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FINAL REPORT

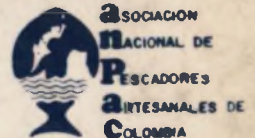
ODA Seminar on Fishery Cooperatives

(DEVELOPMENT ORGANIZATION AID)



INTERNATIONAL COOPERATIVE ALLIANCE
ICA-FISHERIES COMMITTEE

REPÚBLICA DE COLOMBIA



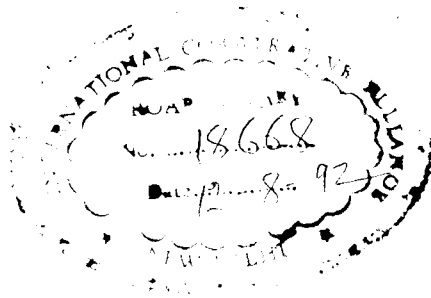
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Cartagena and Bogotá, Colombia

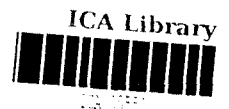
March 10-18, 1991

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7th ODA Seminar on Fishery Cooperatives



INTERNATIONAL COOPERATIVE ALLIANCE
ICA-FISHERIES COMMITTEE



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PREFACE

Fisheries in Colombia are mostly artisanal in spite of the fact that we are surrounded by a considerable quantity of sea and inland waters.

Colombian fishermen have not been able to achieve technical and organizational development; therefore, there is a strong need to promote and strengthen, first of all the leadership role of cooperatives and associations, and secondly the cooperative organizations which are behind the times.

Despite many efforts made by governmental, and private institutions and by concerned foreign individuals and fishermen, development has not shown much progress at all.

It is important to follow up fishery development processes because their needs haven't yet been met. A complete assistance programme with adequate infrastructure is needed, with training and business management education.

Aware of the above, the Fisheries Committee of the International Cooperative Alliance (ICA), is promoting seminars for developing countries like Colombia, with the objective of motivating and strengthening the cooperative fisheries movement through their leaders. So far representatives of the Fisheries Committee have attended 6 Seminars, especially in Asian countries. This was the first year that Colombia has had the privilege of hosting such a wonderful Seminar for the benefit of Colombian fishermen.

Mr. Masaaki Sato, Secretary of the ICA Fisheries Committee visited Colombia last year and met and held talks with ANPAC (National Association of Artisanal Fishermen of Colombia) and DANCOOP (National Department of Cooperative Administration), resulting in the idea of hosting the International Fisheries Cooperatives Seminar in Colombia. After these preliminary arrangements, this idea was accepted in the meeting of ICA Fisheries Committee held in Spain in September 1990.

It was decided to hold the seventh Development Aid Organization (ODA) Seminar March 10-18 1991 in two Colombian cities: Cartagena and Bogotá.

The opening Ceremony was held at the Conventions Hall -Centre of Cartagena de Indias. In attendance was his Excellency the Japanese Ambassador represented by its Councillor, Mr. HIROSHI TAKANO JICA's

director (Japanese International Cooperation Agency) , Dr. IKUO GAMO the mayor of the Tourism District of Cartagena City, Dr. NICOLAS CURI V., the Chief director of National Department Administrative of Cooperatives, Dr. ADOLFO POLO SOLANO, and its General Secretary Dr. WILLIAM OSPINA; the President of the Organization of Cooperatives of America OCA, Dr. ARMANDO TOVAR the President of ANPAC (National Association of Artisanal Fishermen of Colombia), Mr, MANUEL BEDOYA, the chief of Artisanal fisheries from the Agriculture Ministry, Dr. GONZALO URSOLA, the President of ICA FISHERIES COMMITTEE of JAPAN Dr. ANTAL CSOMA who is also the president of the NATIONAL ASSOCIATION OF FISHERIES COOPERATIVES OF HUNGARY.

Their speeches really animated all of the participants, wishing success on the seminar and also expressing the hope of improving as far as possible fisheries knowledge at the national and international levels, and encouraging the exchange of experiences in benefit of the Colombian fishermen's needs.

The daily procedure of the seminar consisted of lecturers followed by discussions which allowed the participants to intervene and ask their questions.

The lecture topics were appropriately geared to the current state of development in the fishery industry. Among the topics were: fisheries law, fisheries cooperatives, CESPAs strategy, and others such as a lecture on easy ways to prepare fish products and other accessible artisanal techniques of fishing processing.

The experiences of the Japanese volunteers were good examples of how they managed to share and participate with the communities in a self-diagnosis of the community's situation.

The field trip impressed all the participants with the demonstration of the successful experience of the Cardumen pre-cooperative. In a short time, it achieved a high level of organization.

On the final day, all the participants worked together in groups on their particular recommendations and conclusions. Therefore we had contributions on punctual issues from all the geographical zones.

The closing ceremony was on March 18th at the Hall of Hotel DANN NORTE in Bogotá. It was the opportunity to thank all the institutional

representatives who were supporting us during the seminar. Amongst them we had the special visit of Dr. Kornel Danos from the Hungarian Embassy; the President of JICA Dr. IKUO GAMO; the chief of Artisanal Fisheries from the Ministry of Agriculture Dr. GONZALO URSOLA; the Vice-President of ICA Fisheries Committee Dr. ANTAL CSOMA; Dr. MASA AKI SATO Secretary of the ICA Fisheries Committee; and Mr. MANUEL BEDOYA President of ANPAC.

In the Closing Ceremony they expressed their very best wishes for the success of Colombian fishermen and the future of the fisheries industry.

INTRODUCTION

Fishery cooperativism needs to be developed according to a coherent process, in accordance with the fishermen's needs.

To achieve the objective of promoting and strengthening the organizational process, the 7th ODA SEMINAR ON FISHERIES COOPERATIVES focused on fishermen leaders and associated cooperatives and their contribution to the development of the Colombian fishery sector.

This was the result of many efforts made in Colombia and Japan, especially on the part of the ICA Fisheries Committee, to encourage Colombian fishermen to initiate activities for organization and technological advance.

The importance of this seminar is best demonstrated by the high level of participation and the resulting commitments. Therefore we offer this Final Report in the hope that it will be useful to those who are directly and indirectly involved in the fishery sector.

Due to the limited space, the contents of this Final Report are a summary of the lectures. We apologize to the lecturers because their works have been modified for this abbreviated document according to the editorial requirements.

We wish to point out two of the most significant events of the seminar: on one hand the field trip, which showed the experience of a fishermen's organization as a business; on the other hand, the active participation of the fishermen and their invaluable contribution with the reports and recommendations from their regions.

Finally, we are convinced that this seminar brought us another step along the way of the development process that began more than 10 years ago with the Colombian artisanal fishermen and some private and governmental institutions as well as international institutions like JICA and the ICA Fisheries Committee, all with the purpose of conserving and efficiently exploiting our fishery resources.

ACKNOWLEDGEMENTS

As a coordinator of this Seminar, it is my privilege to acknowledge with gratitude the guidance, support and wisdom I received from many people:

First of all, special thanks to Mr. Jirosaemon Saito, Chairman of International Cooperative Alliance - Fisheries Committee of Japan who through Dr. Masaaki Sato agreed to host the ODA Seminar in FY 1990 in Colombia. It was his motivation and assistance that permitted me to coordinate the seminar.

I and my colleagues are highly thankful to the JICA authorities, especially Dr. Ikuo Gamo and his officials for their great support.

Thanks to the Japanese Embassy, represented by Dr. Nagashima, who supported and encouraged me from the start. To Dr. Csoma and Gabriella Sozanski for their visit as well as their participation and contribution to the development of Colombian fisheries. To Dr. Koreeda for his sincere collaboration and presence in Colombia.

To Dr Adolfo Polo chief of DANCOOP and his advisers, especially Dr. Ballesteros and Dr. William Ospina, DANCOOP's Secretary General, for allowing me to coordinate the Seminar. To Dr. Armando Tovar, President of the Organization of Cooperatives of America -OCA, for his enthusiasm and his valuable advice for the preparation of the Seminar.

To the Local Authorities of Cartagena City for hosting the Seminar in a very warm and friendly environment. To the National Association of Artisanal Fishermen of Colombia -ANPAC. To all fishermen leaders, to whom I dedicate all my hopes and efforts to achieving higher productivity and better living conditions for the near future.

To all the Directors of the different governmental institutions who participated by contributing their knowledge and experiences, especially to Dr. Gonzalo Ursola who attended the Seminar on behalf of the Ministry of Agriculture.

To the lecturers and Japanese experts whose contribution assured the success and the high quality of the seminar.

And finally to my family that always stayed by my side, providing moral support and helping in every day tasks. I was also fortunate to count on friends in the fisheries sector who assisted me with their valuable knowledge.

THANKS TO ALL OF THEM.



HAYDEE MARIN ORDOÑEZ

Seminar Coordinator

**PROGRAMME OF ICA FISHERIES COMMITTEES'S
ODA SEMINAR ON FISHERIES COOPERATIVES.
CARTAGENA AND BOGOTA, COLOMBIA.
March 10-18 1991**

MARCH 10, 1991 (SUN)

- 10:10-15:00 Arrival of Participants and registration.
 Opening Ceremony.
 Welcome address by the Mayor of Cartagena, Dr. Nicolas Curi Vergara
 Address by the Director of ANPAC, Mr Manuel Bedoya H.
 Address by the Vice-Chairman of ICA Fisheries Committee., Mr. Antal Csoma.
 Other speeches:
 Councillor of the Japanese Embassy, Mr. Hiroshi Takano. President of
 OCA-American Cooperatives Organization, Dr. Armando Tovar.
 Chief of Artisanal Fisheries- Ministry of Agriculture, Dr. Gonzalo Ursola
 Chief of DANCOOP. National Department of Cooperative Administration,
 Dr. Adolfo Polo Solano.
 Welcome cocktail.

MARCH 11, 1991 (MON)

- 8:45-9:00 Briefing on Seminar Methodology
9:00-10:00 Lecture No. 1: Cooperatives Law (Law 79/88)
 By Dr. Maria Cristina Pineros
10:00-10:30 Discussion on Lecture No. 1
10:30-10:45 Coffee Break
10:45-11:45 Lecture No. 2: Fisheries Law 13/90
 By Dr. Martha Bernal, Ministry of Agriculture
11:45-12:15 Discussion on Lecture No.2
12:15-13:30 Lunch
13:30-14:00 Arrival of Participants
14:00-15:00 Lecture No. 3: "CESPA National Strategy"
 By Dr. Arturo Moncaleano, Coordinator. Rural Development Integration (DRI)
15:00-15:30 Discussion on Lecture No. 3

- 15.30-15:45 Coffee Break
- 15.45-16:45 Lecture No. 4: Fisheries Cooperatives of Colombia
By Dr. Haydee Marin Ordóñez, DANCOOP, Planning Division, Fisheries Cooperatives
- 16.45-17:15 Discussion on Lecture No 4
- 18.15-20:00 Dinner

MARCH 12, 1991 (TUES)

- 9:00-10:00 Lecture No. 5: Insurance and the Artisanal Fishermen
By Dr. Alberto Mendoza, Planner
- 10:00-10:30 Discussion on Lecture No. 5
- 10:30-10:45 Coffee break
- 10:45-11:45 Lecture No. 6: Marketing and Management of Fishery Products in Colombia
By Dr. Ramiro Tafur
- 11:45-12:15 Discussion on Lecture No. 6
- 12:15-13:30 Lunch
- 13:30-14:00 Arrival of Participants
- 14:00-16:00 Lecture No. 7: Marketing and Management of Fishery Products
By Mr. Noboru Koreeda, Chairman of Kagoshima Fisheries Cooperative in Kagoshima Prefecture, Japan
- 16:00-16:30 Discussion on Lecture No. 7
- 16:30-16:45 Coffee Break
- 16:45-17:45 Lecture No. 8: The Importance of Small Scale Fishery Boats
By Mr. Yoshiro Hara, JICA Expert from Tolu-Sucre
- 17:45-18:15 Discussion on Lecture No.8
- 18:15-20:00 Dinner

MARCH 13, 1991 (WED)

- 9:00-11:00 Lecture No.9: Inland Water Fisheries and Aquiculture Development
By Antal Csoma
- 11:00-11:30 Discussion on Lecture No.9
- 11:30-11:45 Coffee Break
- 11:45-12:45 Lecture No.10: Artisanal Fish Processing
By Tadayuki Kitasono, JICA Expert, Buenaventura
- 12:45-13:30 Lunch

- 13:30-14:00 Arrival of Participants
- 14:00-15:00 Lecture No.11: The Importance of Fish Meal as a Protein
By Sugawara Michihiro, JICA Expert, National University
- 15:00-15:30 Discussion on Lecture No.11
- 15:30-15:45 Coffee Break
- 15:45-16:45 Lecture No.12: Distribution and Conservation of Sea Food
By Fukagawa Hajime, JICA Expert, Valle
- 16:45-17:15 Discussion on Lecture No.12
- 18:15-20:00 Dinner

MARCH 14, 1991 (THU)

- 9:00-10:00 Lecture No.13: Inland Water Aquiculture
By Mr. Toshida Shunji, JICA Expert, Cucuta
- 10:00-10:30 Discussion on Lecture No. 13
- 10:30-10:45 Coffee Break
- 10:45-11:45 Forum: Experiences of Japanese Volunteers in Tumaco, Mr.Ippeï Fusejima
-Bahia Solano, Mr. Ishida and Mr. Mitsuhashi
- 11:45-12:15 Discussion and Exchange of Experiences
- 12:15-13:30 Lunch
- 13:30-14:00 Arrival of Participants
- 14:00-15:00 Colombian Fishermen Discuss the Role of the Fisherman in Colombia
- 15:00-15:30 Open Discussion
- 15:30-15:45 Coffee Break

MARCH 15, 1991 (FRI)

- 7:00-10:30 Leave hotel for field trip to Tolu
- 10:30-13:00 Field trip to PESTOLU and EL CARDUMEN precooperative
- 13:00-14:30 Lunch
- 14:30-16:00 Comments and conclusions of the field trip
- 18:00 Dinner and overnight stay at Tolu

MARCH 16, 1991 (SAT)

9:00-14:00 Leave Tolu for Cartagena
15:00 Arrival at Cartagena Airport
17:30 Arrival Bogotá Airport
18:30 Arrival at the Hotel in Bogotá

MARCH 17, 1991 (SUN)

10:00-12:45 Report on Fishery Cooperatives by the participants
13:30 Lunch
14:30 Free

MARCH 18, 1991 (MON)

9:00-11:00 Comprehensive discussion by the participants with the help of facilitators nominated by the seminar organizing committee on short, medium and long term goals, recommendations and (resolutions, if any) to promote the fisheries cooperative movement in Colombia.

11:00-11:15 Coffee Break

11:15-12:30 Presentation of the conclusions including recommendations by the facilitators

12:30-13:30 Lunch

15:30-16:30 Closing Ceremony

 Presentation of the Mentions of Honour to the Directors

 Presentation of the Certificates of Attendance by Dr. Masaaki Sato, Secretary of the ICA Fisheries Committee

 Closing Address and Speeches:
 By Dr. Ikuo Gamo, President of JICA
 By Dr. Kornel Danos, Hungarian Embassy
 By Dr. Antal Csoma, Vice-President ICA Fisheries Committee
 By Mr. Manuel Bedoya, ANPAC
 By Dr. Gonzalo Ursola, Ministry of Agriculture

18:30-19:00 Colombian Folk Music Group "La Vaca Loca"

19:00-20:00 Farewell Dinner

INAUGURAL ADDRESS

Dr. Nicolas Curi Vergara *

First of all, I would like to express my satisfaction to the ICA Fisheries Committee, JICA, DANCOOP and ANPAC for the organization of this Seminar and for having chosen the city of Cartagena as its meeting point.

Apart from its political and historical background, our city offers an appropriate location to discuss the your important subjects in a peaceful setting.

Everything here is prepared to receive you and there are many important reasons which will assure the best results of this event.

Furthermore, this city is an appropriate place to apply the recommendations of the Seminar because of its fishing industry, along with the agriculture, livestock and fishery institution.

The majority of our small cities have fishery production which is the main source of income for fishermen.

Fostering cooperatives in developing countries was the starting point for ICA to organize this Seminar. I am sure that with your enthusiasm, you will succeed.

Welcome to Cartagena. I hope that this Seminar brings the establishment of concrete development policies and a new consciousness to the increased cooperation necessary to make these hopes a reality. As a Mayor of this City, I thank you for being true creators of progress and community wellbeing.

Thank you.

“... IN COLOMBIA ARTISANAL FISHERMEN HAVE BEEN WORKING HARD TO CONTRIBUTE TO THE NATIONAL ECONOMY ...”

Manuel Bedoya Holguin **

For ANPAC, it is a pleasure to host this meeting in a city full of history and appropriate place for important events. As well, it is great to be among personalities from both my

* *Mayor of Cartagena, Colombia.*

** *President of the National Association of Artisanal Fishermen of Colombia (ANPAC).*

country and from abroad such as our Japanese guests who kindly will accompany us for the next eight days.

Truly, in Colombia artisanal fishermen have been working hard to contribute to the national economy but unfortunately, without any governmental official help except for the CESPAC Strategy (Center of Service for Artisanal Fishermen).

Despite the difficult economic circumstances ANPAC has faced, it has had a good group of advisers and thanks to them and to the Japanese Government's support, this Seminar has become a reality.

Today, the number of fishermen with their families total 780,000 people. These men from the sea and rivers lack access to new technologies and assistance. This is one of the reasons we are here, so that those who have been more fortunate can share their experiences with us in hopes that our fishermen may rise above the dire situation in which they find themselves.

The new government attitude towards the fishery sector, demonstrated here by the presence of Dr. Adolfo Polo, Chief of the National Administrative Cooperatives Department and his work team, is an encouraging sign. Also we are grateful for the ICA Fisheries Committee's support through the Japanese government and for the presence of Mr. Masaaki Sato.

We also must point out the presence of fisherwomen who share their hard work with the fishermen day by day. We hope a new sun will shine on their homes today.

We hope to build a new country where all contribute to a fair and solid economy.

To conclude, "join your hands with ours so that Colombia will not be in only one hand but in all hands."

Thank you.

"...FISHERIES REQUIRE SUPPORT, COLLABORATION AND TECHNICAL ASSISTANCE..."

*Armando Tovar **

Welcome on behalf of the Colombian Cooperative movement. I am thankful of the Japanese Government's support given through JICA for the betterment of the Colombian artisanal fishermen.

* *Director of the Organization of American Cooperatives (OCA), President of the Colombia Cooperative Confederation.*

The fishery sector requires support, collaboration and technical assistance, but there are other economic and productive sectors as well that could benefit from working together with Japanese cooperation.

