values
6. Special Program for CDP.
7. Possible Areas of Cooperation between CDP and USAID
8. How to Process Beche-de-Mere
9. How CDP list fits into a Program
10. New Program for CDP
11. Work Plan for First Year
12. Suggested Terms of Reference for Future Consultants
13. Proposed Reorganization of CDP
14. Landings and Catch per effort
15. (a) Dhow Construction
    (b) Dhow Construction
16. Shipwright with Adze
17. Mashua hull
18. Gaff rigged mashua
19. Sail plan mashua
20. Perfecting the Mogadishu Saunter
21. Traditional Somali fishing vessels.
SOMALIA
ISHERIES EXPLORATION / PILOT PROJECT
DISTRIBUTION OF DEMERSAL AND PELAGIC FISH ON THE
LALIA COAST DURING THE NORTHEAST MONSOON, 1975-76

School Density:
- very scattered
- scattered
- dense

Rivers

Regional Boundaries

International Boundaries

ETHIOPIA

DJIBOUTI

GALBEEED

SANAAQ

BARI

TOGDHEER

NUGAL

MUDUG

GALGADUD

HIRAN

BAKOL

GEDO

BAY

LOWER SHEBELLI

MIDDLE SHEBELLI

MIDDLE JUSA

LOWER JUSA

This map has been prepared by
The United Nations Food and
Agriculture Organization for the purpose of
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information and the accuracy
shown on the map is not stated on the
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Source: Institute of Marine Research, Bergen
EIGHT QUESTIONS TO ASK ABOUT DEVELOPMENT PROJECTS:

1. Whose project is it? Is it the donor agency's?  
   -or-  
   Does it originate with the people involved?

2. Does the project define the problem to be tackled as a technical or physical deficiency (e.g., poor farming methods or depleted soils) that can be overcome with the right techniques and skills?  
   -or-  
   Does it first address the underlying social, economic and political constraints that stand in the way of solving the physical or technical problem?

3. Does this project strengthen the economic and political position of a certain group, creating a more prosperous enclave which then becomes resistant to change that might abolish its privileges?  
   -or-  
   Does it generate a shift in power to the powerless?

4. Do new skills and information remain only with the leaders?  
   -or-  
   Does the project involve an ongoing educational process for all the participants?

5. Does the project, through the intervention of outside experts, take away local initiative?  
   -or-  
   Does it generate a process of democratic decision-making and a thrust toward self-reliance that can carry over to future projects?

6. Does the project reinforce dependence on outside sources for material and skills?  
   -or-  
   Does it call forth local ingenuity, local labor and local materials, and can it be maintained with local skills?

7. Will success only be measured by the achievement of objectives specified at the outset?  
   -or-  
   Is the project open-ended, with success measured as the project progresses?

8. Is the evaluation a one-way process by which the donor judges the recipient's performance?  
   -or-  
   Is it a two-way (if possible face-to-face) dialogue in which the recipient also evaluates the donor and they together evaluate the project?

These social and cultural attributes are those which supporters of the modernization theory of development would inherently infer needed changing before a third world nation could be considered modernized. This is a partial list you the reader can probably think of many more. Note the negative tone in the words describing the traditional values.
Coastal Development Project is an independent project formerly responsible to carry out development only for fishing settlement.

We are now very glad to inform you that Coastal Development Project has expanded and given as bigger responsibility capacity to carry out developing the Coastal areas and fishing communities in the following coastal districts such as; Garba, Merka, Mogadishu, Adalt, El-Dere, Oboio, Garad, Bili, and Balker Beila that is the coast zones which will be responsible by C.D.P. The future aim of Coastal Development Project is to resettle 150 families in the coastal areas each year, to make them Fishermen and warn their leaving from the sea, it is a great (Honorab) honorable for us to present here for you this special programme.

We anticipate your closer Co-operation with this matter, the new programs which needs to be carried out is as follow.

Boats and Fishing Gears:
- Purchase of boats 50 3.5m.
- Fishing Gear as indicated the attached sheet.
- One Boat for research.
- One big big boat for transportation.
- Work-shops:
  - Work-shop for each Coastal District
  - One big work-shop in Mogadishu.
- Construction:
  - 30 houses for resettling.
  - One jetty for each Coastal District.
  - One cold storage for each Coastal District.
  - One big Cold Storage in Mogadishu.
  - Small fishing markets in the rural and Urban areas near Coastal District.
- To establish 13 small fish-markets in Mogadishu.
- To build small Fishin-Canning factories for the suitable Coastal Palces.
- Transportation:
  - One tractor for pulling Boats for each Coastal District.
  - 6 Land-Rovers for Services.
  - 2 Trailors for picking up the boats to the Work-Shop.
  - Mobile lorry Work-shop for the fishermen.
- Communication:
  - Powerful Communications in Coastal Areas.
- Training Courses abroad:
  - Three(3) Experts for training Courses in Somalia.
  - One Master of Fisherman Expert in Somalia.
  - One man for the Administration expert in Somalia.
- Maintenance:
  - To repair our Jerrycan, Land-Rovers and tractors see the attached sheet.
  - To repair our and maintain our permanent Boats.

