

## UNA COMUNIDAD RURAL Y EL DESARROLLO DE LA PESCA: EN EL CASO DE COLORADO DE ABANGARES\*

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### RESUMEN

A finales de 1970 varias cooperativas pesqueras fueron creadas en comunidades alrededor del Golfo de Nicoya, con el estímulo y apoyo de agencias internacionales e instituciones públicas de Costa Rica. Las cooperativas fueron diseñadas para promover el desarrollo y servir como vehículos para mejorar las condiciones socioeconómicas entre los pescadores artesanales. Tales cooperativas no han tenido mucho éxito. Paralelamente, otras cooperativas que fueron establecidas por iniciativa del sector privado se han consolidado y son actualmente prósperas organizaciones.

Esta investigación examina los esfuerzos para desarrollar una comunidad -Colorado de Abangares- a través del establecimiento de dos cooperativas -una de

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pescadores y otra de productores de sal. La asistencia previa en desarrollar las cooperativas es evaluada y las características socioeconómicas de la comunidad son analizadas en relación con las actividades de dichas cooperativas.

La comunidad de Colorado de Abangares es considerada como representativa de las comunidades pesqueras que se encuentran en el litoral del Golfo de Nicoya, y como ejemplo de los esfuerzos por desarrollar las cooperativas pesqueras de esta región. Colorado fue seleccionada porque ha sido incluida en programas llevados a cabo por instituciones nacionales e internacionales, con el objeto de organizar a pescadores migrantes de la zona y porque tiene una cooperativa formada por pescadores artesanales y recolectores de conchas.

En primer lugar, se hará un análisis de la comunidad tomando en cuenta los siguientes aspectos:

- a. Actividades económicas más importantes.
- b. Estructura socioeconómica.

Luego se hará un análisis comparativo entre las dos cooperativas existentes en esta comunidad; mostrando como difieren sus estructuras organizativas y el impacto que estas han ocasionado en el desarrollo de la comunidad. Finalmente, se examinan las razones por las cuales una de las cooperativas ha tenido un funcionamiento exitoso y la otra a pesar de la ayuda recibida de instituciones nacionales e internacionales, ha tenido un pobre desarrollo. A pesar de los fracasos sufridos en intentos previos para desarrollar la pesca en pequeña escala en Costa Rica, las estrategias empleadas en los últimos proyectos han sido prácticamente las mismas. El caso de la Cooperativa de Pesca y Concha de Colorado-COOCOPECO, nos enseña que los programas de capacitación y asesoría llevados a cabo por diferentes instituciones en las comunidades pesqueras no han sido cuidadosamente planeados antes de ser implementados. El mercadeo, por ejemplo uno de los problemas más importantes de COOCOPECO, no ha sido tratado apropiadamente. Para desarrollar la cooperativa, el foco de atención se ha concentrado en la producción de los recursos marinos; sin embargo no se ha realizado un estudio serio y confiable de los sistemas de mercadeo de estos productos.

El análisis de la Cooperativa de Salineros de Colorado-COONAPROSAL, ayuda a dilucidar algunos de los problemas básicos de COOCOPECO. El apoyo que COONAPROSAL ha recibido de la comunidad y el éxito alcanzado son debido a la influencia de empresarios privados. La participación del sector privado en la cooperativa ha sido un factor determinante en su organización interna y fundamental en su relación con el resto de la comunidad. En contraste, COOCOPECO se ha caracterizado por ser una organización inmensamente burocrática. El personal de las instituciones que han participado en los programas de capacitación y asesoría no han prestado suficiente atención a las demás organizaciones de la comunidad, y no han podido tratar eficientemente los problemas existentes en la cooperativa.



La experiencia de los pescadores de Colorado de Abangares resulta muy valiosa para poder entender el impacto ocasionado por los aspectos que intervienen en el cambio social y el desarrollo cooperativo entre los pescadores artesanales del Golfo de Nicoya.

## SUMMARY

In the late 1970's, fisheries cooperatives were formed in communities around the Gulf of Nicoya with the encouragement and support of international agencies and public institutions of Costa Rica. The cooperatives were designed to promote development and serve as a vehicle for improving socioeconomic conditions among small-scale fishermen. Such cooperatives have not been very successful. At the same time, cooperatives established through local private efforts have succeeded.