I rejoice that the ICA Fisheries Committee is hosting programmes in America.

I offer you my 9 years of experience working for cooperativism in all of Latin American. Also, this is the Confederation of Colombian Cooperatives -CCC's idea, in which, with the support of all of you fishermen as well as other cooperative associations, could make possible the union towards the consolidation of the cooperative movement.

The stage that the contemporary world is living, the opening economy is talking advantage in the accelerated development of industry. This fact can not left the cooperative movement behind. Therefore you Colombian fishermen have a mission in this fundamental change. We have to incorporate into the modern technology or basically we will disappear among the great international trade.

This present support given by JICA, could be stronger. This international cooperation policy must be given in practice, because is in the practice that governments can assist properly artisanal fishermen.

I am very thankful for your invitation to this important seminar and I wish you the best of successes.

I am interesting to know the seminar conclusions in order to be ready to collaborate on behalf of OCA and CCC.

“... THIS SEMINAR IS BASICALLY DIRECTED TO THE ARTISANAL FISHERMEN AFFILIATED IN ASSOCIATIVE ORGANIZATIONS ...”

Mr. Hiroshi Takano *

It is a pleasure to address you, to give my regards and express my sincere wishes for the success of this Seminar on Fishery Cooperatives, made possible thanks to the Japanese and Colombian cooperative institutions. This Seminar is basically directed to the artisanal fishermen affiliated in associative organizations.

Japanese collaboration with Colombia for the development and management of the fishery industry was initiated in 1977 on the Colombian Atlantic coast, with the support of the IFI (Institute of Industrial Promotion), SENA (National Learning Service).

* *Councillor of the Japanese Embassy in Colombia.*

COLCIENCIAS, INDERENA (National Institute for Renewable Natural Resources), and other regional corporations. With these institutions, we have been working in areas such as *marine research, training fishermen, catching techniques, fish cultivation and the processing of fish products.*

During former Colombian President Virgilio Barco's last visit to Japan, a cooperation program between the two countries was proposed. That program was later consolidated with the current President, Dr. Gaviria, and the National Planning Department (DNP). It was agreed to extend Japanese cooperation towards the Pacific coasts, especially in the fishery sector. At the moment we have 5 Japanese volunteers located in Pacific regions plus 2 other experts, one of whom is working directly with the DRI. Next month a Japanese fishery mission will come to do a study on the Pacific Coast.

One of the basic areas to be developed is the artisanal fishery sector. The realization of this Seminar is an important step towards development in benefit of the fishermen's organizations in Colombia.

It is necessary for our artisanal fishermen to become aware of the wealth of their natural resources and of the importance of conserving them. Only if fishermen are sure of their needs and the advantages of organizing themselves in order to protect their natural resources will they succeed in solving the problems they face. Without this collective understanding and will to cooperate, nothing is possible and any cooperation from abroad could easily be wasted.

I hope this Seminar serves to consolidate the will for positive action mentioned above, as well as to strengthen the fraternal links between our nations.

“... YOU WILL GO BACK TO YOUR HOMES FULL OF KNOWLEDGE AND EXPERIENCES FOR DEVELOPING FISHERIES IN COLOMBIA...”

*Dr. Antal Csoma **

On behalf of the Fisheries Committee of the International Cooperative Alliance, I would like to extend my greetings to the participants of this Seminar, to the delegates and the lecturers.

As Vice-President of this Committee, it is an honour for me to welcome you to this Seminar. Unfortunately, the President of our Committee, Mr. Jirozaemon Saito, could

* *Vice-Chairman of the ICA Fisheries Committee.*

not be present but it is important to point out that he was the inspiration behind this Fishery Cooperatives Seminar. He is also the Committee's founder which was initiated with the goal of hosting skills improvement courses in different countries and to this end found support from the Japanese government.

The main objective of this Seminar is to develop the skills of fishery leaders from cooperatives and other similar fishery organizations.

So far we have already attended six seminars and this one is the seventh. This is the first time that a Latin American country has had the privilege of hosting a Seminar.

The Seminar's subjects were chosen for the way that they reflect the problems that actually affect the fishery sector in Colombia and their experiences in cooperative association, based on the Japanese and Hungarian models.

Fishing has enormous importance in the sea going countries. Given this importance, it is not surprising that in many places of the world aquiculture in sweet (inland) waters has been increased.

The ICA commissioned a study called "Cooperatives in the Years 2000" which was done by a group of American researchers. One of its conclusions by Dr. A.F. Laidlaw states that fisheries cooperatives will play an important role in supplying food in the year 2000.

The Fisheries Committee of the ICA facilitates exchanges among fishermen. In the September 1990 meeting in Madrid, one of the Committee's fundamental conclusions was to incorporate more countries in the committee activities because we are convinced that only through international cooperation can problems be solved.

The Fisheries Committee gives special importance to people and the human side of development and this will be seen at this Seminar.

I would like to wish each of the participants a fruitful experience and I hope you will go back to your homes full of knowledge and experiences for the development of fisheries in Colombia.

Many Thanks.

“... THIS SEMINAR IS IMPORTANT BECAUSE IT STRESSES COOPERATIVE ORGANIZATION ...”

*Dr. Ikuo Gamo **

The participation in events like the one for which we have congregated here is a cause of satisfaction for JICA because it offers the opportunity of giving our support and help in one of the fundamental areas in the development of a country, in this case the fishery sector.

Also this Seminar is very important because it stresses cooperative organization. We will touch upon just about every topic of importance to the development of the Colombian fishery sector. The seminar agenda is very complete.

During this week we will have the chance to exchange ideas and discuss different topics regarding the cooperative fishery sector and artisanal fishery such as; legal regulations, processing, transportation, marketing and retailing, social security for the fishermen and governmental strategies among others.

Representatives from the government entities in charge of the fisheries sector and its policies are present which will permit us to make plans and decisions on future cooperative actions.

Finally the presence of distinguished international lecturers assures a rich exchange of experiences.

To the ICA Fisheries Committee, DANCOOP and ANPAC, I express my gratitude for having invited me to participate in this Seminar and I congratulate them for its excellent organization.

To the Bolivar department and city authorities my gratitude for their kind hospitality they always provide.

To Haydée Marín, my most sincere recognition for her hard work in the coordination of the Seminar.

And to all you fishermen for your presence here, because without you the Seminar would not be possible.

Many thanks.

* *Director of the Japanese International Cooperation Agency (JICA).*

“IT IS IMPORTANT TO UNDERTAKE A PUBLICITY CAMPAIGN FOR COOPERATIVISM, TO INFORM PEOPLE OF ITS ADVANTAGES AND GUARANTEES ..

*Dr. Gonzalo Ursola*¹

It is an honour for me to accompany all of you in this Fisheries Cooperatives Seminar. The desire on the part of the Ministry of Agriculture is to approve all policies, programmes and projects initiated by the agriculture and fisheries cooperatives.

In this Seminar we wish to inform everyone of the Ministry of Agriculture's policies and programmes such as the Fisheries Law 13 of 1990 that created the National Institute for Fisheries and Aquiculture (INPA) and other proposals for the development of fisheries in Colombia. At the moment, we plan to give a lecture on fisheries law and the National Fisheries Plan, on the diversification of the fishery sector.

Another important point is the role of cooperativism with respect to the fishery sector in organizing the fishermen and their institutions.

Therefore it is important to undertake a publicity campaign for cooperativism, to inform people of its advantages and guarantees.

I am sure that this Seminar will respond to the fishermen's concerns and inspire them to work together and organize themselves for social and economic benefits.

The Ministry of Agriculture, through the Department of Fisheries, plans to coordinate activities with DANCOOP and other institutions to accomplish the conclusions and recommendations from this Seminar.

Thank you.

“... THE IMPORTANCE OF GOOD MANAGEMENT OF FISHERY RESOURCES ...”

Adolfo Polo Solano^{**}

We find ourselves in Cartagena de Indias, to think about and look for alternative solutions to the problems facing artisanal fisheries in Colombia.

We can not deny the progress made by the new fisheries Law 13/90 but still there is

* *Chief of Artisanal Fisheries, Ministry of Agriculture.*

** *Chief of the National Department of Cooperative Administration (DANCOOP).*

the need to recognize the importance of good management of fisheries resources and that we lack an adequate plan for rational development in the fishery sector.

Colombian fishermen are caught in the middle of the national crisis, which combined with an "every man for himself" attitude has, not allowed them to advance. The result is low levels of productivity and accumulation, impeding the possibility of access to large scale enterprise and new technologies.

The fishing industry is unorganized and the fishermen don't know how to look after their natural resources.

There is lack of education and common goals and values. There is a need to develop appropriate cooperative policies to clarify the role of fishermen and their economic alternatives.

In Colombia more than 150,000 families depend on the fishery sector. At this stage, the State must present development plans that meet the real needs of these families. The State must offer opportunities that will allow them to increase their income level.

So far government policies haven't addressed these problems. In 34 fisheries cooperatives, most of them had their structures and operating processes imposed on them from above, without community participation or appropriate technical assistance. As a consequence of this process, artisanal fisheries are slipping backwards day by day.

The gap between the industrial and artisanal fisheries is deeper than ever and the rise of new production techniques, such as fish farm cultivation, are pushing out the artisanal fishermen out of the market.

We consider rural cooperativism as a development strategy because of the role it plays in food production and the conservation of natural resources. It requires a punctual and coordinated development plan among governmental and non-governmental organizations to create fishery enterprises and an industry capable of managing our natural resources in a conscientious and profitable way.

Finally I declare officially opened the ODA Fisheries Cooperatives Seminar. In the name of the Colombian Government I would like to thank the ICA Fisheries Committee representatives, his Excellency the Ambassador of Japan, the Japanese International Cooperation Agency -JICA, the Directors of ANPAC, the Mayor of Cartagena City, the functionaries of DANCOOP who organized this Seminar, but especially to all of you fishermen who have come from far away places. All of you are contributing in different ways to the peace we all need.

COLOMBIAN COOPERATIVE LAW: LAW 79 OF 1988

Dr. María Cristina Piñeros Ortíz. *

After world war one, the Colombian government began to see the power and usefulness of cooperatives to increase national production, improve distribution of wealth and the standard of living.

Around 1927 a competition was held among the cooperative specialists for the best legal project of law closest to the European systems that had been successful in solving problems from 1930 crisis. This legal project was presented to Congress and in 1931 it became law 134.

This law was criticized, because it was an experiment in a new area which had been copied from countries where the conditions were different.

However law 134 was a good base for the present cooperativism and remained valid for 3 decades until it was brought up to date in 1963 with the decree 1598.

The same year the following decrees were produced: 1630 regarding the national institute of finance and development of cooperative and 1587 which organized and allocated a budget to the National Superintendency of Cooperatives. Later this became the National Department of Cooperative Administration "DANCOOP" with the law 24 of 1981, which gave more importance to this institution, which became more like a technical Ministry in charged of Directing the State Politics, regarding cooperatives, financial assistance, technical, assistance, cooperative education, overseeing and control of cooperatives, employee funds, mutual associations and other similar institutions.

The Decree 1598 was not enough to fulfil the ambition of Colombian cooperative specialists. Between 1963 and 1988 there were 25 projects of law which culminated in law number 79 of 1988.

Law 79 of 1988 copies Decree 1598 to about 60%.

The Law consists of 161 articles divided into four heading covered by the main or preliminary title. Which contains the proposals and objectives of the law and we should underline the innovative state declarations to guarantee development of cooperatives and the acknowledgement that cooperatives formed a fundamental part of the National Economy, the promotion of cooperative law as a special field of general judicial

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organization. The state also declared the promotion, protection and function of cooperatives to be of national interest.

The first heading "The Cooperative Agreement" also represents an innovation in our legal system where for the first time a cooperative agreement was made in opposition to partnership contracts and the cooperative acts in opposition to commercial acts. Now the cooperative lawyers will undertake to develop the doctrine and theory of the cooperative act and the cooperative agreement.

The Law makes a more complete definition of the cooperative and its characteristics.

Also this heading contains general characteristics related to the creation of a cooperative, general assembly, associates, administration, overseeing, economic regulations, labour regulations, and some specific regulation applied to certain types of cooperatives, (consumption, education, housing, transport, finance, insurance, education), integration, and finally the figures of incorporation and liquidation.

It is appropriate to point out that law 79 made the constitution of cooperatives much easier by eliminating some of the requirements, and by establishing the positive silence of public administration, which means that if in the case of any requesting from a cooperative being made and no answer within 60 days, a positive answer is assumed. Protocolisation of statute reformation documents, diffusion, social economic studies and concepts of higher level organisms were eliminated

By the same means more autonomy and freedom was given to private cooperatives initiative by eliminating research, concepts, and approval of DANCOOP regarding regulations for provision of services, plurality of activities, extension of services to third parties, investigation and approval of acts and assembly, administrative councils, boards of cooperatives, employee organizations and mutual associations.

Law 79 revalues contributions and therefore corrects mistakes that had been made in detriment of cooperative sector. If economic factors permit, the value of those contributions can be maintained. As a consequence DANCOOP developed the text of the law and produced a decree which determined that cooperatives can revalue their contributions annually up to inflation indicator of the year, after certification by the National Statistics Department called DANE.

The second title of the law deals with the cooperative sector and clearly defines its composition: "cooperatives, second level degree cooperatives, third level degree cooperatives, auxiliary institutions of cooperatives and precooperatives".

The third heading establishes the relationship between the state and cooperatives and significantly strengthens those associations giving special benefits. Cooperatives can offer the services also given by the Social Security Institute.

It is obligatory for industry and commerce to sell products to cooperatives at retail prices, in accordance with the demand. There are sanctions for those who do not obey, imposed by DANCOOP or the Superintendency of Societies. This regulations was

rejected in the State Council because it was considered restrictive of free competition, although it was considered constitutional, and at present DANCOOP is rewriting the regulations to make them more applicable

Cooperatives have preference in regarding contracts with the state when they are in equal competition with other bidders.

The law reestablishes the creation of a National Cooperative Council with a different composition to the decree 1598.

The fourth title contains some sanctions and responsibilities which punish companies for infringement of the law, statutes and irregularities and establishes fines from 1% (one per cent) of the social capital, personal sanctions to directors, administrators and liquidators, with fines of up to 100 (one Hundred) times the minimum legal salary. They can also receive sanctions for up to 5 years by preventing such people carrying out these jobs.

Banks can become banks, themselves. This remarkable event changes law 45 of 1923 that regulates banking activity in the country and disposed that foundation of banks financial cooperatives, social and commercial finance companies only could be done when they were anonymous companies.

The regulations concerning housing cooperatives brings the purest concept of solidary property, where the land, and buildings, belong to the cooperative, and associates have rights to use the housing exclusively. They can also pass it on to them.

New legislation establishes clearly the relationship between the members of the cooperatives of associated work that don't correspond to labour laws. As a consequence anything to do with employment, salaries, social security must be written in the by laws.

The Ministry of work and DANCOOP, regulated this type of coops with decree number 468 of 1990 and added to the legal definition, a paragraph aimed towards fishermen and farmers.

This cooperatives are permitted to give complementary services such as saving and credit social welfare.

I could no end this statements without saying that it may be true that cooperative law has been criticized for its complexity but it was the result of many years of work by cooperative leaders of cooperatives. It is however, a very up to date law which has been a base for other Latin American countries and although we may aspire to have perfect laws, we know it, would be an impossibility therefore we are content with our "good" laws.

SOME CONSIDERATIONS ABOUT THE FISH INDUSTRY IN COLOMBIA

*Dr. Guillermo Alberto González **

During the last years, several efforts has been achieved to develop fishery sector in Colombia.

For the first time this activity was regulated by legislative decree 0376 of 1957.

In 1957 through law-decree 2811 it was expedited the code to protect national natural resources and environment in which was included a chapter about fishery, however, it was pointed out mainly the preservation. In 1983 National Department of Planning tried to establish the basic lines to promote fishery development and a document was approved by CONPES (Council of Economical and Social Policy).

In 1985 a program which diagnosed and formulated conclusions and recommendations from which the fishery law project began to be discussed, which pretended the creation of the National Found of fishery and the Financial Corporation of the Fishery Enforcement. Also it would create the National Institute of fishery and aquiculture (INPA). However this document was disapproved because it was considered against the fiscal policy. After, several projects were made no one passed in the congress, until the Law 13 of 1990.

The National Government assumed the functions of adopting the necessary steps to develop this law, but due to the change in the administration, absence of the INPA' staff organization and budget, it was necessary to postpone its initiation date until July 1991.

At the moment it is preparing the organic structure with its respective personnel plant, employees manual's functions, budgets an investment for the rest of the year.

Colombia has 988.000 square kilometres of jurisdictional marine water (82% of continental surface), a continental platform (deep below 200 metres) of 48.365 kms. and a total of 2.900 kilometres length in both coasts. Furthermore it has more than 238.000. Has of permanent water (Marshes, lakes, ponds) and a huge quantity of water currents (rivers, lakes, and sewers) correspondent to Sinu, San Jorge, Magdalena, Orinoco and Amazonas rivers.

Due to our agricultural vocation, fishery has not reached and adequate level of development. The average of catching in the last 15 years, with exception of 1989 (year in which strong efforts were initiated to be the tunny-fish profits) was 80.000

* *Senator in charge of Fishery Laws.*

tons per year; 50.000 tons arose from inland waters (lakes, rivers and marshes) and 30.000 tons from the sea waters. The aquiculture is producing since 1985- 3.000 tons from marine cultivation (in 1.800 has of water) and 2.200 tons per year coming from inland waters (in 500 has).

In spite of having coasts in both Atlantic and Pacific Oceans as far as catching is concern our country's production is in the last place in South America.

In Colombia up to 1988 the income from fishery production approximately reached Us\$97 millions/year, while in neighbour countries, their incomes represented important amounts of money for its inside economies.

The commercial balance of fishery products waste mostly deficient until 1987. From 1988 it became positive and in 1989 the exportations reached Us\$83.9 millions while the imports were Us\$32.4 millions.

The increase of fishery production since 1988 obeys to the policy actions as well as the industry work in order to get profits of Tuna fish and other affinity species.

The Majority of volume caught and semi-processed in Colombia, is been exported successfully, The surplus is self supplying national market in a efficient and competitive way with foreign products.

In 1970 the relation between the added value generated by the fishery sector and the agriculture sector (Current money) was 1.87%. in 1978 changed to 2.01% and in 1984 was 2.87%. In the same way, the evolution of the fishery sector in the gross national product has been positive; while this contribution maintains 0.46% until 1982, from this year increasing tendency was consolidated.