The Boats which needs a repair are divided in the following categories:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Boats</th>
</tr>
</thead>
<tbody>
<tr>
<td>I - Sri Lankan old Boats</td>
<td>45 Boats</td>
</tr>
<tr>
<td>II - Greek Old Boats</td>
<td>10 &quot;&quot;</td>
</tr>
<tr>
<td>III - Swedish 3.5m Boats</td>
<td>20 &quot;&quot;</td>
</tr>
<tr>
<td>IV - Swedish 5.4m Old Boats</td>
<td>10 &quot;&quot;</td>
</tr>
</tbody>
</table>

Total Number of Boats: 85 Boats.
Possible Areas of Cooperation Between CDP and USAID - a Discussion Paper

Martin Vincent and Bruce Barbour
Consultants to CDP and USAID
Mogadishu, June 4, 1985

The Coastal Development Project is an independent project, formerly given the task of settling drought victims and providing them with the skills and materials needed to earn a living as fishermen. This task has been completed.

The Minister of Fisheries has given CDP a new role, and expanded its jurisdiction to cover the area from Baraawe up to the North East point of Ras Assail. This area extends far beyond the original four settlements, and includes a large number of traditional fishermen.

The new role of CDP can be divided into two separate tasks:

1) settling secondary-school graduates and civil servants, and providing them with the skills which are required to be fishermen.

2) providing services to the existing fishing industry.

Although USAID will not be able to assist CDP with the task of settlement, it could be interested in helping CDP provide services for the already existing fishing industry. It is therefore suggested that funding for the two activities be separated, and sought from separate sources.

The provision of services to the existing fishing industry would help CDP in its task of resettling additional families. Once these families had acquired their fishing skills and materials, and once they had become a part of the existing fishing industry, they would benefit from these services in the same way as other members of the existing fishing industry.

CDP could be responsible for the following services:

1) Fisheries equipment service
2) Boat building services
3) Mechanical services
4) Fish handling and transportation services
5) Communication and data collection services
6) A credit program for fishermen, boat builders, mechanics, and fish dealers.
Functions of the suggested services could be as follows:

1) **Fisheries Equipment Service**
   - To advise CDP and other importers of fishing gear on what materials are needed by Somali fishermen.
   - To purchase and sell the fishing equipment which is imported by CDP.
   - To show fishermen the ways of assembling fishing gear.
   - If the fish handling and transport service discovers markets for species which are not currently being caught, the fisheries equipment service could develop new fishing gear and fishing methods for these species.

2) **Boat Building Service**
   The current fishing industry includes a large number of traditionally built boats. With the rise in the price of GRP boats, these GRP boats are becoming uneconomical to operate. Therefore, the construction of traditional fishing boats, which are less expensive, should be encouraged. COP could assist traditional Somali boat builders
   - in obtaining wood, nails, caulking materials, tools, and other necessities
   - by including traditional boats in its future purchases for the settlement program.

3) **Mechanical Services**
   Within the existing fishing industry, there are a number of mechanized boats which CDP has maintained. CDP should continue to provide mechanical services for these boats, through:
   - The provision of workshops in each district, and one central workshop in Mogadishu.
   - The provision of skilled mechanics.
   - The provision of spare parts.

4) **Fish Handling and Transportation Services**
   While the handling and transportation of fish is best left in private hands, CDP could provide continuing services in this areas:
   - Demonstration projects, such as CDP has done in Adale, to show the economic viability of transporting fish in ice boxes. This project was very successful, in that businessmen are now
transporting fish from Adale to Mogadishu.

- By providing information on market possibilities, both within Somalia and in other countries.

5) Communication and Data Collection Services

CDP presently uses radio to coordinate its activities in the various regions. In addition, these radios can be used to collect daily information on landings, fish prices, and market opportunities. This information is valuable for fish transportation, marketing, and for future planning. This service should be expanded throughout CDP's jurisdiction.

6) Credit Program

This program could assist fishermen, boat builders, mechanics, and fish dealers in establishing or expanding their businesses.