This research examines the efforts to develop the -community of Colorado de Abangares- through the establishment of two cooperatives of fish and salt producers. The assistance provided in the present cooperative development effort is evaluated and the socioeconomic characteristics of the community are analyzed in relationship to the cooperative's activities.

## RESUME

A la fin des années 70 fut lancé un programme public, avec l'appui d'agences internationales, de regroupement des artisans-pecheurs du Golfe de Nicoya, en coopératives; ceci en vue d'améliorer leurs conditions socio-économiques et assurer le développement de leurs communautés.

Le bilan aujourd'hui: les coopératives impulsées par les pouvoirs publics ont échoué, tandis que celles établies avec l'appui du secteur privé ont réussi.

Cetravail présente le cas d'une communauté: Colorado de Abangares où deux coopératives furent créées (l'une pour la pêche, l'autre pour la production de sel). Les résultats sont complètes pour une analyse des caractéristiques socio-économiques des membres de la communauté, en fonction de leur appartenance aux coopératives.

## INTRODUCTION

In both industrialized and underdeveloped nations, efforts have been made to improve socio-economic conditions among small scale fishermen (Acheson, 1981). In most fisheries development efforts, cooperatives - which are associations, enterprises, or organizations owned by and operated for the benefit of those using its services - are perceived as integrative devices and tools for progress in the communities in which they are implemented. They are initiated most frequently in the rural communities of poor nations (Borda, 1971).



This study focuses on social change and cooperative development among small-scale fishermen in Colorado de Abangares, Costa Rica. The objectives of this research are the analysis of the organization of Colorado's sea-shell and fishing cooperative COOCOPECO, and the evaluation of the salt cooperative CONAPROSAL.

Colorado de Abangares is examined as representative of the fishing communities around the Gulf of Nicoya, and as an example of rural cooperative development. Colorado was selected because it has been included in programs to organize the migrant fishermen of the area and it is a cooperative formed by small-scale fishermen and sea-shell collectors.

A consideration of the experiences of Colorado's fishermen is necessary to understand the impact of different aspects of social change and cooperative development among small-scale fishermen of the Gulf of Nicoya. Through the insights gained, the impact of the fishing activity on the community's economic development can be more thoroughly assessed.

## 1. METHODOLOGY

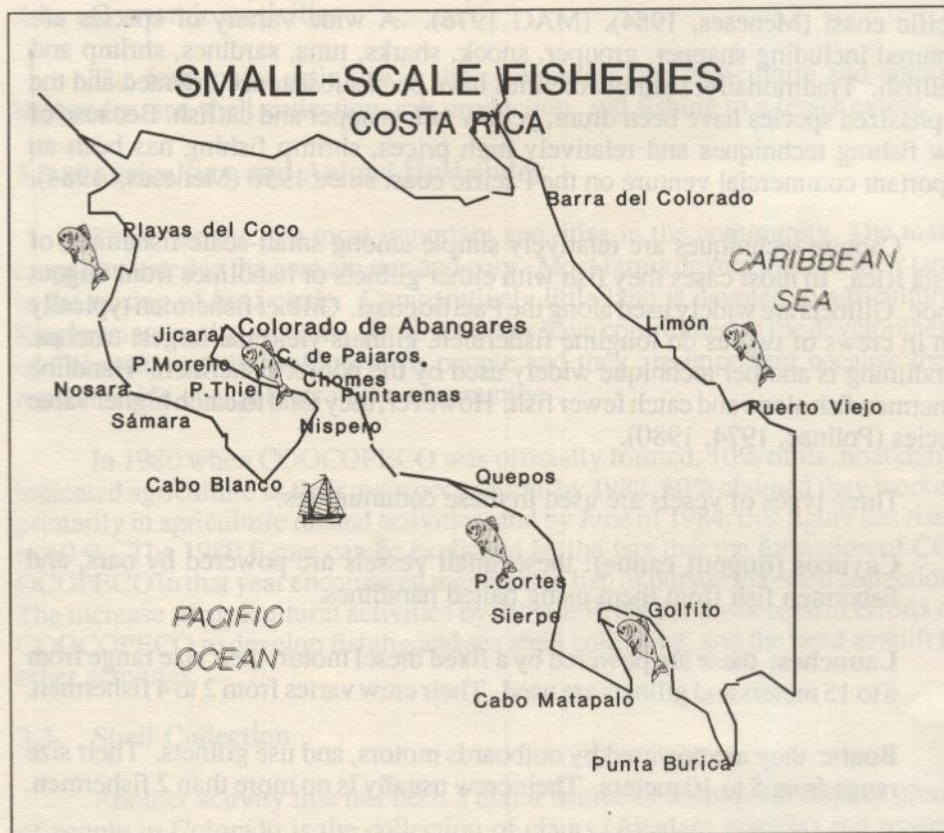
This research is based on data collected in four different surveys during the period of 1980-84 which were conducted in Colorado de Abangares and among the members of the *Cooperativa de Concha y Pesca de Colorado (COOCOPECO)*. Two of the surveys were conducted by a research group of the National University of Costa Rica (*Universidad Nacional*). The third was done by the Costa Rican National Census Bureau, and the last one was conducted by the author.