In 1986 the participation was 0.63%. We suppose this sectorial behaviour has to do with the employment because fisheries occupy workmanship in activities related to the catching, processing and marketing fishery products. As a way of example, artisanal fishermen from inland waters are estimated in 49.500, though they can reach 80.000 in harvest times, while the sea waters are approximately 13.000 fishermen.

The number of the processing enterprises is been reduced in the last years while the one of enterprises dedicated to extraction, production and marketing have increased considerably.

The main sectors obliged to provide inputs to the fishery sector are: textiles, and confections (nets), chemical and caoutchouc, oil refining, machinery and equipment, banks and insurances, services to enterprises for this reason the fishery sector would generate and important effect over those sectors.

The dynamism showed by the fishery sector in the last years, even though the absence of real development policy, it is confirmed by analyzing the sector growth rate given by the growth national product which was 32.3% during 1980 - 1988.

This figure was superior to the one given by the total growth National product 29.2

NATIONAL FISHERY PRODUCTION

1980-1989 TONS.

	1980	1983	1986	1989
ATLANTIC OCEAN	5115	3058	10364	7988
PACIFIC OCEAN	24179	9136	17045	40998
INLAND WATERS	46903	45343	54876	36027
AQUICULTURE	-	-	5416	4003

SOURCE: INDERENA

VOLUME AND ANNUAL VALUE OF IMPORTING FISHERY PRODUCTS

PRODUCTS DESCRIPTION	1980			1983			1986			1989		
	VOLUME ton.	VALUE CIF US (000)	VOLUME ton.	VALUE CIF US (000)	VOLUME ton.	VALUE CIF US (000)	VOLUME ton.	VALUE CIF US (000)	VOLUME ton.	VALUE CIF US (000)	VOLUME ton.	VALUE CIF US (000)
FROZEN FISH	-	-	869	851.6	-	-	566	-	402.0			
ORNAMENTAL FISHES	740	723.3	429	591.6	832	1328.6	1378	1758.2				
FISH MEAL	3811	18672.5	39176	17880.3	37331	12764.5	18654	10152.6				
PRESERVED AND PREPA												
RED FOOD	55598	43645.8	24853	26488	43464	33747.5	16555	18314.0				
TOTAL IMPORTS FISH PROD.	94449	63041.6	65327	45811.5	81627	47840.6	37177	30655.8				
SOURCE: DANE	MADE BY: INDUSTRIAL FISHERY DIVISION AGRICULTURE MINISTRY 1990											

VOLUME AND ANNUAL VALUE OF EXPORTING FISHERY PRODUCTS

PRODUCTS DESCRIPTION	1980			1983			1986			1989		
	Volume ton.	Value Fob	Volume ton.	Value Fob	Volume ton.	Value Fob	Volume ton.	Value Fob	Volume ton.	Value Fob	Volume ton.	Value Fob
FROZEN FISH	-	-	1419	2249.4	1724	2995.9	26394	23211.6				
ORNAMENTAL FISHES	413	13591.3	110	2036.6	219	1122.0	266	1768.2				
DRY FISH SALTY	-	-	11	124.2	15	225.8	26	836.8				
SHELLS AND MOLLUSCS	2616	21557.1	2038	23200.6	3698	31533.9	7234	59780				
TOTAL	3029	35348.4	3578	27610.8	5656	35877.6	33654	83828.4				
SOURCE: DANE	MADE BY: INDUSTRIAL FISHERY AGRICULTURE MINISTRY 1990. VALUE FOB US(000)											

%, this fact allow us to conclude that the relative growth of production volume of fishery sector was superior to the other economic sector's average.

The fishery sector has maintained permanent contact with the investors and foreign shipowners with the aim of assuring the number quality and type of embarkations - that are required for the development of its activities. This means that there is a won field in the opening process that the government has planned.

The CESPFA strategy - at present going on is pretending to give special attention to the fishermen of the country: the artisans. Its adequate execution will allow the development of attention kernels of such fishermen, that would bring the employment generation and fishery development.



Japanese, Hungarian and Colombian lecturers and participants

“CESPA” NATIONAL STRATEGY FOR SMALL SCALE FISHERY CENTERS

*Dr. Arturo Moncaleano **

INTRODUCTION

Even though, Colombia has a large coast extension in two oceans, it has the most important inland water systems of South America, and uses to report combined potential for more than 500.000 tons per year, really it does not reflect an annual production for more than 80.000 tons.

More than 80% of Colombian production is supplied by the artisanal fisheries, and great part of landings are originated by inland fisheries. This remark an special condition of fisheries in Colombia, in which major part of their products are handled under rudimentary conditions.

Distribution channels in the country are inefficient, making fish more expensive than meat in all markets. Between this situation and the lowest quality of the product, negative effects are created to win acceptance of fishery products all over the country.

Fisheries is normally have a low influence representing only 0.4% of the Gross National Products and fish consumption per capita is considered the lowest of the world, just around 3 Kg/Year.

POLICY TRENDS

Thus, it is necessary to review state policies concerning fisheries and their development. Colombian Government is really engaged to providing an improved basis for rational exploitation and management of fisheries resources regarding new requirements for small scale and industrial fisheries.

SITUATION OF ARTISANAL FISHERIES

Several studies have showed at least 120.000 active fishermen directly engaged with production of 80.000 tons per year for marketing purposes. At least another 30.000 tons for their self consumption. However whole landings of fish statistics showed that their potential have been suffering during recent decades an accelerated reduction process which became lower production levels. Furthermore it registered declining trend, particularly affecting large quantity of fisheries zones of the country in which critical troubles of pollution and environment degradation were also reported.

* *Marine Biologist, Coordinator CESPA program, Integral and Rural Development (DRI).*

This situation reflects lowest intensity of productive work and leads fishermen to decrease their economical conditions. Fishing activities become so on typically of survival level. Due to various reasons:

- Low standard of living.
- Low education level.
- Low business capacity.
- Absence of technical assistance
- Lack of credit and Financial services
- High costs of fisheries equipments
- Inadequate infrastructure
- Absence of development policies for this sector.

CESPA's STRATEGY

CESPA's strategy is considered a local adaptation, as a result of several works and discussions between government and artisanal fishermen organizations of Colombia in order to find solutions for non well developed fisheries. The model is defined as Strategy of Service Centers for Development of Artisanal Fisheries -CESPA.

Final proposals of CESPA strategy were submitted to consideration of Colombian authorities in 1985 regarding programs of fishery development adopted by National Fisheries Commission "CONALPES" and was taken as a realistic policy to develop artisanal fisheries.

CESPA's objectives might be summarized as follows:

"... To obtain the integral development of artisanal fisheries activities through improvement of adequate technology for efficient performance of fishing and economic benefits of fishermen..."

"... To get establishment, adequation and settlement of storage, required infrastructure for conservation of products and marketing, and to supply and develop complementary support services..."

"... To advance in financial establishment and credit alternative solutions for the operation of CESPA's and fishing activities..."

Effects of strategy are expected on cultural aspects and adjustments on rural areas in which fishing activities are priority and produce major part of regular people's income. Based on this statement, CESPA assume particular signification into National Alimentary Security Plans, having in high concept fish value for nutrition of low level income population, from urban or rural areas. The new CESPA's effort in the fisheries context finds need to struggle against actual law production and product distribution at several, local, regional and terminal markets.

It is also very important for local activation and regional processes which joining community forces participate, particularly a case of women that are deeply engaged in multiple activities regarding to handle and purchase fishery products, in view of making real contribution to familiar fund and to increase survival options of their familiar unit.

CESPA emerges as government policy to make investments in four main topics which integral strategy takes forms as follows:

1. Conservation and exploitation of natural resources, where fishery resources are considered critical limit for implementation of growing projects, which constitute natural reserve for fisheries and it is just the exploitation matter at CESPA's force.
2. Adjustment and transference of fisheries technology, a gradually important field because modernization and technification of fishing activities are the suitable way to reach new resources and fishing grounds, extremely necessities for CESPA's development.
3. Organization and social development, is a critical point in consolidation process of structured organizations to support productive models of participants and economical staments. To generate richness and redistribution of economical benefits traditionally enjoyed by other agents different than fisherman.
4. Infrastructure and physical CESPA's dotation, to provide basic support for diverse handled store activities and fish products preservation, as practical way to get efficiency and to avoid losses. In such terms, CESPA's strategy follows national policy of administrative decentralization and economical openings to private economical activities, having in view clear objectives to involve particulars in the generation of new industrial occupation way, while State applies an appropriate roll for promotion and encouragement of social development alternatives.

On the order hand of this initial effort, which government institution supported artisanal fishermen's initiative, it was enacted a "General Law of Fisheries", in course of state policy to provide an adequate normal- legal context for development fisheries, centering basic matters as research of resources, fisheries regulation, technical assistance, credit and other related matters, to look for increasing fisheries participation into National economy and to produce short-term effects on national production values. The new law also gets a new institutional structure creating a National Institute of fisheries (INPA) and financial fisheries Corporation (CORFIPESCA).

IMPORTANCE AND RELIANCE

Up to date CESPA's strategy is conducting actions on various regions of the country. It is a definitive interest to remark some aspects in which this program offers reliable advances in favour of fishery communities development:

- Government investments on fishery development.

CESPA really have assumed leadership on rural development promotion in remote areas where state presence it is not enough.

Projects at present time are serving as operation models.

Colombian Government leads, since 1988, continuous transference of financial resources as state contributions surrounding \$1.000 Million pesos (More or less \$2 Million Dollars the three years), surely the most important amount of funds dedicated to reinforce fishing activities. Annual investments may increase to \$1.300 Million pesos (\$2 million dollars) from 1991 to 1994. These funds will be apply to establish 13 projects distributed in the most important areas of national fisheries system as follows:

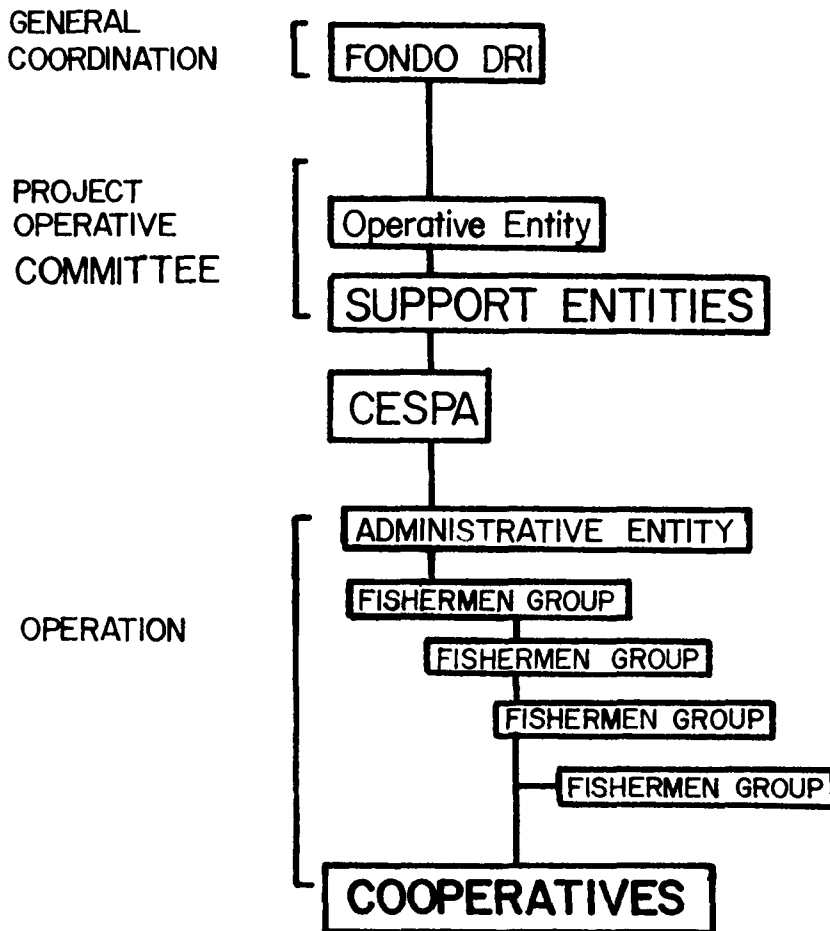
INVESTMENT

PACIFIC COAST	4 Projects	580 Million Col Pesos
ATLANTIC COAST	4 Projects	150 Million Col Pesos
MAGDALENA RIVER BASIN	3 Projects	560 Million Col Pesos
NATIONAL LANDS	2 Projects	150 Million Col Pesos

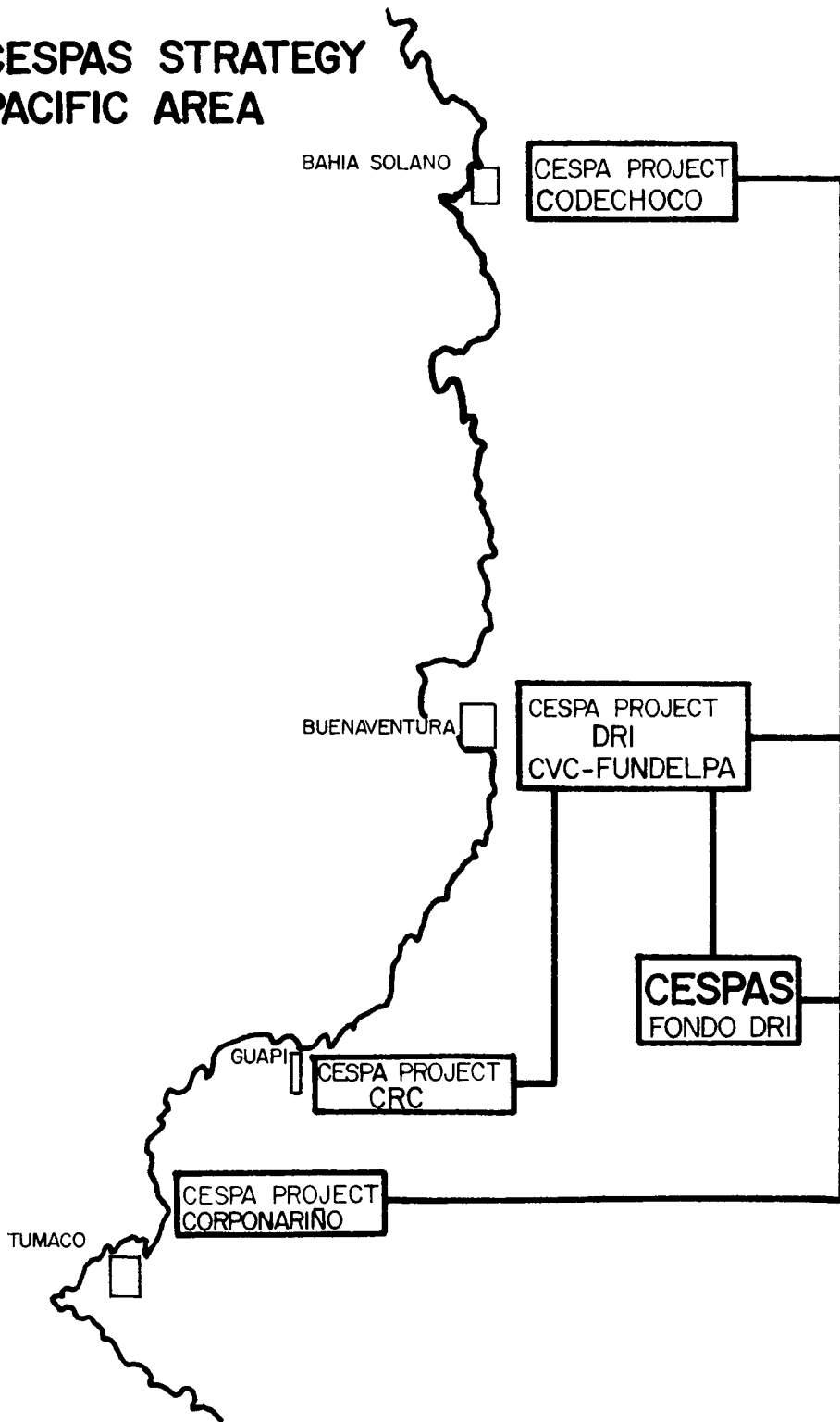


COOPESCUR, CESPA's cooperative in Urabá.