If CDP wished to provide the services outlined above, and attract funding for them, CDP would have to strengthen the fisheries department and demonstrate management capability. Specific suggestions would be to:

1) Increase the number of trained and skilled fisheries specialists within the department.

2) Transfer management responsibility of fisheries related infrastructure, (such as fishing gear stores, mechanical workshops), to the fisheries department.

3) To demonstrate the proper utilization of the previously established inventory and accounting procedures.

To summarize, CDP's mandate to continue its resettlement program is recognized. It is also recognized that CDP has been given the additional responsibility to assist the already existing fishing industry. These are two separate functions, and funding for each function could come from a separate source. While USAID is unable to assist CDP in its resettlement program, USAID is interested in discussing the possibility of working with CDP to strengthen and assist the existing private fishing industry and establishing private sector support agencies.
HOW TO PROCESS BECHE-DE-MERE
A Potential Development Project for the Fisheries Dept.

(Gus-Badeed)

Also known as Trepan, Zub-el-Bahr, Sea-Cucumber, Holothurians. These animals are found in many areas of Somalia on sandy bottoms in quite shallow water near the coast. They can be picked up when walking in shallow water or swimming.

Proceed as follows to produce a valuable produce:

1. Collect from fishing area in a sack or net bag. This should be kept under water all the time. If possible find a shallow place where you can leave them to build up a large number.

2. Make a fire and boil sea-water in a fuel drum cut in half. Water must be bubbling and churning.

3. Make a small cut (1/2 length of body) on the side of the animal which is up when you collect it. Squeeze body gently so that stomach and internal organs are pushed out of the hole at one end.

4. Put into strongly boiling water, keep water boiling for 45 minutes. Take out the animal which is now small and tough like rubber.

5. Dig a hole in the sand. Put the animals in the hole a few at a time and cover with sand. Each piece must have sand all over its skin. Leave for one night in the sand.

6. Rub-off the sand and the rough surface of the skin with a brush or stone until clean.

7. Put again into boiling water and boil for 45 minutes.

8. Place a short stick across the cut to open it up and put out on a mat to dry in the sun. Cover each night.

9. After four or five days the product should be as hard as wood, if not leave to dry some more. Then put into sacks and store. Insects will not attack this but after many months redrying may be necessary.

10. This product can be marketed through the same channels as shark fins and has a minimum value in Singapore of US$4 per kg. Top quality is valued at US$10 - 12 per kg. This is equivalent to approximately Shs.80,000 per quintal.
Appendix A

How the C.D.P. list of requests fits into a "Programme" that could be addressed by a strengthened and reorganized Fisheries Department given the mandate to provide Services to fishermen and to stimulate private business involvement in fisheries production, fisheries service industries, fisheries marketing and export of fishery products.

A. **FISH.HANDLING.AND.TRANSPORT.SERVICES**

A consultant to evaluate request for processing/marketing related services outside Mogadishu area (where J.I.C.A. Mission is active). Requested items:-

1. Transport/Collection vessel
2. Regional cold stores
3. Rural Fish Markets
4. Canning factories

B. **BOAT.AND.REPAIR.SERVICES**

1. District Workshops
2. Mobile Workshop
3. Tractors
4. Engines and spare parts
5. Expert mechanic

C. **FISHERIES.EQUIPMENT.SERVICES**

1. Fishing Gear
2. Exploratory Fishing Boat
3. Expert Masterfisherman

D. **COMMUNICATION.AND.DATA.SERVICES**

Radios, batteries and chargers
E. CREDIT FACILITIES

(A Revolving Fund managed by the Somali Development Bank, this C.D.P. Service is to identify, encourage, verify and support applications for funds from the private sector).

1. Boats
2. Fishing Gear
3. Markets, Cold Stores, Canning equipment
4. Engines, parts
5. Vehicles, parts

"SUPPORT TO THE ADMINISTRATION" is required in order that the Fisheries Department may be reorganized and strengthened so as to increase its management capabilities, efficiency and accountability. Support would take the form of:-

1. Salary supplements
2. Vehicles, fuel and maintenance
3. Office Maintenance
4. Office furniture and equipment
5. Training
6. Consultants
7. Experts
Appendix 18.

SOMALI DEMOCRATIC REPUBLIC

COASTAL DEVELOPMENT PROJECT

8/6/85

With the reference of the paper written together the two USAID consultants which was reviewing the future planning where C.D.P. is going.