The first survey was conducted in 1980, just a few months before COOCOPECO was formed. This survey was designed primarily to collect socio-economic information from all household heads in Colorado. Based on the 1980 survey, The National University research team administered a restructured survey to the same population in 1982. As part of the 1984 Costa Rican National Census, data for Colorado was collected between June 16-21.

The fourth survey was conducted in two stages, and was done over a four-month period from May to August 1984. In the first stage, data on the cooperative and the community were collected with participant observation and key informant interview techniques (Edgerton and Langness 1974). This was followed with an open-ended survey focused on a) social environmental issues, such as the relationship of local institutions and resources to traditional techniques of borrowing, leasing, renting, and occupation structure of the community, and b) ideological considerations such as attitudes, beliefs and values concerning aspects of cooperative organization.

In the second stage of the fourth research a structured survey was administered to a population composed of 35 household heads of the community, it focused on the economic, technical and infrastructural factors related to fishing, sea-shell collection and marketing. The objectives of this survey were to: a) define the types of problems households presently encounter and develop an overview of how their





problems can be addressed; a) develop information on resources exploitation; b) technological data, such as information on resources exploitation, c) technological data, such as description of capture methods, potential and use, processing, distribution gear and techniques.

## 2. FISHING ACTIVITIES IN COSTA RICA

On the Atlantic coast of Costa Rica, fisheries development has been modest because of the relative scarcity of resources. In 1984 there were approximately 200 people engaged in fishing on the coast of the Caribbean province of Limon (Censos Nacionales 1984). The typical fishing vessel used in the area is the **cayuco** (dugout canoe) with an outboard motor. Equipment consists of a homemade net, handlines and spears (Bravo, 1976).

There are no commercial fishing activities in the inland water of the country. Fresh water fish are scarce and laws limit catches to protect inland species (Hurtado, 1984). Aquaculture is in its infancy, although there are some experimental programs using fresh water species. Some private commercial operations also engage in the farming of shrimp in salt water estuaries.

In Costa Rica, fishing activities have been centered primarily along the



Pacific coast (Meneses, 1984). (MAG 1976). A wide variety of species are captured including snapper, grouper, snook, sharks, tuna, sardines, shrimp and shellfish. Traditionally, fishing activities have been subsistence oriented and the emphasized species have been drum, yellow tail, snapper and catfish. Because of new fishing techniques and relatively high prices, shrimp fishing has been an important commercial venture on the Pacific coast since 1950 (Meneses, 1984).

Capture techniques are relatively simple among small-scale fishermen of Costa Rica. In most cases they fish with either gillnets or handlines from dugout canoe. Gillnets are widely used along the Pacific coast. Gillnet fishermen typically fish in crews of two as do longline fishermen, gillnets yield the largest catches. Handlining is another technique widely used by the poorer fishermen. Handline fishermen fish alone and catch fewer fish. However, they tend to catch higher value species (Pollnac, 1974, 1980).

Three types of vessels are used in these communities:

1. **Cayucos (dugout canoe):** these small vessels are powered by oars, and fishermen fish from them using baited handlines.
2. **Launches:** these are powered by a fixed diesel motor, their size range from 6 to 15 meters and gillnets are used. Their crew varies from 2 to 4 fishermen.
3. **Boats:** they are powered by outboards motors, and use gillnets. Their size range from 5 to 10 meters. Their crew usually is no more than 2 fishermen.