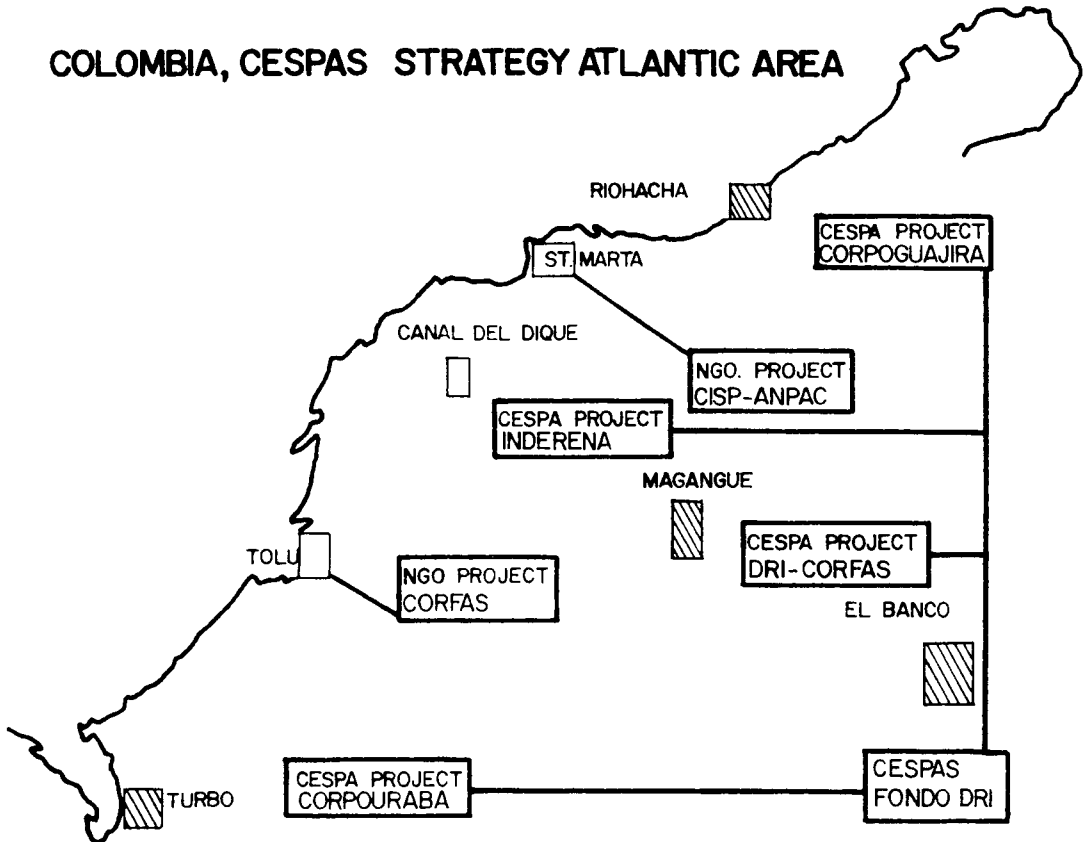
CESPA'S ORGANIZATION CHART





CESPAS STRATEGY PACIFIC AREA



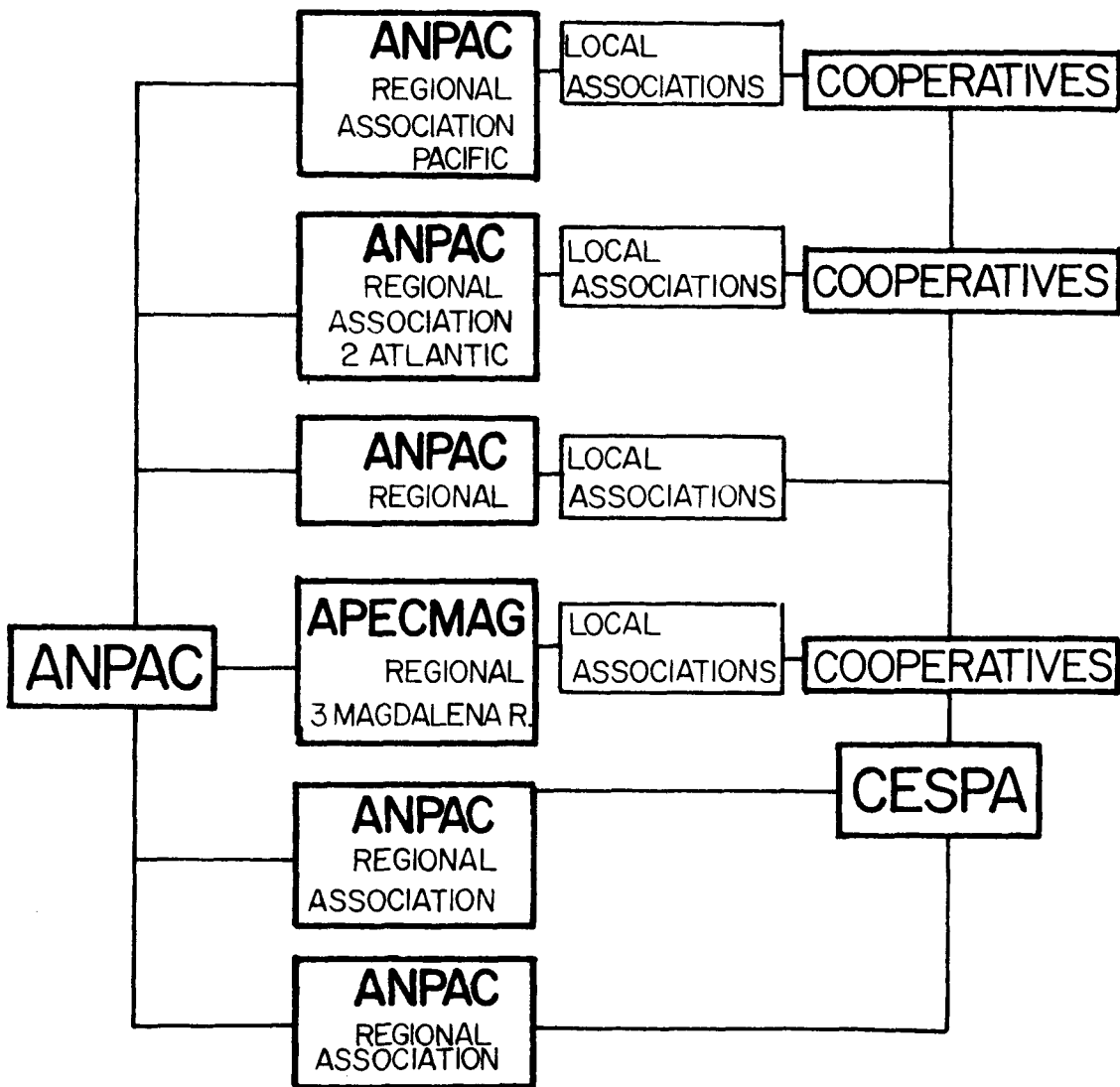
COLOMBIA, CESPAS STRATEGY ATLANTIC AREA



CONVENTIONS

-  CESPAS' DIFFERENT PROJECTS NGO'S
-  STARTED PROJECTS UNDER DRI COORDINATION

FISHERMEN'S ORGANIZATION CHART



FISHERIES COOPERATIVES IN COLOMBIA

*Dr. Haydee Marín Ordoñez**

PREFACE

The Colombian government is becoming more aware of the importance of fishery sector. It recently gave special recognition to the sector in the form of Law 13 of 1990.

Fisheries cooperatives, as part of the solidarity economy, are fighting for survival in difficult economic conditions.

Although, fisheries cooperatives are not advanced in their organization, they are potentially rich in marine resources. According to a 1988 INDERENA (National Institute for Renewable Natural Resources) report, artisanal fisheries contribute 61,000 tons of produce per year to the GNP, from both fresh and marine waters. It is estimated that fishery cooperatives contribute 2% to this total.

Fisheries cooperatives are now fashionable due to their economic potential, among other reasons such as the fact that fishery activities have to be carried out in a group. The CESPAN National Strategy of fisheries development is aimed at encouraging fishermen to organize themselves into cooperatives to address their common needs and increase their probability of success through cooperation.

Despite the far-reaching implications, so far there is not common agreement as to the role of fishermen and the definition of the fishery cooperative. Therefore, there is not a common consensus as to the policies needed for their development.

Fisheries cooperatives need encouragement and proper support from the government if they are to fulfil their potential in the development of Colombia.

METHODOLOGY

One of the difficulties fisheries cooperatives face is the lack of access to information and production and business statistics.

To study fisheries cooperatives, field work is necessary. Supporting this research is a task for the institutions related to fisheries.

Some research has been carried out, based on visits and reports made by DANCOOP compiled from the available statistics and surveys of fishermen whom I met at fishery meetings.

The data used was from DANCOOP, the Ministry of Agriculture -Artisanal Fisheries Section, INDERENA (National Institute for Renewable Natural Resources), the National

* *Economist with the Planning and Development Division, DANCOOP.*

Department of Planning, and ANPAC (National Association of Artisanal Fishermen of Colombia).

Another useful source of information was my personal involvement with fisheries cooperatives, especially the three months I spent with the fishermen at the Morrosquillo Gulf.

This research is nowhere near exhaustive, it is only a brief attempt to take stock of the role of fisheries cooperatives in Colombian development. It is also intended to help people who are interested in undertaking more formal research on this subject.

CONCEPTUAL FRAMEWORK

The cooperative movement in Colombia must be considered as part of the Latin American context. Generally speaking, we can analyze cooperativism from two points of view:

ONE - As a social philosophy, whose tenets are pragmatic and act to alleviate social conflicts and to develop and modernize the capitalist system.

TWO - As an economic development strategy of Third World countries which developed in response to the specific needs and conditions of the countries.

These two perspectives have contributed to the transformation of cooperativism in Colombia. The concept has evolved from ancient times when human beings began living in society and mutual cooperation was the main instrument of survival. Before colonization, the primitive tribes in Colombia worked together in communal organizations called "minga y mano prestada" (helping hand).

In the 1970's, the so-called informal sector gained official recognition in Colombia. Now it is considered as part of the solidarity economy. It is worthwhile to talk about this sector, because it involves all kinds of community organizations, including cooperatives, mutualist societies, communal associations. These organizations represent a large number of Colombians. It has been shown that these organizations contribute to the Colombian economy in a dynamic way (Valencia L. 1989), and that they generate, helping to alleviate the problem of poverty.

Despite many difficulties, the informal sector is trying to strengthen itself in order to further the socio-economic development of this country.

The cooperatives, as a privileged organizations in the solidarity economy, are called upon to be the leaders of this development process. If we take into account the historical development of these heterogeneous organizations, their enormous potential to carry out an autonomous socio-economic development becomes apparent.

* *García, A. 1976.*

BACKGROUND

Fishery cooperatives started in Colombia in 1960. In the early 1970's, the Peace Corps arrived in Colombia, bringing with them their foreign strategies for development, including agricultural reform and the formation and promotion of cooperative associations.

This is how the fisheries cooperatives got started. The Peace Corps joined forces with government institutions to create fishery cooperatives subsidised by the government through INDERENA, INCORA, IDEMA and Family Welfare. The objectives of these institutions were to eliminate the middleman, to increase the fishermen's income level, and to protect the fishing resources through adequate care and protection.

Under this form of management imposed from above, the fishermen felt like they did not have any real participation, as if they were mere employees of these institutions. When these institutions stopped their intervention, the cooperatives ceased to operate. The patronage of the government-sponsored institutions was like a miraculous solution to the fishermen's problems but these problems were never clearly identified, much less resolved.

Fisheries cooperatives lack of organization and management. The State cooperativist policies so far have not reached this sector. Colombian fishermen rarely have been characterised as a solid organization. Most of the time they have been obliged to organize in response to certain specific local economic conditions. They began thanks to the patronage of institutions which offered money to the organizations. For many reasons, at the moment we can say that fisheries cooperatives are in a stage of stagnation, very few of them work properly, they have poor resources and they still use primitive, artisanal fishing methods.

LEGAL FRAMEWORK

The cooperative movement began in Colombia at the turn of the century but it wasn't until 1931, when Law 134 established norms for the administration and activities of cooperatives.

As a consequence of this law, in 1932 the National Superintendence of Cooperatives was created as supervising and regulatory body. This institution was under the co-jurisdiction of the Ministry of the National Economy and the Ministry of Labour.

By that time, the National Cooperative Fund was created and the mutualist societies came under the control of the National Superintendence of Cooperatives.

Law 134 was in effect with some amendments when Congress named the Cooperativists Committee to study, update and elaborate a new decree in accordance with the current reality. Decree 1598 went into effect in 1963. This law constitutes the instrument of cooperativism which has endured for the past 25 years.

In 1981 the cooperativism movement had reached a peak and Congress passed Law

24, creating the National Department of Cooperative Administration -DANCOOP- that allowed the transformation of the National Superintendence of Cooperatives. In this way, cooperativism attained better status and its functions were diversified so that it was not only an organism of control, but was now responsible for strengthening and developing the cooperative sector.

The National Department of Cooperative Administration -DANCOOP- was created with the following objectives: to guide and execute the cooperativist policies of the state; to collaborate in cooperativist economic planning; to propitiate the cooperative financial foment, technical assistance; to give cooperative training and education, as well as exercise vigilance and control over the cooperative organisms and its affiliates.

Cooperative Law 79 was passed in 1988. This law actualized the cooperativist movement, giving it greater autonomy. This law also permits the cooperative ordinance as an essential and new branch of the jurisdictional order of Colombia. On the other hand, this new law allows the members to be more involved in the administration and vigilance organisms.

In summary, we can say that in Colombia cooperativism as a development policy has followed a progressive trajectory. Still, in spite of accounting for only 3% of the National Economy, it plays an important role in the solidarity economy.

The reality is that the cooperative movement needs to develop further in a more coherent way, supported by the government and cooperativist plans. We can not deny the good intentions of the cooperativism leaders from the affiliate organizations, whose intentions tend to provide structure and assist in development in an adequate way. The response from the cooperativist sector hasn't been the best. There is a lack of participation. Thus we can affirm that the cooperativism in Colombia has not evolved very far.

To the extent that fishery cooperatives are situated in this framework, have had to improve their conditions to meet the cooperative regulations and ask outside persons to help them in order to conform to all the required regulations. We should keep in mind that most Colombian fishermen have a low level of education. The majority of association members don't know or understand the cooperative laws.

FISHERIES LAW

Since January 1990, the government has recognized the fishing activities as an occupation of public interest, regulating the catching methods as well as establishing procedures for maintaining and protecting natural resources. Under Law 13 of 1990, the government created INPA (National Institute for Fishing and Aquiculture) which is still in its early stages but whose objective is to contribute to the development of fisheries activities in order to occupy a larger place in the National Economy.

This Law also clarifies fishery activities such as: fishery research and catching through

various techniques be done exclusively Colombian boats, with the purpose of creating a Colombian fishing flotilla.

Another activity that is being examined is that of fish processing. It is suggested that this work be done mainly in plants designed for this purpose rather than by dispersed individuals. The quality control of this process is subject to official inspection. Another main activity is fish marketing. Law 13 addresses the issue and proposes to implement an efficient chain of marketing at national level. This law aspires to solve the fishermen's problems related to production. The last activity mentioned in this law is aquiculture and it is INPA's (National Institute for Fishing and Aquiculture) responsibility to regulate and establish the necessary standards for the cultivation and reproduction of species, as well as maintaining the supplies of eggs and sperm for this activity.

Law 13 also establishes the right to fish and tax rates. In general, Law 13 tries to organize fishery sector in almost all aspects, with the objective of regulating the management of fishery resources and assuring they are used well.

This Law accords official recognition to the fishermen's organizations, permitting them to operate more efficiently.

FISHERIES COOPERATIVE STATUS AT PRESENT

In 1973 there were 23 fishery cooperatives registered with DANCOOP (see Table 1). Only one, located on San Andres Island, started with its own capital, the others were funded through loans.

Fishery cooperatives began without clear policies or coherent programmes for the institutions and the fishermen. The fishery cooperatives developed their own way of marketing according to their conditions and location. e.g. the Fishery Cooperative of Taganga-Santa Marta in which the women carry out the marketing business at the centre of the city. Fishermen have suffered from the instability of the prices and also from the uncertain harvest. Fishermen lack knowledge of management, marketing and fishery business as well as basic education and training. In order to make a living as fishermen, they have to fish when the sea conditions permit and therefore are often unable or unavailable to participate in the cooperative's meeting or look after its administration.

Since that time 5 fishery cooperatives have folded from a total of 34 cooperatives registered with DANCOOP in 1990. Most of the fishery cooperatives started out with a lot of ambitious objectives, but the members couldn't carry them out properly and the cooperatives had to be closed because of lack of cash and poor management. When the accounting was done, it was discovered that the cooperative's very members were the main debtors.

Another basic problem was that the cooperatives did not offer any worthwhile assistance to the associate members.

In the development of fishing cooperatives we can affirm that none of them have

completely achieved their main objectives. If we analyze exhaustively the behaviour of the members and the internal management, it is evident that they have adopted a passive laissez-faire attitude. As a result, the members don't feel like they are part of the cooperative. Instead of the fishermen contributing innovative ideas to their organization, they expect the organization to offer them something. The cooperatives started under these conditions, their members were not involved in the planning or organizational processes.

We have had occurrences in which the fishing cooperatives existed only while the sponsoring institution were providing them with assistance through its functionaries. They could not function properly on their own.

TABLE No. 1
FISHERIES COOPERATIVES IN 1973

NAME	LOCATION
FISHERY COOPERATIVE OF SOPLAVIENTO	BOLIVAR
INTEGRAL FISHERY COOP. OF GUANINO-CITO	CALDAS
INTEGRAL FISHERY COOP. OF TAGANGA	MAGDALENA
FISHERY PRODUCOR COOP. OF PROVIDENCE	SAN ANDRES
FISHERY ARMERS COOP. OF PACIFICO COOARPE	VALLE
FISHERY COOPERATIVE OF PACIFIC	VALLE
FISHERY COOPERATIVE OF LOMAR	ATLANTIC/BOLIVAR
FISHERY COOP. OF BAHIA SOLANO	CHOCO
INTEGRAL COOP. OF CIENAGA GRANDE	MAGDALENA
FISHERY COOP. OF MAGDALENA RIVER	MAGDALENA
FISHERY COOP. OF MORROSQUILLO GULF AND SAN BERNARD ISLAND	SUCRE
FISHERY COOP. OF PLATA RIVER	MAGDALENA
FISHERY COOP. OF VALLE DEL CAUCA	VALLE-CALIMA

Source: DANCOOP statistics - 1989

CONCLUSIONS AND RECOMMENDATIONS

1. Firstly, we have to clearly define, what is a fishery cooperative, pointing out the advantages and the disadvantages of cooperatives in Colombia.
2. Fishermen have to identify their basic needs and be aware of the possibility for success through cooperation.
3. It is important for the fishermen to organize themselves in order to overcome their marginal status and not be exploited by middlemen.
4. It is essential for the fishermen to have knowledge of accounting, marketing and management in order to transform their organizations into cooperatives.
5. The fishermen of cooperatives have to take common interest in protecting their fishing sites as well as their equipment. This is valid for both the marine and the inland fishermen. They also have to unite to better manage their relations with the buyers and middlemen. Furthermore, it is necessary for the fishermen to establish initiatives for their development to acquire government support.
6. Although cooperatives are not profit-making organizations in the commercial sense, they are by no means non-economic organizations. Fisheries cooperatives have to strive to not be exploited by the middlemen and the buyers.
7. From the above, fishery cooperatives need financial assistance to operate at a sufficient level of business and production.
8. The role of the government is to define the basic structure for cooperative organizations, to protect and help cooperatives achieve business efficiency, to provide legal guidance, to offer technical and financial assistance, to provide education and training to the fishermen and cooperative management staff. It is government's responsibility to train its own staff who work with cooperative affairs.