Thus our objective is to provide services for the already existing private fishing industry. The way we want to provide the services is as follows:

1. C.D.P. is to provide the following services to the already existing private industry.
   A. Fisheries equipment services
   B. Boat Building services
   C. Mechanical services
   D. Fish Handling and transportation services
   E. Communication and Data Collection services
   F. A Credit program for fishermen, Boat Builders, Mechanical and Fish Dealers services

2. C.D.P. To strengthen the Fisheries Department, therefore it can provide the services
   A. by increasing the number of trained and skilled Fisheries specialists within the Department.
   B. by transferring Management responsibility of Fisheries related infrastructure (Such as Fishing) gearstocks, Mechanical workshops, ice plant etc. to the Fisheries Department.
   C. by demonstrating the proper utilization of the previously established inventory and accounting procedures.
   D. by allocating a Budget to the Fisheries Department.
   E. by providing a floor of offices to the Fisheries Department.

Therefore C.D.P. is requesting a fund to get it changed and carry out the above mentioned services.

GENERAL MANAGER OF C. D. P.

ABDIKARIM HABEEB IGAL
Prepare plan for fisheries department

Prepare budget

Make written commitment to transfer management responsibilities of gear stores to fisheries department

Make written commitment to transfer the required trained and skilled fisheries technicians to the department

Prepare funding request for salary supplements, office renovation, fuel, maintenance

Identify and renovate offices

**Fisheries Equipment Service**

Bring in and train head of section

Establish procedures

Arrival of small quantity of ODA nets and trial of the new rotating net-fund system

Specification of £40,000 of nets

Arrival of £40,000 of nets and sale

Evaluation of new revolving-fund system and possible expansion
submit request for consultant study
consultant performs work

**Boat Building**

**Marine Mechanical Service**

transfer 2 mechanics into service
Transfer spares store to fisheries department
Train 2 new mechanics for Ali's absence
Ali Yusuf goes to England for training
Request ODA for mobil workshop
Arrival and operation of mobile workshop
set up central workshops and spare store
arrange financing; specify engines, spare parts, tools, and materials

Calendar

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Fish Handling and Transport Service

- Transfer assistant to Abdil Nor
- Finish off ice plant and stores
- Submit request for consultant study
- Consultant performs work

Communication, Data Collection, Planning

- Transfer 2 English-speaking fisheries technicians
- Establish data collection methods
- Saiid, current head of division, goes to England for 3 years of training
- Prepare financing proposal for additional radios
- Expansion of data collection from additional areas
- Draw up credit program proposal in consultation with USAID contract analyst and Somali Development Bank
Terms of Reference: Boatbuilding Consultant

Background:

Traditional Somali boat-building has been overlooked since resettlement programs began ten years ago and hundreds of foreign boats were imported. Traditional Somali boats currently outnumber foreign-designed boats by more than 2:1, and are growing in number as the overall size of the industry grows. Locally built traditional boats are more easily modified in design to fit local needs than mass-produced ones, and offer savings of 50%.

Work to be Performed:

The consultant shall work with CDP in assessing the potential role of traditional Somali boat-building, and planning the development of this sector on Somalia's East coast.

Specifically, the consultant will:

1) Document the current status of the sector; the number of boat-builders working, the types of boats being constructed, the materials required, and the costs.

2) Determine the future role of traditionally built boats; which fisheries are they most suited for, which fisheries are they unsuited for, how do they compare with Sri Lanka and GRP boats in terms of cost, production of fish, and safety.

3) What steps should be taken if one wished to increase the production of traditionally built boats.

A draft copy or summary of the final report will be submitted to CDP for discussion before the consultant leaves Somalia. The final copy will be submitted in the U. S.

Schedule:

To ease travel problems, it is suggested that the consultant work during a dry period, such as mid-October to mid-December.

1 week, Kenya, for orientation and to visit wood exporters
7 weeks, Somalia
1 week, U. S., to prepare final version of report.

A total of 9 weeks.
Terms of Reference: Seafood Handling and Transportation Consultant

Background:

The Coastal Development Project is planning to strengthen its fisheries department and establish a seafood handling and transportation service. This service would be aimed at assisting the private sector to develop in this area by providing information and by carrying out demonstration projects.

Work to be Performed:

The consultant shall work with CDP in strengthening its seafood handling and transportation service.

Specifically, the consultant will:

1) Document the current system of fish distribution and marketing from Brava to Ras Asail.

2) Plan the development of this sector during the next three years; the roles of CDP, the roles of private businessmen.

3) Determine what infrastructure and technical assistance is required for this development.

4) Work with CDP's section of data collection and planning to coordinate their work.

5) In general terms, assess CDP's effort to strengthen its fisheries department, its success in assisting the private sector, and assist CDP in planning its efforts during the next year.

A draft copy or summary of the final report will be submitted to CDP for discussion before the consultant leaves Somalia. The final copy will be submitted in the U. S.