Marketing of marine resources has been accomplished through two different groups of middlemen. Primary buyers are the ones that buy the fish from the fishermen at the port or beach site.

Their facilities normally consist of a small ice chest and/or freezer, so they usually purchase small and selected quantities of fish.

Truckers are wholesalers who buy fish from the primary buyers or directly from the fishermen and transport them to the retail outlets which sell fish only, and to supermarkets in the Central Valley. They travel to different fishing communities along the Pacific coast purchasing fish.

### 3. THE COMMUNITY OF COLORADO DE ABANGARES

First, the community will be described in terms of its:

- a) Major economic activities.
- b) Socioeconomic structure Second, an analysis will be presented which compares the structure and organization of the two cooperatives and shows how they have differed in their impact on local community development. Finally, the reasons for the success of one cooperative and the failure of the other will be explored.



### 3.1 Economic Activities

The four major activities in the community are: agriculture and animal husbandry, sea-shell collection, salt production, and fishing to a lesser extent.

### 3.2 Agriculture and Animal Husbandry

These are the two most important activities in the community. The main crops harvested in the area are rice and corn. Most farms devote most of their land to the raising of beef cattle. Comparatively little land is devoted to agriculture. Employment is also seasonal. Both activities have contributed to the development of Colorado and the welfare of its people and they are important because they remain stable occupations in the community.

In 1980 when COOCOPECO was officially formed, 10% of its inhabitants indicated agriculture as their main occupation, by 1982, 50% claimed they worked primarily in agriculture related activities, and by June of 1984, this figure has risen to 60%. The 1980 figure can be explained by the fact that the formation of COOCOPECO in that year encouraged members to fish or pursue sea-shell collection. The increase of agricultural activities by 1984 reflects the unsuccessful efforts of COOCOPECO to develop fishing and sea shell collecting, and the need to shift to other activities.

### 3.3 Shell Collection

Another activity that has been a major source of income for a small group of people in Colorado is the collection of clams (*Anadara grandis*) and oysters (*Ostrea app*) shells. This activity has been an important factor in the development of COOCOPECO because the cooperative was created through the efforts of sea-shell collectors. One of the main projects in developing the sea-shell industry began the first half of 1980 and the cooperative has remained in operation thanks to the sea-shell sales.

Marketing of sea-shell in Colorado is done in two ways. Approximately every two weeks, a truck load of shells is picked up in Colorado by middlemen or the cooperative members rent a truck and transport the shell to San Jose. Higher profits result when shells are sold in San Jose rather than to local middlemen. For example, in 1984 COOCOPECO was selling clams for 100 colones per quintal to middlemen. In San Jose clam and oyster shells were sold for 195 and 170 colones per quintal respectively. To increase sea-shell production and profits, COOCOPECO bought a truck when they received funds from a Canadian institution for development (ACDI).

In January of 1984, when the new effort began. Ten members of the cooperative were collecting shells. On the average they collect five **quintales** per working day, and are able to work 14 consecutive days a month or every 13 high tides. As of July 1984, sea-shell sales were virtually paralyzed because COOCOPECO'S traditional customers stopped buying the shells. The truckers argued that to continue buying shell, the cooperative must label the products providing a



detailed chemical analysis. Moreover, the cooperative was unable to find new markets for its shells.

In summary, earlier efforts by **Junta de Vecinos** (a group of shell collectors), **COONAPROSAL** (Cooperativa de Productores de Sal), and later by **COOCOPECO** to develop sea-shell industry have been unsuccessful. The main obstacles in those efforts have been the marketing systems and the lack of appropriate infrastructure.

### 3.4 Shellfish Collection

Another activity that has complimented the collection of sea-shell is the capture and marketing of live shell-fish as a sea-food. When **COOCOPECO** was formed, nine people were dedicated to the capture of shellfish such as hard clams or **pianguas** (*Protothaca* spp), and clams or **chucheca** (*Anadara grandis*) (Facultad de Ciencias 1980). Two years later shell-fish marketing had practically disappeared. Currently, only one person claimed to capture **pianguas** and the capture of **chuchecas** is now prohibited by the Costa Rican law because this specie is endangered.