NATIONAL FISHERY COOPERATIVES

NAME	DEPARTMENT
Coop. Multiactiva de Pesqueros del Embalse Peñol Guatapé	ANTIOQUIA
Coop. de Pescadores de Uraba "COOPESCUR"	ANTIOQUIA
Coop. de Pescadores del Guajaro "COOPESGUAJARO"	ATLANTICO
Coop. Pesquera de Aguadas de Pablo Ltda "COOPESCAP"	ATLANTICO
Coop. Integral Pesquera del Caribe "COOPESCAR" (I)	BOLIVAR
Coop. de Biologos Marinos "COOBIOMAR"	BOLIVAR
Coop. de Comercializacion Pesquera de Magangue "COOCOPEM"	BOLIVAR
Coop. Multiactiva de Pescadores de San Pablo Ltda "COOMULPESCA Ltda"	BOLIVAR
Coop. Integral de Pescadores de Soplaviento	BOLIVAR
Coop. Integral de Pescadores de Zambrano Ltda "COOPESZAM"	BOLIVAR
Coop. Integral de Pescadores de Guarinocito	CALDAS
Coop. Integral de Pescadores de La Dorada "COOPESDORADA Ltda"	CALDAS
Coop. del Rio Meta "COOPESMETA"	CASANARE
Coop. de Saloa Cesar "COOPESA"	CESAR
Coop. Integral de Pescadores de Gamarra "COOPESGAMARRA"	CESAR
Coop. Integral de Pescadores de Acandi "COOPIPA" (I)	CHOCO
Coop. Integral de Pescadores Artesanales Golfo Cupica Tiburon "COOPESTIBURON"	CHOCO
Coop. Agropesquera de Ayapel (I)	CORDOBA
Coop. Agropesquera de Cristo Rey (I)	CORDOBA
Coop. de Productores de Camarones de Sicara "COOPCASICA Ltda"	CORDOBA

Coop. de Produccion y Mercadeo de Pescadores de San Antero "COOPESAN"	CORDOBA
Coop. de Acuicultores Ltda "ACUICOOP"	HUILA
Coop. de Pescadores de Algarrobal Ltda "COOPAL"	MAGDALENA
Coop. de Pescadores de Menchiquejo Ltda. "COOPMEN"	MAGDALENA
Coop. de Pesdadores de Agua Estrada Ltda "COOPAES"	MAGDALENA
Coop. Integ. de Pescadores de Taganga "COOTAGANGA"	MAGDALENA
Coop. Integral de Ingeniero Pesqueros "COOINPES"	MAGDALENA
Coop. de Pescadores de Puerto Guadalupe "COOPEGUA"	META
Coop. de Pescadores Artesanos Costa Norte Pacifico Nariñense	NARIÑO
Ccop. de Pescadores de Bazan	NARIÑO
Coop. de Pescadores Artesanales y Agricultores de Mosquera Nariño Ltda.	NARIÑO
Coop. de Productores y Pescadores de Providencia "COOPROPESCA"	SAN ANDRES
Coop. Pesquera de Roos Carlos Barker	SAN ANDRES
Cove Sea Fishermen's Cooperative	SAN ANDRES
Coop. de Pescadores de San Luis Elliot Mc Gowan	SAN ANDRES
Coop. Integral de Pescadores de Barrancabermeja Ltda "COOPESBARRANCA Ltda"	SANTANDER
Ccop. Integral de Pescadores de Puerto Wilches "COOPESWILCHES Ltda"	SANTANDER
Ccop. de Pescadores Artesanales del Rio Orinoco y sus afluentes	VICHADA
Precooperativa El Cardumen	SUCRE
Precooperativa San Lorenzo de Camarones	GUAJIRA

SOURCE: *National Department of Cooperative Administration -DANCOOP, Planning and Statistics Section, March 1991.*



Manual Caldas, ANPAC's founder, on field trip to PESTOLU.



Field trip to Tolú, pre-cooperative "El Cardumen".

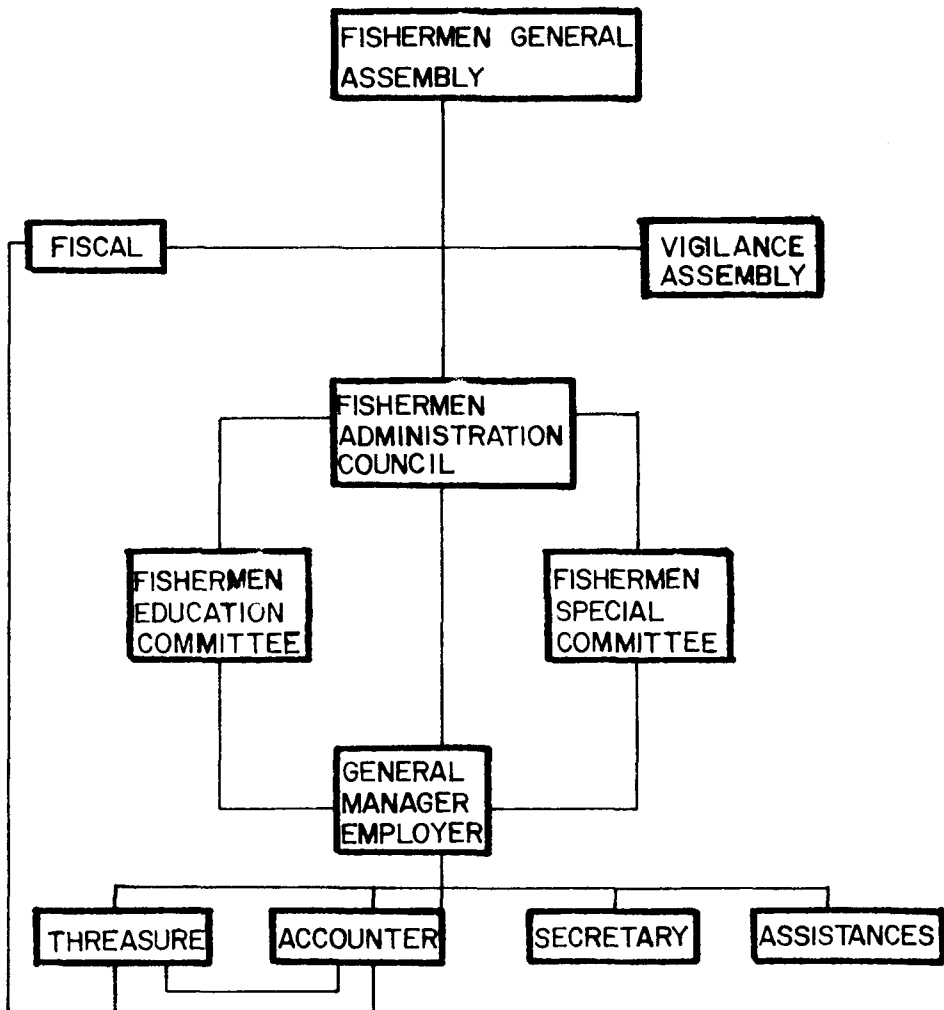
FISHERIES COOPERATIVES COLOMBIA 1991

NAME	LOCATION	ASSOCIATES	TECHNIQUES	EQUIPEMENT	PRODUCTION	ESPECIES	SERVICES
Fishery Coop. of Urabo COOPESCUR	Antioquia Turbo	65	Gill Net, Atarraya (1)	Fish Vassel, stoage room, ice room, 2 refrigerators	1000 pound/day	Prochilod. reticulatos, Galei chlys, red snappe., pseudopla tystoma	Marketing, credit & savings product.
Fishery Coop. of Guajaro	Atlantico Sabanalarga	28	(1)	Wood boat	70 pounds/day	Plagiaosc., Petenia, Kraussii Pimelodus	Marketing
Fishery Coop. of aguadas de Pablo COOPESCAP	Atlantico Sabanalarga		(1)	Wood boat	50 pounds/day	Same as above	Marketing
Integral Coop. of Barran ca COOPESBARRANCA	Santander Barrancabermeja	20	Long line (1)	Wood boat, outboard boat, cold storage	900 pounds/day	Prochilodus, pseudoplati toma	Marketing
Fishery Coop. of Zambrano	Bolivar Zambrano	35	(1)	Wood boat	130 pounds/day	Prochilodus, pseudoplatys.	Marketing
Precoop. EL CARDUMEN	Sucre Tolu	37	Long line, guill net, (1) harpoon-fish trap	W. boat, cold storage, cave	500 pounds/day	Scomberomorus, lutjanus, centropomus, lobsters, snail	Marketing, credits, supply of inputs
Integral Coop. of Guarino cito	Dorada Caldas	94 (active 52)	(1)	W. boat, 2 refrigerators	200 pounds/day	Prochilodus, reticulatos	Marketing, credits, artesanía
Fishery Coop. of Meta river COOPESMETA	Orocue Casanare	24 (active 18)	(1)	Cold storage, ice plant, fish nets	1800 pounds/day	Paulicea lutkenil, galeichtys, prochilodus, reticulatos.	Marketing, loans to assoc.
Fishery Coop. of Salda Cesar COOPESA	Chimichagua Cesar	33	(1)	Wood boat		Same as above	Marketing, credit & savings, Soc. security, education
Prod. fish. Coop. of Patrenillo	El paso Cesar	27	(1)	Wood boat		Colossoma, brachypomus	Marketing, conservation
Integral Coop. of fish. La Glo ria Cesar CORREGIOPES	La Gloria Cesar	27	(1)	Wood boat		Prochilodus, reticulatos	Marketing
Aquicultors Coop. ACUICOOP	Gigante Huila	21	(1)	Wood boat		Colossoma, brachypomus	Marketing
Fish. Coop. of Algarrobal COOPAL	El Banco Magdalena	17	(1)	Wood boat	120 pounds/day	Prochilodus, reticulatos	Credit & savings, Especial se gurity
Fish. Coop. of Taganga	Santa Marta Magdalena	27	Long line, half line, net, (1)	Wood boat, small vessel	150 pounds/day	Red snapper, bonito, tuna	Marketing, credit, provision
Fish. Coop. of producers Pro videncia COOPROPECA	San Andres & Providence	101	Long line, harpoon-fish trap	Refrigerator, 2 cold rooms	1000 pounds/day	Saw fish, red snapper, shrimp	Transport, provision store
Fish. Coop. Roos Carlos Barker	San Andres Island	24	Cord line, fish trap harpoon	1 F. vessel, 2 w. boats, refrige.	750 pounds/day	Red snap., shell fish, saw fish	Marketing, medical service
Fish. Coop. of Cove	San Andres Island	22	Cord line, fish trap harpoon	Cold room, wood boat	275 pounds/day	The same as above	Marketing, restaurant
Fish. Coop. of Orinoco river	Orinoco	30	(1)	Cold room, wood boat		Ornamental fisheries	Provision storage

SOURCE: DANCOOP ESTATISTICS

(1) ATARRAYA: Cast nets

FISHERY COOPERATIVE DIAGRAM



SOCIAL SECURITY IN THE ARTISINAL FISHERIES SECTOR

*Dr. Alberto Mendoza **

Social fisheries security depends on economical and state security policies. Unfortunately fishery craftsmen represent poor Colombian people, they live in a chronic shortage and don't earn enough for their expenses.

Fishermen are marginalized and somehow forgotten by the authorities. Their unequal conditions situate them in a stage of disadvantages. They show an associable behaviour among the people.

They are lack of education, health, services and minium privileges. Social security gives people comfort, assuring damages, traumas, let people to save money their future life, education, to buy house. People do need an state duly organized. To get this facilities.

Although social security is an state debt with its dwellers, in some countries like Colombia there are some problems which make difficult the purpose of giving that security in an adequate and way. This make that the community have to participate itself in order to improve.

Improve it's level of living. Therefore, people have to assume new life attitudes:

- To give value and deference to fisheries.
- To make solid unification in order to obtain a better community.
- To make responsible high management.
- To plan and perform objectives.
- To save and reinvest earnings.
- To adapt clear purposes in order to establish fishery enterprises rather than artisanal fisheries.
- To strengthen the organization and look for assistance and advise given by ANPAC (National Association of Artisanal Fishermen of Colombia).
- To create new cooperatives, community enterprises, associative enterprises.
- To impulse CESPAC as a national strategy to promote organization enterprise.
- To give education and training fisheries.

Artisanal fisheries joined their forces in order to obtain social and individual security.

* *Architectural planner, adviser to ANPAC.*

Main purpose of this process is joining individual forces to become an association of industrial enterprises.

To achieve all purposes of artisanal management, it is necessary to fortify fisheries organization fisheries represented by ANPAC and productive presence by CESPA.

For both, fishermen organization as well as management enterprises it requires from the state services and strong support from officials.

ANPAC FISHING VILLAGES

1. LA GUAJIRA

RIOHACHA

Camarones

Dibulla

Punta de Remedios

Palomino

Manaure

El Pájaro

Bahía Honda

2. MAGDALENA

TAGANGA

Santa Marta

Puerto Nuevo

Ciénaga

EL BANCO

Pueblo Viejo

Isla del Rosario

Palmira

Tasajeras

3. ATLANTICO

Barranquilla

Baranda

Campo de la Cruz

Juan de Acosta

Saco

Ponedera

Repelón

Arroyo Negro

Soledad

4. BOLIVAR

CARTAGENA

Arroyo de Piedra

Pto. Canoas

La Boquilla

Pta. Barbacoas

Barú

Bocachica

Pasacaballos

San Pablo

Ma. La Baja

Río Nuevo

Palomino

ACHI

Colorado

San Bernardo

CALAMAR

5. SUCRE

Golfo de Morrosquillo

El Rincón

La Barca

San Antonio

San Andrés Palo

San Benito Abad

San Marco

TOLU

Berrugas

El Porvenir

6. CORDOBA

Montería

Atapel

Ciénaga de Oro

Montelibano

Puerto Carepa

Puerto Anchica

Puesto Escondido

El Pantano

7. ANTIOQUIA

TURBO

CACERES

Arboletes
Puerto Caribe
El Tres
Necoclí
El Totumo
Mulatos
Punta Arenas
Pueblo Nuevo
Zapata

8. CHOCO

BAHIA SOLANO

Acanon
Capurgana
La Caleta
Pindrada
Sapzurro
Mutis
Cupica
El Valle
Nabuga
Pizarro
Belen de Docamp
Boca de Pepe
Cuevita
Mijua
Orpua
Pabaza
Pie de Pepe
Piliza
Punta Purricha
Purricha
Siviro

Virudo
Punta de Igua
Guineal
Jurado
Aguacate
Coredo
Curiche
Punta Ardita
Arusi
Pangui
Tribuga

9. VALLE DEL CAUCA

Buenaventura
Bazan
Bocas de San Juan
Duadualito
La Plata
Ladrilleros
Malaga
Mayorquin
Potedo
Puerto Merizalde
Punta Soldado
San Antonio Yurum
San Francisco de Maya
Cab. Río San Juan
Chanica
Cab. Zona Indígena
Buga
Sonso
El Porvenir
La Victoria

Roldanillo
Tulua
Totoco
Mediacanoa

10. CAUCA

GUAPI
Candelaria
El Coco
El Cacao
Cll. Larga Maya
Boca Grande
Timbiqui

11. NARIÑO

Tumaco
El Charco
Arenal
Roberto Payan
La Vija
Bahía Mulatas
Río Tapaje Pulb
Plinio Oliveros
Quita Sol
Sanquiaca
Pandamoja
Boson
Secadero Sequit
Mosquera
Cocal
Cocalito
A. Lopez P. Flori
Bellavista

J.E. Gaitán (Cocal)
San José Calabaza
Salahonda
Patía
Boca de Curay
Cabo de Manglares
Colorado
Descolgadero
Chajal
Caleta
El Pital
Espriella
Mataje
Teran
Bajo Zapotal
El Bajito
El Papayal
El Pinde
Caleta Viento L.
Ceibito
Bocana Nueva
Chagui
La Chorrera
Majagual
Pital Piragua
Playa del Cab.
Playa del Mira

La Barca
El Coco
Cacagual

12. TOLIMA

Flandes
Honda
Girardot

13. CALDAS

La Dorada
GUARINOCITO
Puanio
La Atarraya

14. RISARALDA

La Virginia

15. CUNDINAMARCA

Pto. Salgar

16. META

PTO LOPEZ

17. SANTANDER

BARRANCABERMEJA

18. CESAR

Valledupar
Badillo
Chimichagua
Candelaria
Río de Oro
San Alberto
La Raya
Pto Carreño
Tamalameque
Zapatoza

19. ARAUCA

Arauca

20. AMAZONAS

Leticia
La Pedrera

21. GUAVIARE

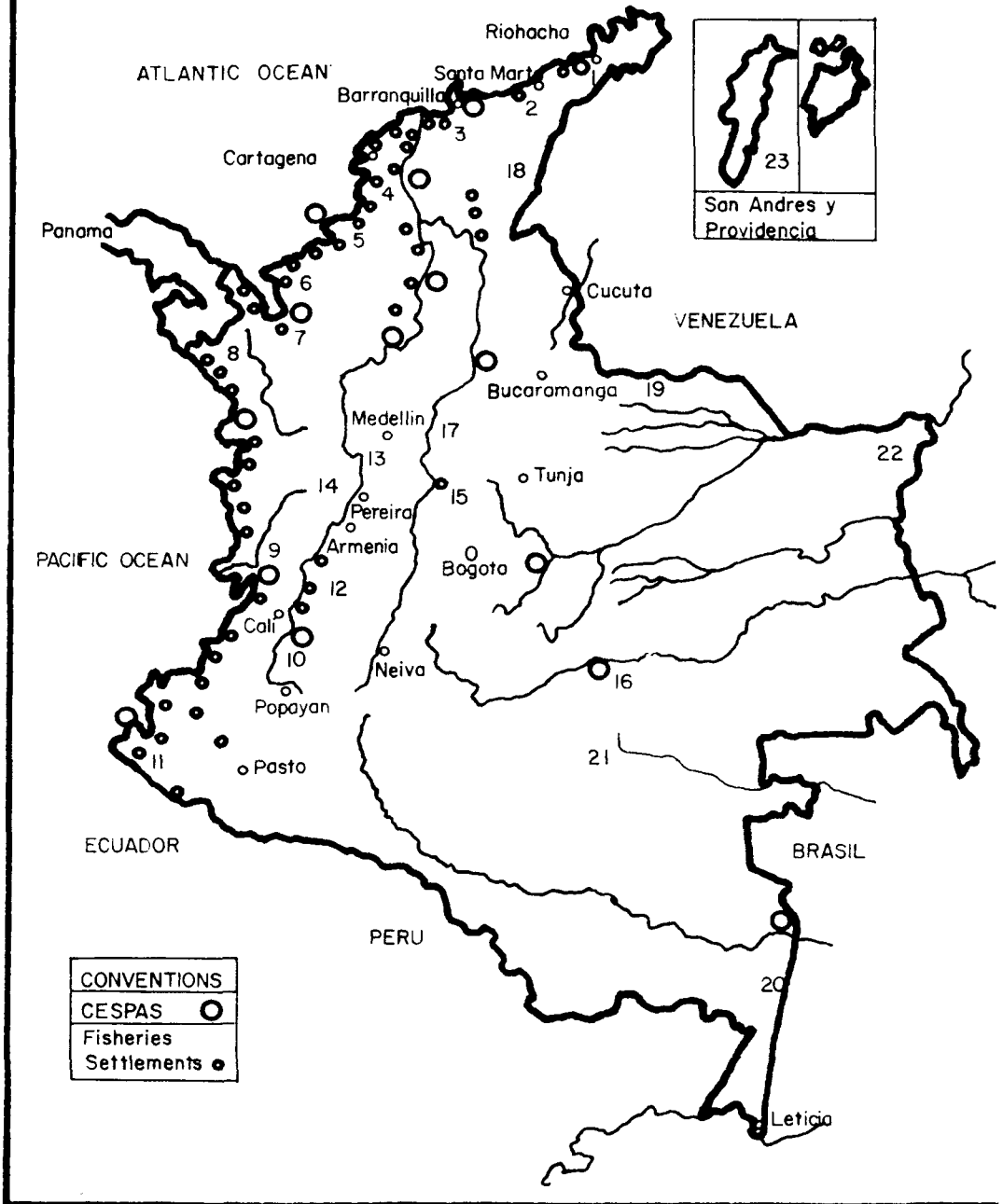
SAN JOSE DEL GUA-
VIARE

22. VICHADA

Puerto Carreño

23. SAN ANDRES IS- LANDS AND PROVI- DENCIA

COLOMBIA FISHERIES SETTLEMENTS 1991



THE MARKETING OF FISHERY PRODUCTS IN COLOMBIA

*Dr. Ramiro Tafur Reyes**

Traditionally, Colombia has not been a fishing country. In this industry it has not realized or exploited its potential productivity. Colombia has 3.000 Kms of water along its Pacific and Atlantic coasts and its main rivers.