Schedule:

1 week, Tropical Products Institute, England and INFOFISH, Rome
7 weeks, Somalia
1 week, U. S. A., to prepare final version of report.

A total of 9 weeks.
PROPOSED REORGANIZATION OF THE C.O.P. (JUNE 8, 1985)

OFFICE OF THE GENERAL MANAGER

ADVISORY SERVICES
+ TECH COOPERATION

DEPARTMENT OF COMMUNITY SUPPORT SERVICES
TRANSPORT  CONSTRUCTION

DEPARTMENT OF FISHERIES

BOAT BUILDING SERVICES
BOAT REPAIR SERVICES
FISHING EQUIPMENT SERVICES
FISH-HANDLING AND TRANSPORT SERVICES
COMMUNICATION AND DATA SERVICES
CREDIT SERVICES

DISTRICT FISHERIES SERVICE UNITS
Appendix 4.

Landings and Catch per Effort.


Region 1

Ras Chiambone is a small village a few kilometers from the Kenyan border. It forms a fishing cooperative together with Burgao, situated at a small river mouth some 20 km to the north. Apart from fishing for the local consumption, the cooperative contributes with fish to the fish factory in Kisimayo. According to the latest information there are 12 operating motor boats and 13 sailing boats. The people in the villages have a lot of sheep and goats and some camels and cows. During some parts of the year, they grow sorghum in the clearings in the forest. Certain seasons the fishermen put up camps on the islands, fish for sharks and dry-salting the catch, which is exported directly to Kenya. This is done mainly by the fishermen in Ras Chiambone, Burgao and Kulmis. Gillnets and long-lines are the main gear for this kind of fishing. The fish, which is delivered to Kisimayo, is mainly caught with beach seines. During the calm periods, trolling for big pelagic fish occurs. The fishermen also dives for spiny lobster. They usually go to the outer islands, but
still not to the most exposed areas along the reef, which is normally found outside the islands. This probably means that there is a stock of lobster in very exposed areas, rarely exploited, which prevents overfishing. The fishermen use a mask, a wooden stick on which they put some octopus and a small hoop-net. I once joined some fishermen to see how they operated. We went to suitable rocky places with stones and small caves, in which the lobsters hide during day time. We found lobsters from two to about ten metres depth, which is the maximum for the divers. As soon as a diver caught sight of a lobster, he put the bait in front of it and it was amazing how fast the lobster was attracted to the bait. When it came out of its cave, the diver only had to put the net behind the lobster. Within 3/4 of an hour three divers caught about five Kg. The divers seem to operate only when they know that the transport boat is coming, and very few of them store the lobster in cages. Most of the lobster is sold to the SMP fish factory in Kisimayo. In Kulmis there are eight operational motor boats and thirty sailing boats. The conditions are about the same as in Ras Chiambone and Burgao. Beach seining inside the islands, trolling and gillnetting occurs in about the same way.

In Kisimayo 26 motor boats are operational and the same number of sailing boats. These boats deliver most of their catch direct to the fish factory and there is less fishing for sharks. It seems to be more suitable bottoms for lobster further south. The fish factory produces frozen fish and lobster and small amounts of smoked fish. The fish is exported in order to generate hard currency but sometimes it is also sold locally, e.g. to the modern fish market in Mogadishu. The fish caught in the beach seines is dominated by Siganus and many different kinds of Lethrinus. These are small and medium size of fish. By gillnetting, hand-lining - trolling and long-lining large fish are caught, for example sharks, snappers, Caranx and tunas. Not all the fish is however delivered to the fish factory. According to estimations I made among a few fishing boats, average about 30% of the catch was kept for local consumption. This was
mainly small fish or species not accepted by the collecting boats from the fish factory. Sometimes very small fish and lobster are caught. These must not be accepted by the fish factory, which also apply to female lobster with eggs. Even if the eggs are removed it is easily detected. In 1983 the SMP factory produced totally 560 tons of fish of which about 80 tons were spiny lobster. According to my estimates another 240 tons never reached the factory because it was consumed locally. According to the latest information I could get before I left Somalia, the SMP production for 1984 is about 530 tons. I also made some inquiries in the villages about the production of dry-salted fish and I estimated at least 200 tons fresh weight to be exported to Kenya. Assuming that the local consumption was about the same as previous year the total production of region 1 in 1984 is close to 1000 tons.

Region 2

Brava is a quite large village about 200 km south of Mogadishu. There are nine operational motor boats, six Sri Lankan and three Greek, and thirty huuris. Most of the fish is consumed locally, but a lot of it is dry-salted and exported to Kenya. The main gear are gillnets and hand-lines. In January 1984 the total catch was 11,532 Kg, of which 6,955 were taken by six Sri Lankan boats and 4,577 by 12 huuris. During February and March only 5,968 Kg resp. 6,860 were caught totally. However, five of the Sri Lankan boats were fishing sharks south of Brava during 45 days. Their catch corresponds to a fresh weight of about 12 tons. In April 9,214 Kg were landed and during the first 25 days of May 5,526 Kg. From there on the sea became more and more rough and fishing stopped during June, July and August. The total catch of this period is thus about 51 tons. If comparison is made with September to December 1983 the estimate for the total catch of 1984 will be about 80 tons.

El Ahmed is a small village only 15 km south of Merca. There are nine operational motor boats, most of them Sri Lankan, and only three huuris. Gillnets are the most common gear. The fish is often transported to Merca or Mogadishu. In January six Sri Lankan boats caught 8,590 Kg. In February the catch was
As in Brava there has been no fishing during June, July and August because of rough weather. The total production of El Ahmed from January to August is therefore 36 552 Kg. When compared to the production of the last part of -83 the estimate for the whole of -84 will be about 55 tons. Merca is situated about 100 km south of Mogadishu and it is a quite large village. There are ten operational fibre-glass boats (6,5 m), which are produced in the GRP factory in Mogadishu. As much as 75 huuris are scattered in the coastal surroundings. The fish production in January was 29 223 Kg. This amount of fish was caught by ten GRP boats and twenty huuris. In February there were 12 GRP boats and 31 huuris, landing 25 750 Kg. During March, April and May 52 710, 84 910 resp. 78 130 Kg were caught. In this period 11 motor boats and 34 huuris were operating. In June the catch was 45 250 Kg and because of the rough weather only 4 145 Kg in July. This makes a total of slightly more than 320 tons from January to July. From August to December -83 256 tons were caught. If assumed the catch will be the same in these months -84 the total will be 576 tons. Most of this fish is consumed in Merca and the adjacent inland villages. Sometimes the fish is transported to Mogadishu. In Mogadishu there are up to 35 operational GRP boats (6,5 m) but normally much less are operating at the same time. There are also about 30 huuris. Mostly hand-lines are used, for demersal fish during the windy seasons and trolling for big pelagic fish during the calm seasons. Also gillnetting occurs. The way of fishing reminds a lot of that of Merca. In January only 2 855 Kg were caught in Mogadishu but only ten GRP boats per day were fishing. The following month the catch was 9 918 Kg and in March 38 135 Kg. This time, like the following months, average 23 boats were fishing. Both motor boats and huuris land their catches at the same place and it is sometimes difficult to differ between their catches. In April and May the catches were 42 450 Kg and 31 114 Kg. During June as much as 114 065 Kg were caught and in July 67 017 Kg. In these last two months about 26 boats operated per day. In August the production was 34 495 Kg and
in September 40 269 Kg. The total production of Mogadishu for these nine first months amounts 380 318 Kg. If the production of October, November and December keeps to the average of the other nine months, which is plausible, the total production of Mogadishu is somewhat more than 507 tons. There are normally six motor boats fishing in the small village Gesira some 25 km to the south of Mogadishu. According to my information these boats have a somewhat lower catch rate than in Mogadishu and I have estimated their production for 1984 to about 100 tons. In Adale about 150 km north of Mogadishu there are several kinds of boats. Between six and eight Sri Lankan boats have been operating during 1984. There are also two Russian boats, four GRP (6.5 m) and three huuris. The two Ministry boats, one GRP (8.5 m) and one Japanese, are also operating in this area. The boats are however operating in different places during different seasons. Sometimes south of Adale and sometimes far north in region 3. When the fishermen go far from Adale and put up their camps, for example in Ilka Uus or El Dere, they go fishing for sharks with Gillnets and dry-salt the fish normally. Close to Adale they often use hand-lines and when the season is good they are trolling for big pelagic fish. The total catch from this area was in January 51 270 Kg, in February 57 561 Kg, in March 111 323 Kg, and in April 67 840 Kg. During May and June the catches were as high as 393 240 and 229 133 Kg. During the rough weather in July the landings were only 17 652 Kg. The total catch for these months is almost 1000 tons. This high production is mainly from shark fishing along a very long coastline and the very high figures from May and June, probably depend on that the sharks come close to the coast for spawning and feeding. The average for the production for the other five months is probably a good indication for the production of the last months of 1984. The estimation of the total production of 1984 in the Adale area is therefore 1 250 tons. When added up the total production of region 2 will be 2 568 tons. As mentioned above this figure includes landings far up in region 3. El Dere is situated some 150 km north of Adale.
Region 3
A lot of the production in region 3 is already mentioned under region 2. There are very few motor boats in region 3 and it is doubtful if any of them can operate during this bad fuel situation. The main production comes therefore from the huuris. According to the latest information there are about 15 huuris in the main centre Obbia and the same number in Garacad. As further north the production is concentrated on gillnetting for sharks, which is dry-salted. Handlining and trolling also occur. With an annual production of 20 tons per huuri the landing in Obbia is 300 tons. Depending on problems with transportation the production in other areas is probably very low and an estimate of the production of the northern part of region 3 is 400 tons.