The richness of Colombian lands, soil and climate have made it an agricultural country which produces enough food for its population.

Colombian people don't know how to eat fresh fish and they haven't taught their children to consume these products. They only eat preserved or canned tuna and sardines. These products are readily available but are often of dubious quality and the public has become accustomed to accepting second rate produce.

Adequate marketing of fishery products would be the best start for increasing consumption per capita in Colombia, which is only 4 pounds per person a year.

In order to market the products, it is necessary to have good quality raw materials, available in large quantities, good packaging, freezing and storage facilities and a marketing strategy.

This article attempts to identify the best opportunities that Colombia has in its fishery resources and will analyze the present production as well as future marketing, treating the main products separately.

1. SHRIMP

The shrimp industry in Colombia is the most developed of the fishery sector. It was initiated more than 30 years ago in the Atlantic and Pacific coasts. At the moment it employs a high degree of technology and effective exploitation. Therefore it has reached 45 million U.S. dollars of exportation income from sales of the pink, titi and cauliflower varieties.

At present there are 200 shrimp vessels in Colombia, 120 in the Pacific waters and 80 in the Atlantic.

Furthermore, 5 years ago shrimp cultivation was initiated in Tumaco, Cordoba and Bolivar Departments and the resulting export production was valued at U.S.\$ 12 Million in 1990 and is expected to increase in 1991.

* *Agricultural engineer, MSc; President of the Compañía Pesquera Colombiana S.A. (COPESCOL), Buenaventura.*

For the first time in Colombian history due to overexploitation of shrimp, INDERENA (National Institute of Renewable Natural Resources) introduced several restrictions during a two month period in order to increase white shrimp production.

This product has been quite scarce for more than 20 years, because of the "Boy" and "Girl" currents and the improper use of nets.

Marketing of shrimp has been managed directly by telephone between the foreign buyers and the fishermen/sellers. Often the fishermen are ignorant of international market trends and are therefore at the buyer's mercy.

So far in the Pacific coast the shrimp is purchased on reasonably good terms for the producers. The sales are transacted F.O.B., by credit card, cheque or distribution intermediary. In the Atlantic coast there is a green list, made up by buyers, in which a uniform price is quoted for raw products. To this price it is necessary to discount a certain amount of dollars and a percentage which are calculated as a buffer and protection against price drops. The shrimp is sent on consignment and once it is sold, its price may increase or decrease, and this new value is only known 30 to 45 days after having been dispatched. At the present time the prices have decreased considerably and buyers have decided to change the payment system, lowering the prices and limiting the volume of their purchases.

NATIONAL MARKETING

In the national market shrimp is considered as a luxury good. Therefore it is necessary to undertake an educational campaign that eliminate this myth and show that this product is not so expensive and has the added benefit of being more nutritious than beef or chicken.

2. WHITE FISH

Traditionally white fish have been underexploited in Colombia, especially in comparison to salt water fishes.

The bulk of the catching is done by artisanal or semi-artisanal fishermen who work in primitive conditions and often damage the quality of the recently caught fish due to improper care.

The fish are often treated roughly then left unrefrigerated causing further damage. The product suffers at each step of production. Its shelf life is cut short drastically and not surprisingly, the products often fail to live up to the consumer's expectations.

It is imperative to improve the production techniques if we are to create a good market.

Vessels also have to be adapted specially with suitable equipment, different gear and modern methods of catching. The recently caught fishes must be transferred to cold storage quickly and gently in order to avoid damage and waste so that they will fetch a good price on the local and international markets.

NATIONAL MARKETING

Unlike the situation with shrimp, marketing white fish (red snapper, jack mackerel, shark, saw fish) presents its own set of persistent problems such as assuring a permanent and opportune supply, as well as quality control.

Due to mistreatment of fishes after they are caught and a lack of consuming habits, people think fish smell bad, are difficult to prepare and are full of bones.

The majority of Colombians are from the interior of the country and therefore are not used to eating fishery products. They haven't learned how to prepare and eat fish. Only people from the coasts and the rivers consume fish as a staple food. In order to market white fish a constant supply is needed so that people will begin to buy it fresh and will become accustomed to its availability and through periodic consumption will lose the prejudice that it is an unappealing product.

Adequate distribution channels do not exist and people often cannot find fresh fish or don't know where the fisheries are. For future markets it is necessary to have:

- Good quality fish.
- Enough supply.
- Good storage conditions and management of fish.
- Good prices.
- Enterprises dedicated to industrial scale production in order to gain access into new markets.
- It is necessary to establish differences between fresh and frozen fish.
- Buyers have to be honest since the products are sold through consignment.

3. TUNA

Tuna activities in Colombia are quite new, it stated no more than two years ago, even though it is important to mention the enterprise MARCOL. Tin plant, which has survived for more than 20 years, working on this product.

Colombia produces approximately 60.000 ton/year of Tuna specially the variety of yellow fin and skipjack those species have been exploited by foreign vessels.

NATIONAL MARKETING

Tuna can be marketed three main ways: frozen, processed and canned.

This is the fish product of major consumption in the world and its demand is permanent.

Colombia doesn't have its own tuna fishing vessels. All of those working the Colombian waters belong to different countries and are affiliated with companies that market tuna, especially for export.

The annual consumption in Colombia is approximately 500,000 cases of which 180,000 are produced in Colombia, 120,000 are imported from other countries and

the remainder is contraband. The trade is valued at around 12 million US\$ dollars annually.

To achieve the total amount of consumption it is necessary to have adequate Colombian vessels, because total production needed 10.000 tons per year that amount can be found in Colombia waters.

4. FISH MEAL

Colombian consumption is 60,000 tons of fish meal per year, all of it imported. In the Pacific coast there is enough raw material to maintain, two or three processing plants with an output of about 20 tons/hour. That is also possible in Guajira region of the Atlantic.

Colombia has a market with a steady demand for the product but so far no one is producing the product in the country.

Fish meal marketing in Colombia is the most promising, and profitable of fledgling enterprises, offering new possibilities for the fish industry.

SUMMARY

The marketing of fishery products starts with the catching stage or from hatching in aquiculture production.

There is a need to improve the methods of catching fish and adequate posterior treatment to assure market quality products.

Fish products have to be well-preserved and frozen in order to maintain good quality and attain a good price.

In Colombia white fishes have not been exploited at the industrial level, neither have snails, lobsters and other mollusks.

Good marketing of fish products is achieved through sufficient and permanent production. Also needed is a campaign to promote consumption, stressing the benefits of eating fresh fish.

Commerce in fish products involves: catching, hanging, storage, transportation, processing, packing and freezing.

This lecture hopes to give an idea of our production, and marketing, also to present some possibilities for increasing our internal consumption and sales to other countries.

MARKETING BUSINESS OF FISHERY COOPERATIVES IN JAPAN

Dr. Noboru Koreeda *

1. INTRODUCTION

Kagoshima Prefecture is located at the southern tip of Kyushu island in Japan. The population of Kagoshima Prefecture is about 1,800,000 of which 22,500 are fishermen.

The production of fisheries in this prefecture in 1989 was 185,700 ton equivalent to 87,600 million Yen (= 673 million US dollars).

The following table shows fisheries production of Kagoshima Prefecture as compared to the total of Japan.

ITEM	TOTAL OF JAPAN	KAGOSHIMA PREFECTURE
1. Fisheries production quantity metric ton	11,985,000	185,700 (1.5%)
2. Fisheries production value Million Yen	2,701,570	87,600 (3.2%)
(Million US\$)	20,781	673
3. Number of fishermen	392,392	22,500 (5.7%)

2. Outline of Kagoshima Ken-Gyoren

Kagoshima Ken-Gyoren is a prefectural federation of fisheries coops in Kagoshima prefecture. It has 86 member coops.

It is engaged in the following businesses.

1. Marketing business & licensed fish wholesale business: sales of fishery product of the members and supply of aquaculture feedstuff
2. Fish processing business: processing and marketing of fishery products
3. Supply business: supply of fishing materials and fuel oil
4. Ice-making and supply business: supply of ice

* Senior Management Director of the Federation of Cooperative Fisheries Associations of Kagoshima, Japan.

5. Non-economic (information and advisory service) business: advisory service on management of fishery coops and education/training of fishermen.

The main economic business of this federation is marketing.

3. Marketing and distribution channels of fishery products in Japan.

Most of the Japan fish production is sold at the local wholesale fish market.

Fisheries cooperatives have an important place in wholesale fish marketing in landing areas, so we see from 337 district fish markets 294 were operated by fishery coops (87,2%) 32 by local governments and (11) (3.3%) by (9.5%) commercial companies (Dated information April 1989).

The total production of fisheries in Japan in FY 1989 was about two trillion seven hundred billion Yen (2.700.000.000.000 Yen = 20.796.230.000 US\$) in value. Of this, fishery coops accounted for one trillion five hundred billion Yen (1.500.000.000.000 Yen = 11.538.461.000 US\$). Edible seaweeds are not marketed via these fish wholesale market: they are sold by joint marketing system operated by fishery coops organizations. The total amount of seaweed production in FY 1989 was about 150 billion Yen (= 1.153.846.000 US\$). Therefore, the share of fishery coops in marketing business of fishery products in landing areas in Japan is approximately 50%.

The role of marketing business of fishery coops is to collect fishermen's produce and sell them at the maximum and advantageous prices for the benefit of member fishermen. In more concrete terms, the following may be counted as the factors which provide benefits to the member fishermen.

1. Materialization of advantageous marketing prices.
Negotiating and marketing of fishermen's produce via coops are far more easier if you do it via coops rather than doing it individually with intermediaries.
2. Improvement of marketability of products.
It becomes possible to supply fishery products in such a way that they meet the requirements of consumers if coop marketing channels are well made used. For example, quality control of products from the very point of production until they reach consumption areas becomes easier if you use marketing channels of coops.
3. Stabilization of fish prices.
By increasing the market share, fishery coops can contribute to assure stable prices.
4. Expansion of marketing channels.
If is possible to develop new marketing channels such as fish processing companies and supermarkets, etc. from the coops.
5. Reducing marketing costs.

By using fishery coops' wholesale fish market as well as cold storage etc., the marketing costs involved can be reduced; this helps increasing competitive power of members to produce in the market.

Wholesale fish market operation, marketing of member's produce outside the wholesale fish market, outright purchase, freezing and processing.

To met some basic conditions the marketing business of fishery coops will not succeed unless such condition are fulfilled.

Characteristics of Kagoshima Ken-Gyoren

1. Kagoshima Ken-Gyoren is the only prefectural level federation which is engaged in wholesale fish marketing business as licensed wholesaler at central Wholesale Fish Market.
2. It has its own super cold freezing storage (Storage temp.: 60 C).
3. It is engaged in export business of fishery products.

From our experiences gained through our efforts of marketing business of Kagoshima Ken-Gyoren, particulary from the standpoint of business development, I can say that it is fairly important for us to make public relation regarding how to eat fish deliciously along with additional information on the advantageous a points of fishery products as nutritious and healthy food. This is very important for the success of marketing business of fishery coops.

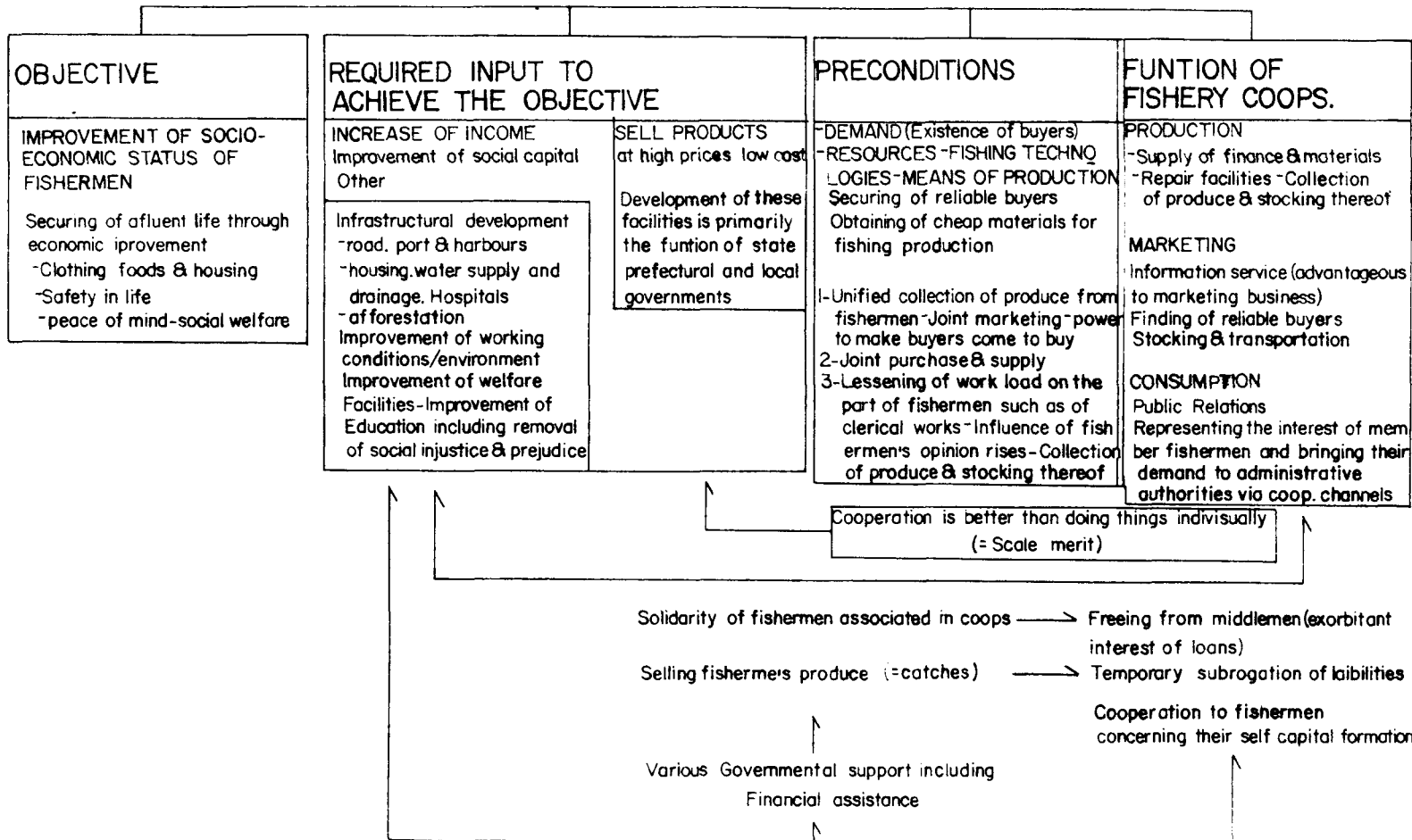


Japanese lecturers: Mr. Koreeda, Mr. Kato, Mr. Sato.

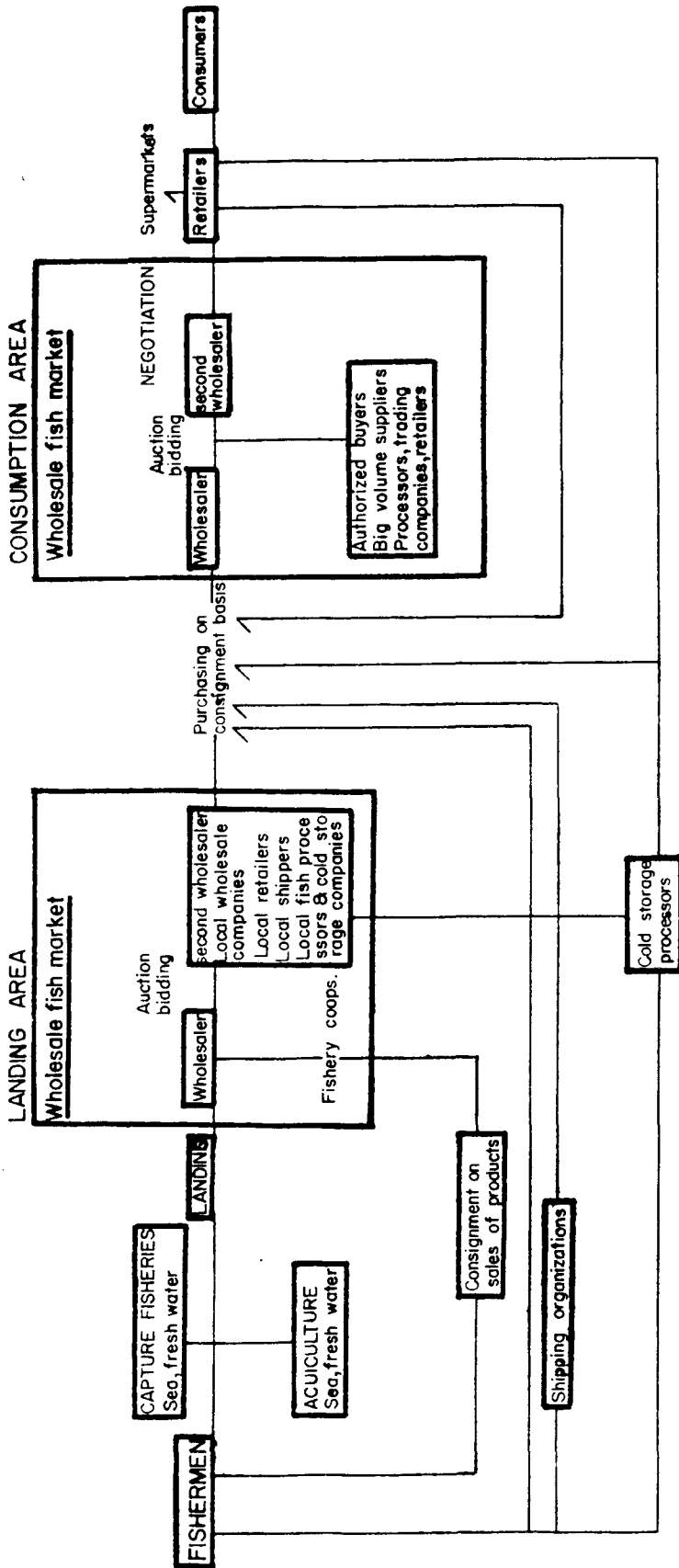


ICA Fisheries Committee Directors: Dr. Csoma, Dr. Sato, Mrs. Gabriella Sozanski, at PESTOLU's pier.