Region 4
From the northern regions it is difficult to get production figures on a monthly basis, not only because of distances and communication problems but also depending on the way of fishing. As most of the fishing is concentrated on production of dry-salted fish, the boats often move to remote parts of the coast far away from the villages and the amount of fish caught is normally not detected until the boats return after several months. The following figures are therefore annual production figures from 83/84. The fishing season normally starts in October and ends in April - May. Gillnets are the main gear but trolling for big pelagic fish during the calm seasons is also important. Region 4 seems to include the richest fishing grounds. There are plenty of big and small pelagics as well as demersal fish.

There are nine Sri Lankan motor boats in Eyl, which are operative and eight beden. The beden are sailing boats described above. The production during 83/84 is 116 tons. This figure is converted to fresh weight from dry weight. Together with the local consumption, which is according to my figures more than 50 tons, the total production of Eyl is about 170 tons. By the end of 84 some more motor boats have probably been put into operation.
In Bender Beyla there are four Sri Lankan boats but the main production comes from the 36 beden. In October, November and December the production corresponds to a fresh weight of 150 tons. From January to May the landings were about 450 tons and figures from the fresh fish consumption indicates 50 tons. The total production of Bender Beyla is thus about 650 tons.

In Hordio there are three operational Sri Lankan boats, twelve beden and ten huuris. In the closely situated Ras Hafun the number of operational Sri Lankan boats is four. There are 23 beden and nine huuris. The production 83/84 in Hordio was 714 tons fresh weight and together with the local consumption the estimate is about 750 tons. In Ras Hafun the production was 1164 tons, which together with the fresh fish consumption is estimated to be close to 1200 tons.

In Bargal, close to the horn of Africa, there are nine Sri Lankan boats, 26 beden and 64 huuris. The total production is, according to recent information, only 350 tons for 83/84.

The total production for region 4 in 83/84 is 3120 tons.
Above: Somali boat builder fitting deck plank with small hand saw.

Large sailing Dhow being built on the beach in Kismayo, Somalia.
A general view of the shipyard with crooks of jungle wood from India in the foreground.
This shipwright is chipping away at a jungle "crook," shaping it to form a rib. The ribs are shaped out of the mass of branches piled up on the shore. Each is selected with care for its curvature.
Appendix 18.

Fig. 7  7.8 m Local Mashua with gaff rig
**Appendix 19.**

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<th>MAIN PARTICULARS</th>
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<tr>
<td>Length overall</td>
<td>7.80 m (25' 7&quot;)</td>
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<tr>
<td>Length waterline</td>
<td>7.55 m (25' 0&quot;)</td>
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<tr>
<td>Beam maximum</td>
<td>2.20 m (7' 3&quot;)</td>
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<tr>
<td>Beam average</td>
<td>2.00 m (6' 7&quot;)</td>
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<tr>
<td>Displacement (approx)</td>
<td>25000 kg (55000 lb)</td>
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<tr>
<td>Sail area (total)</td>
<td>25.07 m² (270 ft²)</td>
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1. **Sail length**: 4.50 m, beam 6.0 m
2. **Rake forward**: 1
3. **Vane, length**: 3.40 m, maximum speed: 14 knots
4. **Cross-trees**: 5
5. **Forefoot**:
6. **Self-anchoring mast
7. **Spar**: 3.80 m (12 ft)
8. **Jib outboard**: 9
9. **Bowthruster**: 10
10. **Jib sheets**: 11
11. **Staybark area**: 52.5 m² (570 ft²)
12. **Topmost shroud**: 13
13. **Shroud (beam)**: 14
14. **Shroud sheet**: 15
15. **Main shroud**: 16
16. **Main sheet**: 17
17. **Loose footed mainsail area**: 5.8 m² (62 sq ft)
perfecting the Mogadishu Saunter

Mogadishu, Somalia prowls the surf that breaks beside this desert city, were lured to Mogadishu's about six years ago when Si节点s, then patrons of So节点 built a seaside slaughter­J ust north of town. Several year these sharks, excited blood and offal that slithers on beach and into the sea, ens of Somalia.

The Anglo-American Beach is seedy, hospitable establish on the beach, expatri­nd their afternoons drinki节点 beer, sunbathing, not swimming and reminiscences about shark attacks.

"It is one of the odd character­istics of the climate . . . that it is practically impossible to remain both immobile and conscious, says there have been shark attacks on the Mogadishu beach in the past seven years. "

American diplomat confirms the case of the youth who lost his leg bitten off, another and three months ago I young man reach for a that had been kicked into the water. He lost both arms up to mean an attack," said the diplomat, who did not want to be identified.

"We have perfected a deliberate, dignified pace that allows them to stroll the crumbling, sand-swept streets of this 1,000-year-old city without breaking into a sweat.

Unless one adopts this Mogadishu saunter, one sweats miserably and steps on the (often bare) heels of the locals. There is little point, anyway, in rushing around this town of 1 million people. For when one arrives on time, for an appointment, the object of that appointment often is not in.

The workday begins, allegedly, at 7 a.m. and ends at 3 p.m., when offices close and everyone saun­ters home for a nap. Many government offices, however, are empty all day, as evidenced by endlessly ringing telephones.

Behind this ringing emptiness stands the abysmal pay scale of Somalian civil servants. They have not had a pay raise in 26 years. Department heads earn only $30 a month, barely enough to feed a family of four here for a week. Many civil servants, therefore, have outside business interests.

And, since Mogadishu sleeps in the afternoon, these bureaucracy-penned entrepreneurs would go broke if they did not take care of business by ducking out on jobs in the morning.

"IT IS ONE of the odd character­istics of the climate . . . that it is practically impossible to remain both immobile and conscious," says there have been shark attacks on the Mogadishu beach in the past seven years. "

Evelyn Waugh wrote this a half century ago of Aden, a city north of here on the southern tip of the Saudi Arabian peninsula. But the observation fits contemporary Mogadishu.

In the city's central market, a sandy, fly-infested sprawl of goat carcasses, cassette tapes, ravishing Somali woman and great mounds of overripe bananas, infectious somnolence lurks behind every tea stall.

Market teamsters, who drive donkey carts into the city at dawn, sack out on the empty beds of their carts as soon as they have unloaded the day's haul of mangoes or mutton. They snore contentedly as their donkeys, still in harness, stand immobile, slowly blinking their long eyelashes in the ferocious morning sunlight.

Afternoon finds shoe-shine boys asleep on shady sidewalks, their heads resting on piles of brushes, shoe polish and rags. Polio cripples, their spiny legs splayed beneath them, sleep, too, on the sidewalks. At the Mogadishu duty-free shop, which only opens in the afternoon and only sells to customers with foreign passports, the music on the store's stereo is Dave Brubeck's "Take Five."

Even when Mogadishu is mobile and conscious, the city's routine business is performed adagio. Consider, for instance, the cashing of a traveler's check.

I attempted this transaction at 8 a.m. at Mogadishu's largest financial institution, the Central Bank of Somalia. At the sight of my check, a clerk slowly turned and went into an extended search for four sheets of carbon paper. He calmly swiped an ancient adding machine from another clerk's desk. It needed to be plugged in, however. This necessitated a slow-motion wrestling match with the Central Bank's primary power source: A long black extension cord snaking across the center of the bank's marble floor.

After 30 minutes of logistics and calculations, the clerk said, "Go sit on that bench and wait."

THE CASUAL approach to busi­ness in Mogadishu extends also to religion. Wild-eyed Khomeinis and gun-toting Shitism do not wash in "this officially Islamic state. Women on the city streets wear no veils. Loose-fitting cotton and silk clothes pose their faces, their arms and the goodly portion of their backs."

1975, when 10 fundamental­ist mullahs protested a new law giving property rights to Somali women, the mullahs were shot. The quorum is sold here every day.

"All of us are nomads or the descendents of nomads. A nomad does not know if tomorrow the water well will dry up or if the goats will be eaten by hyenas. This gives us an instinctive pragmatic approach to life," explains Ibrahim Mohamud Abya, president of the Somali Institute for Administration and Management.

"There is no goo­dymn view," says to be a fanatic," says the president, who does not want to be identified, fearing what he Somali government's y that to sharks, "because I am running the beach.

ATTACKS aside, there is little running, brisk movement in this steaming city of an Ocean, Somalis here.

Washington Post  § July 8, 1985
Lateen rig on a 7.8 meter sailing mashura, being lowered.

The fine European lines of the national wooden mashura.