NECESSITY OF MARKETING BUSINESS OF FISHERIES COOPERATIVES



MARKETING CHANNELS OF FISHERY PRODUCTS IN JAPAN



THE DEVELOPMENT OF FISHERIES IN HUNGARY

Dr. Antal Csoma *

HISTORICAL VIEW

Fish have and have always had an important role in human culture. There are many tales and traditions about fish and fisheries.

Therefore we can say that fishing is an ancient and time honored occupation of mankind. We have passed through a long process of learning and experiences about fishing to achieve our actual way of fishing. Our ancestors had to learn all about fish, including their behaviour and way of the reproduction.

Hunting is also considered an ancient occupation but nowadays it is practised as a sport in developed countries. Fishing, on the contrary, has remained an important industry both through catching and aquiculture cultivation, as well as being the world's most popular sport.

The practice of fishing in Hungary is as old as its people. They arrived in Europe during the Great Migrations, bringing with them their fishing skills and implements from Asia. They built their homes near rivers, lakes and waters where the fishing tradition was passed on through the generations.

Since that time, fish have been considered the primary protein food. Granting fishing rights was privilege that underlines the economic importance of fishing.

In ancient times there have been significant changes in fishing methods, quantities caught and species. Despite not having exact data, we know from chronicles and records that our waters were productive.

Subsequent draining and the manipulation of the continent's canals and rivers have seriously affected the fisheries situation. Given the smaller amount of water available, reproduction has diminished considerably. Even with a gradual reduction in the number of fishermen, the miracle of abundant fish turned into a shortage.

The first artificial lake was built in 1430. It was used for store fish caught in the surrounded areas.

In 1988 the first book on fishing was published. It is still used as an authoritative and scientific text by all Hungarians. In this book the farsighted author recognized the importance of fish farms and the possibilities for carp production.

* *President of the "Viharsarok" Fishery Cooperative, Hungary; Member of the Board of the National Federation of Fish Producers; Vice-President of the ICA Fisheries Committee, Japan.*

The first pond farm was built in 1984 and in 1938, the total area occupied by the fish farms reached 10.000 hectares.

At present the total areas of the fish farms is about 20.000 hectares and the total area natural fishing waters (rivers, lakes, etc.) is about 130.000 hectares.

1. Fishery regulations

In Hungary the first fishery law was established in 1888. This law was intended to serve a dual purpose: on one hand to establish a fishing season in order to avoid exhausting the fish supply, and on the other hand to provide appropriate regulations for a rational fish cultivation industry.

To meet these two objectives, the law grants fishing rights that are linked to property rights. At the same time, it stipulates that fishing activities must be undertaken as an association.

This law was modified in 1925, permitting the rental of fishing rights.

From 1945, the right to fish has been accorded by the State. The State gives fishing rights to State farms, fishing cooperatives, fishing federations and private fishermen, under certain conditions. These conditions are: the rational exploitation of fish with concern duly given to protecting and maintaining the fish population to assure a constant supply. The caught fish become the property of the fishermen. Later, due to changes in the legal definition of property, a new law was written based on the principles of a regulatory system that safeguards economic interests and protects the fishes' capabilities to maintain the population.

This law promotes fish production and recreational fishing with the objective of protecting the hydrologic environment in the national interest.

The regulation requires that the fishermen protect fishing resources (including fishing rescue on damsons and against water contamination) and to develop the waters without exhausting them.

2. Evolution of the present fishing structure, the strengthening of fishing cooperatives and the formation of an interest protection system

The development of the Hungarian fishing industry was motivated by important scientific discoveries and economic factors. Hydrological development began about 100 years ago and has been developing at an almost uninterrupted pace. The damming and regulation of rivers has caused big changes.

Extensive flood zones dried up, depriving fish of their reproduction sites. Then, Hungarians started developing the waters around them. They built dikes to increase water exploitation and currently have large quantities of water at their disposal.

At the end of last century, they began to take advantage of the natural resources

available through breeding fish that responded well to cultivation in dikes. These breeding projects took off in the 1950s as a form of rational development in fish farms, as well as in rivers and lakes. There is a profitable use of waters for fish production, using dikes, dams and natural waters.

The possibilities gained from the increasing of fish production are:

- The natural conditions of our country are favourable for fish production.
- The increasing of demand for fish from foreign countries as well as from the interior.
- We have much non-cultivable earth, which is beneficial to fish production.
- There are good possibilities for fish exportation.

The objectives of the development of fisheries are:

- To contribute to healthy nutrition.
- To make good use of species available.
- To built dikes in non-cultivable areas.

To allow the development of sport and recreational fishing.

In 1989 national production was about 37,500 tons, more or less the same of the year before. The same quantity is projected for 1990.

Evolution of fish production in Hungary
Table 1

	1984	1985	1986	1987	1988	1989
SECTOR						
State	19,313	18,429	16,666	17,616	18,946	18,802
Cooperative	14,137	12,813	13,245	13,239	13,229	11,993
Others	5,526	5,685	6,151	6,220	6,569	6,722
Total	38,976	36,927	36,062	37,075	38,294	37,517
% of 6 years	104	98	96	99	102	100

The first fisheries cooperatives were founded 1945 when fishermen decided to organize themselves. They had a long struggle against the authorities for control of water zones.

In 1957 the first Executive Committee was founded to represent Fisheries Cooperatives. In 1967 it evolved into the Federation of Fisheries Cooperatives.

In order to protect themselves in 1972 they diversified and allowed agricultural cooperatives with fishing interests to enter their union. Later on, in 1982 cooperative societies made their appearance. In 1989 the Federation of Fisheries Cooperatives founded the National Federation of Fish Products through private support.

GENERAL GOALS OF TECHNICAL DEVELOPMENT

From the historical point of view, fisheries in Hungary developed independently, each production plant on its own, unlike the livestock sector.

The fish production system in Hungary cannot be separated from natural resources, therefore the industrial production in quantitative terms cannot be increased significantly. This increases the costs of raising animal protein foods, even in the fish farms, lakes, dikes, and other settings of controlled fish cultivation.

Technological development can be summarized as follows:

1. **Biological improvement of fish quality**

- Carp crossbreeding system.
- Introducing new species.
- Repopulation of natural waters.

2. **Betterment of the basic condition of fish reproduction**

- Dry cultivation in dikes.
- Lake bottom plant cultivation.
- Complex exploitation (fish, ducks, rice, arable land).
- Nurturing and adaptation of animal to different feeds.
- Improving water quality.

3. **Manure in the lake and chemical contamination**

- Organic manure.
- Artificial fertilizers.

4. **Nurturing the fishes**

- Fish meal with forage.

5. **Reproduction**

- Artificial reproduction.
- Fish nurseries.

6. **Development of fishing tools**

- Catching tools: natural aquatic utensils, nets for dikes, electric nets.
- Fish treatment tools: manual tools.
- Utensils for transport: containers, packing materials, vehicles.

7. **Mechanization of fisheries**

- Vehicles, pumps (water, air, mud).
- Catching operations in dams.
- Weed control.
- Transportation and engines maintenance.

8. **Fishing Constructions**

- For fish farms (dikes, dams, hydraulic facilities).

- Constructions for catching in natural waters.
 - Species specific apparatus (for trout, etc.).
- 9. Processing activities**
- Processing of fish and its derivatives.
- 10. Complementary areas**
- Breeding aquatic birds.
 - Breeding of animals for skins.
 - Sugar cane and willow cultivation.
- 11. Fishing production at the industrial level**
- Fish farming in dikes.
 - Breeding fish in captivity.
 - Breeding fish in aquarium.
- 12. Health**
- Preventive and curative techniques.
- 13. Technology and organization of fisheries**
- Specialization in fish production.
 - Size of the lake.
 - Economic problems of continuous fish storage.
 - Marketing activities in production plants.
 - Automation techniques.

This report is to show the wide variety of areas that can be developed in this field.

FISHING IN NATURAL WATERS

The significant part of our fish production takes place on agriculture farms, however fish production in natural waters still plays an important role even if it represents a small portion of the overall production. Its importance can be summarized as follows:

- Contributes to the variety of fish that are available for commercialization.
- A small investment can produce returns of fish of high nutritional value.
- Provides an economical source of nutrition.
- Protecting the fish has the added benefit of protecting the environment.
- Assures that waters are preserved in good conditions for exploitation and recreation.

FISH CULTIVATION (DIKES)

In the late 1800s, fish cultivation was considered important because at that time in Europe it was fashionable to produce several species. They were not difficult to

produce. Fish was also very cheap and was eaten by most of the population. The cultivation techniques were very simple and many people practised them successfully. The next move was to aquaculture in dikes along with artificial reproduction and its application at industrial levels.

Although Jacoby (German) first fertilized trouts in 1767, it was not until 1870 that trout eggs could be removed from the fish and stored.

In 1953 Jaczo (Hungary) hypolized carps successfully. In 1967 Antalfi and Tolg were the first to reproduce herbivorous fish in incubators of temperate water.

Recent developments have focused on policulture, which consists of the simultaneous breeding of various fish species with different meal and nutrition needs. The objective is efficient exploitation of the dikes environment.

AGRICULTURE AND AQUICULTURE

In Hungary, the aquiculture movement was started in the 1960s by agriculture cooperatives.

ADVANTAGES:

- a. To satisfy the demand for fish.
- b. The traditional ways of aquiculture don't require a large investment.
- c. Aquiculture farms in sweet water have good possibilities for complementary industries such as pork or bird dropping fertilizers.
- d. In some regions, through the aquiculture farms are more profitable than agriculture farms, thereby increasing the collective benefits.

DISADVANTAGES:

- a. The seasonal character of fish breeding and the complex activity of traditional aquiculture can create problems in distribution and marketing.
- b. The reproduction cycle takes take several years, this can create financial problems.
- c. Lack of professional knowledge and skimpy investment reduces productivity and can worsen marketing problems, even though modernization is relatively easy and inexpensive.
- d. Consumer demand may not be for the species which are the most economical to produce.
- e. Fish diseases and the protection of the environment potentially limit aquiculture production on a large scale basis.

All of the above underlines the fact that the fishery industry is a partner in environmental protection, and it is the fishermen who undertake this responsibility both for themselves and for the environment.

ARTISANAL FISH PROCESSING

*Dr. Tadayuki Kitanosono**

The aim of this lecture is to explain the use of some artisanal techniques for the elaboration of various types of fishery products, avoiding the use of machinery.

The main objective of this lecture is to promote the development of attitudes and skills on the part of the artisanal fishermen in the processes of conservation and protection of the environment, especially the hydro-biological resources.

With these techniques, it is possible to earn profits and to this end it is not necessary to employ costly raw materials and expensive fish such as red snapper, whose use would greatly cut into earnings.

DIFFERENCES BETWEEN ARTISANAL AND INDUSTRIAL TECHNIQUES

The fish used as raw materials are mostly: sardines, tuna and shark, which are otherwise not used to their full potential in Colombia.

The main difference between industrial and artisanal processing techniques is in terms of the quantity, due to the large processing capacity of industrial machinery.

In artisanal fisheries, once the techniques are learned and practised enough, products can be made that would be impossible to produce in the industrial setting.

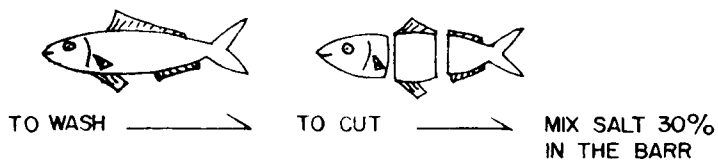
Artisans can produce products which are not made by industry. The production of an exclusive product is one way to compete effectively in the market. This creates demand and provides possibilities for future production on a larger scale.

The lecture goes on to explain how to make fish hamburger from tuna, sardines and shark. The basic recipe and process is very simple: wash and prepare the meat, blend the mixture, mold to the desired form, then refrigerate, package and sell.

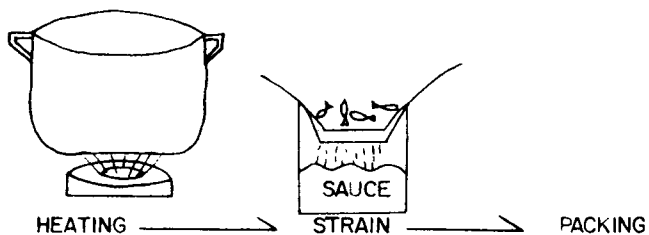
Some other artisanal recipes for fish product are tuna sweet and fried fish snack chips (chicharrón). Also popular are surimi products, which are made of pollock and other white fish. The most important thing in this lecture is the practical lesson on how to prepare fishery products the artisanal way, practising the recipes many times until the desired effect is achieved.

* *Japanese expert working with SENA, Buenaventura and Tuluá. Note: The complete text is found in the Spanish version.*

FISH SAUCE



MIX ONCE A DAY → MIX ONCE A WEEK → MIX ONCE A MONTH
7 DAYS WITH STICK FOR 3 MONTHS



THE IMPORTANCE OF FISH-MEAL AS A RAW PROTEIN

Dr. Sugawara Michihiro *

- a. The development of the fish-meal industry in Japan.
- b. The superiority of fish-meal as a high protein raw material.
- c. The establishing fish-meal plants in Colombia.
- d. Recommendations for use of small modern equipment for extracting and processing fish residues from inland and sea waters.

METHOD FOR DRYING FISH-MEAL

A. Drying by flame (Direct system)

Air Temperature 700-1.000 C

B. Drying by steam (Indirect system)

Steam Temperature 130-150 C

C. Characteristics Of Each System

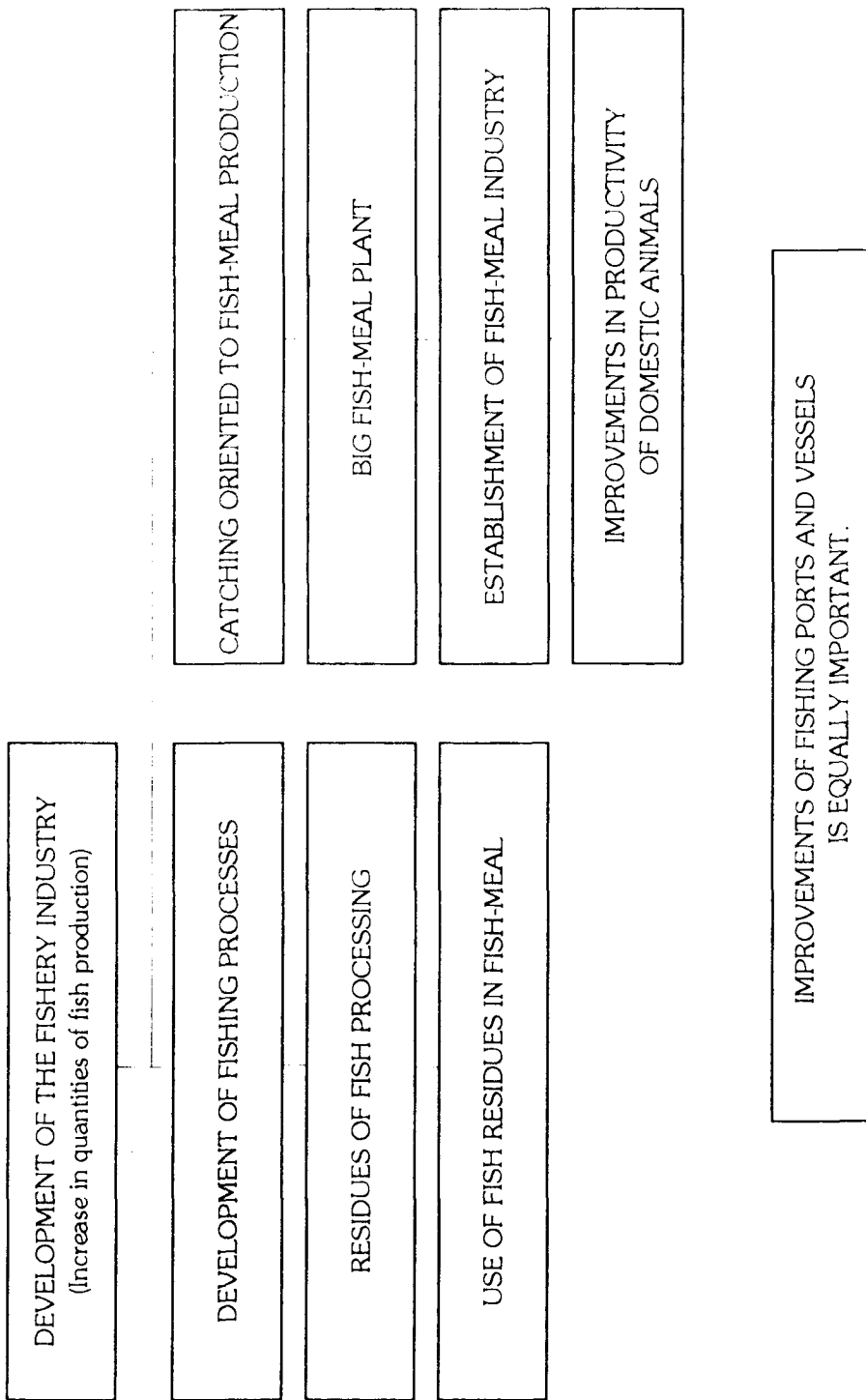
Simple easy small scale method to use fish residues as raw protein

Deposit all the residues in a basket, add water, boil and let cool.

1. All the residues are mixed with the ordinary animal feed and given to the pigs or chickens. The mixed food appears the same as the original, dry or liquid, depending on one's needs.
2. If the consumers object to fish oil floating on the surface, it can be skimmed off.
3. The liquid is separated from the solid. The solid is put out to dry in the shade, avoiding direct sunlight. Once dry the solid is ground finely and can be used as fish-meal.
4. The liquid is separated from the solid. It is evaporated and reduced to a concentrate then added to the solid and mixed well. The mixture is dried in the shade and finally ground. This product is called ARAKASU. It can be dried by thermal processes, but special care must be taken to avoid damage caused by excessive heating.

* *Japanese Fish Expert with JICA and Professor at the National University.*

RELATION BETWEEN THE FISHERY INDUSTRY AND FISH-MEAL



COMPARISON OF NUTRITIONAL COMPONENTS BETWEEN FISH-MEAL AND SOY FLOUR CAKE

A. NUTRITIONAL CONTENT

	RAW-PROTEIN %	CRUDE OIL	CRUDE FIBRE	CRUDE ASH	HUMIDITY	METABOLIC ENERGY KCAL/G
Fish-meal	66.5 ^b	9.2	0.5	16.2	7.3	2.98
Soy flour cake	6.3 ^a	1.3 ^c	5.0	6.1	11.8	2.39
Arakasu	52.5	11.8	0.8	23.9 ^d	8.4	2.42

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- a. The nutritional value of soy flour cake is the best among all the oil vegetable cakes.
- b. In the case of fish-meal, protein content reaches 70% or more because "stick water" is added.
- c. Extract.
- d. Arakasu is rich in bone and therefore a good source of phosphorus and calcium.

NUTRITIONAL COMPARISON BETWEEN FISH-MEAL AND SOYA FLOUR CAKE

B. ESSENTIAL AMINOACIDS

	MET %	CIS.	M · C	LIS	TRI.	CRUDE PROTEIN	METABOLIC ENERGY Kcal./g
Fish-meal	1.97	0.55	2.52	5.21	0.70	66.5	2.98
Soyflour cake	0.52	0.70	1.22	2.92	0.64	46.3	2.39
Arakasu	1.37	0.39	1.76	3.99	0.24	52.5	2.42

Methionin and cistin are sulphur-containing amino acids.

Fishmeal contains more protein and essential amino acids than soyflour cake, plus it has a higher caloric content. This is to say that fish-meal is a superior source of nutritional protein.

DISTRIBUTION AND CONSERVATION OF FISHERY PRODUCTS

Dr. Fukagawa Hajime *

Freshness is considered the most important factor in the process of marketing of fish products. Before formal lab tests and chemical assessment can be done to determine the fish's freshness, an empirical estimation must be made in order to sell the fish products.

In response to requests for a series of criteria for evaluating the freshness of fish, the Japanese government's Institute of Science and Technology undertook a study on the distribution of refrigerated fish products.

The study analyzed the distribution system in the country and made recommendations for the modernization of the system, including the "cold chain".

POSTHUMOUS CHANGES IN FISH

1. Rigor mortis and autolysis

The dead fish succumbs to rigor mortis and autolysis once the bacteria have begun the decomposition process.

Fishes generally decompose between two to three days after death at room temperature of 25 C.

The decomposition is arrested when the fish is frozen at temperatures below -20 C.

Rigor mortis is the stiffening of the muscles after death. The rapidity of onset and the duration vary according to several factors such as species, fishing methods, death conditions and the temperature.

The decomposition time is between 5 to 22 hours at room temperature.

Codfish takes the least time to decompose. The first stage of Rigor mortis is marked by the separation of the calcium from the phosphoric acid.

Observing the fish, we can see changes caused by the multiplication of bacteria and/or the trimetalamino process; two independent and unrelated processes. Therefore it is difficult for the fishermen to estimate freshness.

Let us consider the yellowtail and cod fish; after death but before the bacteria multiply, we can see that the muscles deteriorate without the presence of bacteria. It is necessary

* *Japanese expert with JICA, Valle del Cauca.*

to differentiate between the criteria for the freshness of fish in order to discriminate between muscles deterioration and decomposition caused by bacteria.

In my opinion the decision to investigate the latter through bio chemical methods will provide us with the correct definition of fish freshness acceptable among the fishermen and traders. It is advisable to freeze fish as soon as it is captured, in order to avoid temperature related transformations.

2. THE DISCOLOURATION OF THE CUTICLE

	CONSTRUCTION COST	PRODUCTIVITY
Direct	Inexpensive	High
Indirect	Costly	Low

After death the pigment cells in the fish cuticle discolor by deterioration of the pigments through oxidation and decomposition.

The discoloration speed varies according to the species. Generally speaking, red-fleshed species lose their color faster.

The fish cuticle colour has important implications for the market price, red-fleshed species are more valuable.

Enzymes similar to riboxides are responsible for discoloring the fish cuticle.

Oxidation is caused by air and can be prevented by covering the fish with special packing.

Discoloration in red-fleshed fish is caused by contraction of the cells and is aggravated by washing with fresh water. When octopus and squid are washed, the cells contract and the flesh takes on a white color.

The cell discoloration in red-flesh fish doesn't mean pigmentation changes but only physical changes. Therefore it is advisable to preserve the aforementioned species in cold sea water with 2-3% salt concentration.

3. FLESH DISCOLOURATION

Among the hard-boned species, are those of pink or red flesh like Salmon, Trout, Tuna, Bonito, Sardine.

Red-fleshed fish have higher concentrations of haemoglobin, the blood pigment. When these pigments are exposed to the air, they become gray in color. Salt accelerates this reaction.

In Japan, Tuna fish and Bonito are used as the raw material for "SASHIMI", whose value is set according to its red color.

Industry is currently developing methods of preventing discoloration, and at the same time freezing fish at -40 C.

Tuna and trout change color from pink to yellow because of grease oxidation.

For this reason, it is advisable to take preventive actions such as removing the gills from the fish.

CONSIDERATIONS

The quality of fish is linked to its freshness.

In Japan, there are several studies have been made on fish freshness but we prefer to consider this subject from practical experience. Another important factor is that all those studies of fish freshness were made from the bacteriological point of view without taking into account practical and replicable applications that can be applied in the workplace and varied environments.



Typical Colombian fisherman with his casting net.

INLAND WATER FISHERY ACTIVITIES

Dr. Toshida Shunji

1. WHAT IS A FISHERY ASSOCIATION COOPERATIVE?

The fishing rights and associations in Japan

In Japan there are fishing rights. Fishing rights are like agricultural landowning rights except that they cannot be private. All water surfaces are considered public property and are controlled by the cooperative association under the regulations of fishing rights.

Fishing rights can be divided into three categories: The fixed fishing rights, boundary fishing rights, and fishery cooperative rights.

All fishing rights are controlled exclusively by the cooperative associations, which are licensed by the respective administrative department. Amongst other responsibilities, this licence requires the association to assign a certain amount surface of water for fishery activities.

Each regional fishery association elects a local president.

Fishing rights are divided into inland areas and ocean areas. Those responsible for administering inland area rights are required to promote fish reproduction.

To obtain inland fishing rights the interested party must take responsibility for the following: setting limits on fishing times, the control of illicit fishing, the administration of preservation and safety of river and stocking the rivers with various fish species to avoid the exhaustion of natural resources. Japan has not the same abundant natural resources as Colombia, especially in the inland waters.

To achieve all the above mentioned, it is important to consider association and organization well as cooperation among the population as imperative to success.

Cooperation in inland waters can be divided into three points

- Cooperation is the requisite for production.
 - Cooperation in the circulation process.
 - Cooperation in the production process.
1. In production cooperative activities are undertaken to encourage reproduction, to administer the rivers, and to adequately maintain the necessary infrastructure for fish production.
 2. Cooperation in the circulation process strengthens the competitive market through

* *Japanese expert with JICA, CORPONOR, Cúcuta.*

unified norms and standards, quality control, quantities produced and speed of production.

3. Cooperation in the production process includes cooperative operations in the harbours, in transportation and cooperative use of machinery.

2. ACTIVITIES OF THE INLAND WATER FISHERY COOPERATIVE OF JAPAN

Stocking Ayu Fish in the Rivers

Ayu is the most valuable of inland fishes in Japan. Generally it is used as an indicator of environmental quality for being sensitive to water contamination.

In recent times Ayu has become one of the most important catches of the Japanese inland fishing industry. Fish farm cultivation helps to maintain young fishes in natural environments in order to be able to restock the rivers quickly. The economic benefits for the fishermen are directly dependant on the number of young fish released into the waters, calculated as a percentage of the total catch. This same method could be used in Colombia, not only through governmental institutions but with the help of all the fishermen's associations.

3. AQUICULTURE ACTIVITIES IN JAPAN BY COOPERATIVES

Eel production

The first prerequisite for Eel production is fresh, clean, warm water. For this reason it is cultivated in the Japanese south west coast of Pacific Ocean. The Chizuoka Fisheries Cooperative is located in that area and has been producing Eel for more that 100 years. The organization and administration of Chizuoka Cooperative is divided into divisions, one of which is responsible for water quality control and additives. Another division is in charge of Eel marketing. They have a well-stocked laboratory for the control of fish diseases and for teaching and promoting the use of technology. All Eel fishing rights are granted by the association.

4. AQUICULTURE ACTIVITIES IN COLOMBIA

Under the auspices of the National Corporation of the North -CORPONOR, I am in charge of promoting an inland water fish production project. The first step consists of creating fish consumption habits among the populations and building fish cultivation ponds in small towns.

The project intends to build 40 ponds in hopes of increasing the per capita fish consumption to an average of 4.5 Kg per person in Colombia. Another objective is the creation of a fishery cooperative for marketing the products but so far that cannot be done because the production hasn't reached the minimum quantities necessary for

CLOSING ADDRESS

“... THERE IS GREAT POTENTIAL FOR COLOMBIAN FISHERIES ...”

*Dr. Antal Csoma **

The ODA seminar has come to its end. We were optimistic when we started the work because our common interest is fish; catching, marketing and increasing production quantities. Regardless of where in the world the fishermen live, they have the same aims.

There is an ancient oriental saying, “If you don’t want your people to starve, don’t give them fish but teach them how to fish.”

It is a very wise saying and guideline for how to improve one’s life. In order to improve our standard of living, we have to produce more, market our products better and especially cooperate more and organize our work.

I don’t like to refer to my opening address emphasizing the ever increasing role of the fisheries cooperatives within the national economies by the year 2000. Fish can provide the basis for healthy nutrition. This has been true for several thousand years and will be true for the future as well.

With the aim of promoting cooperatives in Colombia, the seminar was convened by the ICA Fisheries Committee and organized by DANCOOP and ANPAC. On behalf of all of us, I would like to thank the Japanese government for sponsoring this seminar through the ICA Fisheries Committee. In the name of the ICA Fisheries Committee I would also like to thank all the lecturers who shared their experiences with you. We particularly appreciated the contribution of JICA for the way their approach focused attention on practical experiences.

The lecturers’ topics were selected with great care to meet the basic objective, namely the mobilization and development of human resources through improving the fishermen’s knowledge. The great number of questions proved that the topics were interesting and timely for our public.

Availing myself of this opportunity -both in my capacity as a lecturer and as a representative of the Hungarian Fishery Cooperative- I would like to thank you for your attention and to lead the way for Hungarian fishermen to cooperate in development issues with you. On the basis of what I have heard and seen, I can heartily declare that there is a great potential in the Colombian fisheries industry.

* *Vice-chairman of the ICA Fisheries Committee.*

I express my thanks for the tremendous work by DANCOOP and ANPAC put into organizing the seminar, providing excellent facilities both for the theoretic work and for the field-trip.

Thanks for your attention, discipline and interest which have contributed to the success of this seminar.

I very much enjoyed the Colombian hospitality and appreciated the open and friendly discussions.

I am convinced that all of us leave as friends and that we'll have the chance to see each other again.

"Have a good fishermen's luck"

Thank you.



Artisanal fishing boats of Cartagena.

CONCLUSIONS

These conclusions are based on the issues signalled as important by both the lecturers and the participants, main conclusions are as follows:

1. Colombia has enacted to contribute to the establishment of appropriate economic bases in a useful way.
2. INPA (National Institute of Fishery) will act according to int constitution and work to strengthen cooperatives in order to increase productivity and improve the fishermen's income.
3. Fishermen must identify their basic needs in order to be aware of the advantages of cooperation.
4. It is important for the fishermen to organize themselves in order to overcome their marginal status and not be exploited by middlemen.
5. Fishery cooperatives need financial assistance to work at an appropriate scale of business operation.
6. The role of the government is to provide the basic infrastructure. Both the fishermen and those who are involved in running the cooperatives need education and training in business operations cooperative management. Also the government needs to train its functionaries who work with the fishery sector to be aware of the needs of the cooperatives and their members.
7. Fisher technology in small Colombian fishing communities needs to be completely overhauled in order to increase production and improve processing and freezing skills so that the quality of the product will be better and it will fetch a better price.
8. Fish consumption habits among Colombians need to be increased and new markets abroad, especially in the Latin American countries, need to be investigated.
9. From the marketing experience of Japanese fishery cooperatives, Colombian fishermen can learn the importance of fishery associations and federations in their role as intermediary between the producer and the wholesaler.
10. In order to develop the fishery industry, it is necessary to have certain conditions such as:
 - Stable standard of living (clothing, food, housing, safety, social welfare, etc.)
 - Adequate national infrastructure (roads, ports, harbours, water supply, education, environmental conditions).
 - Resources
 - Fishing techniques
 - Governmental support, including financial assistance.
11. To be successful in fisheries marketing, the following conditions are necessary:

Good prices.

Reliable buyers (Common criteria for selling by the fishermen), joint marketing for selling the products.

Goods inventory and transportation.

12. The Hungarian lecturer pointed out the possibility of making the most of Colombia's advantageous natural conditions, amenable to the production of high quality fish with a minimum of investment.

13. From the Japanese expert's lecture dealt with the importance of freshness and quick freezing techniques which are indispensable to assure good marketing for fishery products.

14. The fish freezing techniques mentioned above and artisanal processing methods are both available to the small scale fishery operation.

15. The elaboration of products which are not made by big industry is the way for artisanal fishermen to gain entrance into the market.

16. Fishery organizations must work together with the fishing communities in order to develop innovative new ways of producing and succeed in the market.

17. The Ministry of Agriculture - INPA's lecture was opportune in its contents and provokes us to question ANPAC's role in relation to the Fisheries Law's regulations.

18. Field trip

It was interesting to note that although PESTOLU was originally an organization for the artisanal fishermen of Tolu, its orientation changed to become more concerned with bigger business, neglecting the local fishermen's needs. Despite this fact, it remains an example of cooperative enterprise.

19. Artisanal fishermen have to be prepared for the imminent rise of technology. Establishing some medium scale enterprises would allow the fishermen to take advantage of these developments.

20. The precooperative "EL CARDUMEN" is an example for all the fishermen because it is well-organized and its marketing allows them to deal in more than 4 million Colombian pesos monthly.

RECOMMENDATIONS

RECOMMENDATIONS OF THE MINISTRY OF AGRICULTURE

Recently in Colombia there have been important changes in the marketing and catching systems for artisanal fisheries. Fishermen are motivated to catch fish not only for their own consumption but to sell. This is because of the existence of organizational structures which gradually have allowed an appropriate development of the Colombian artisanal fisheries.

The demand for fishery products is increasing daily and the persistent problems in production and commercialization are reason enough for turning fishery organizations into cooperatives. This is being done with the help of the National Service of Education (SENA) and the Ministry of Agriculture among others.

With adequate administrative support from fishery cooperatives, fishermen can improve their socio-economic standard of living.

As well, by using new techniques, the artisanal fisheries in Colombia can generate more income. Fisheries committees in small towns need to receive training and assistance in technical aspects and administration and general guidance in the advantages of forming cooperatives.

The success of fisheries cooperatives is based on good organization and administration in accounting matters and especially through active participation by the fishermen. The administration is extremely important, not only because on it depends all production, technology and personnel issues, but because it forms the basis for the cooperative's general identity.

RECOMMENDATIONS BY ATLANTIC FISHERMEN

To create a financial organism which supports fisheries cooperatives.

That ANPAC create a consulting and advising division available to all fishermen, associated members and other independent organisms.

To found a fishing school for fishermen's children.

DANCOOP and the other governmental institutions that deal with the development of fisheries in Colombia, must give adequate assistance and permanent training to the fishermen in administering the business aspects of the trade.

The Colombian government should clarify its policies towards fishery sector, avoiding overlapping responsibilities with other institutions working with hydrobiological resources.

The Rural Development Integration (DRI), as an organism which coordinates the CESP strategy, must allow fishermen to have free access to imported equipment.

There is need for more efficient dissemination of information related to National Fisheries events in order to participate fully.

RECOMMENDATIONS FROM THE SAN ANDRES AND PROVIDENCE ISLANDS

Fishermen from every region must form cooperatives, realizing that cooperativism is the future of the country, as has happened in other countries such as Canada, Spain and Costa Rica.

ANPAC's duties should be the strengthening of cooperativism among all fishermen, based upon solidarity, integration and training.

ANPAC's central office should be located anywhere on our Coasts and not in Bogotá. ANPAC must stop its excessive paternalism towards the cooperatives which is damaging to the overall objectives.

ANPAC should facilitate the acquisition of the Navigation Card for fishing rights for its members.

RECOMMENDATIONS FROM THE PACIFIC COAST

DANCOOP must host seminars and training for all cooperative members in order to promote and strengthen the cooperative movement in the country.

There is need for fishermen to form cooperatives because this way of organization has been shown to be successful in other countries. There is need for ANPAC to support cooperativism and

adopt a clear position with respect to the problems that fishermen face in this country.

There is an urgent need for training and assistance, especially in fishing techniques, processing and marketing.

RECOMMENDATIONS FROM INLAND WATER FISHERIES

Fishermen have to participate on the committees and in elaborating the reports and conclusions on the reform of the Fisheries Law, especially with respect to inland water matters.

Colombian government has to update its fishery policies regarding production and marketing by private enterprises and mixed economies; technical assistance and fishermen's education, providing financial assistance so that all may benefit from the programs.

That the CESPAS Strategy include all the fishery regions, especially the inland water fisheries from the national territories like the Amazon, Arauca, Orinoquia, etc.

That government fishery policies make provisions to deal with the contaminations of waters by industries and the desiccation of marshes. It is important to host national fisheries seminars at least every six months.

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"Law 13 of 1990" Dr. Marta Bernal	Ministry of Agriculture	Industrial Fishing Boss
"CESPA national strategy for small scale fishery centers" Dr. Arturo Moncaleano	Fondo Desarrollo Rural Integrado - DRI	CESPA Coordinator
"Fisheries cooperatives in Colombia" Dr. Haydee Marín Ordoñez	DANCOOP-Departamento Administrativo Nacional de Coop.	Planning and Development Division
"Social security and the artisanal fisherman" Dr. Alberto Mendoza	Consultor ANPAC	ANPAC Advisor
"The marketing of fishery products in Colombia" Dr. Ramiro Tafur	COPESCOL - Compañía Pesquera Colombiana	Director
"The marketing business of fishery cooperatives in Japan" Dr. Noboru Koreeda	Federación Cooperativas Pesqueras de Kogoshima	Director
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