### 3.5 Salt Production

In Costa Rica, salt production has been the primary activity of some coastal communities (including Colorado) of the province of Guanacaste. Due to the seasonality of fishing, fishermen often supplement their income with salt production activities. Salt production takes place in the dry season and fishing increases in the wet season. In the last 30 years salt production has increased gradually in the communities of Santa Elena Bay and the Gulf of Nicoya.

Colorado de Abangares has been one of the major centers for salt production in Costa Rica. According to old residents in the area, the production of salt decreased notably in the 50's and 60's. Fishing as a subsistence activity increased during the same period.

In the early 70's and thanks to the efforts of local entrepreneurs, small salt producers, community leaders (including fishermen) and the sponsorship of the National Council of Cooperative Development (**FEDECOOP**), a salt cooperative was established in Colorado. The cooperative -**COONAPROSAL** was officially opened in March of 1974 and has been very successful. **COONAPROSAL** has grown rapidly in membership, and production.

Salt production is the only marine-related activity that is of major economic importance for the entire community of Colorado. This industry has brought people to Colorado and salt is the major item of trade. Salt production has increased gradually since the cooperative was created. As of July 1984, the cooperative was producing 70% of the salt consumed in Costa Rica. Its physical facilities have expanded especially in the last four years.

The salt cooperative (**COONAPROSAL R.L.**) is the most important and in-



fluent organization in the community because it provides jobs for most of Colorado's residents during the dry season. It also plays an important role. For example, to promote greater community integration. COONAPROSAL has lobbied among religious institutions to bring religious services to the community. As a result, the Sisters of Santa Ana came to Colorado, established a congregation, and built a church in 1977.

In summary, the creation of COONAPROSAL has been an important factor in the development of Colorado and has strong ties to the development of fishing activities, and the sea-shell industry.

### **3.6 Fishing Activities**

Despite the fact that Colorado is a coastal community fishing has not been a primary factor in its development. Commercial fishing has decreased in the last few years. Fishing continues to be supplemental subsistence activity and a source of income for a few residents. In the survey conducted by the National University in 1980, one of the questions asked of Colorado's population was "what is your main occupation?", only eight out of the total 115 household heads interviewed considered fishing to be their primary occupation (defined as currently fishing and having been a fisherman for more than a five years).

The 1984 National Census Bureau figures indicated that in the entire community only five persons classified themselves as full-time fishermen. Among COOCOPECO members only two claimed to be full-time fishermen and 24 were either part-time or occasional fishermen.

In the past, fish was marketed in two ways. Some of the "fishermen" traveled to Costa de Pajaros or Manzanillo twice a week to sell their catches to Coopemontecillos. Part time and occasional fishermen, those who owned just a handline, sold their catches in Colorado or simply fished for domestic consumption.

However, after the cooperative bought a truck most of the fishermen that are members of COOCOPECO sell their fish to the cooperative. Once a week COOCOPECO'S truck travels to San Jose to deliver the product to EXPUN-Exportadora Puntarenense.

Few COOCOPECO members own much fishing equipment. Most of the existing boats and equipment belongs to the cooperative; through the financing of \$4,829,907 from ACDI, this cooperative has been able to obtain vessels, outboard motors, fishing equipment, and a truck for transporting the fish. This financial assistance made it possible for the cooperative to initiate marketing and processing operations from its modest physical plant. In general the equipment is in poor condition and usually takes too long to get spare parts or to repair broken equipment.

### **3.7 Division of Labor**

Due to the limited availability of work opportunities in Colorado, males are



the primary wage earners. Most adult males earn their income in agriculture, salt and sea-shell production and fishing activities. In general, women take care of children and the household chores, although a few women work in the salt cooperative or help in washing and cleaning sea-shells. Most children attend the elementary school and help in fishing and sea-shell activities when not in school. Most males over 15 do not attend school, instead, they work for wages. Young females help around the house and usually do not work for wages.

### **Income**

An evaluation of income improvement among cooperative members provides one measure of COOCOPECO'S success in providing services to its members the last four years. To the question "What benefits have you received for being a member of COOCOPECO" 75% indicated that in four years they had not received any help or benefit from the COOCOPECO. Another 50% claimed that their average income had declined after they became members of the cooperative. Only 7% felt they had received any kind of help from COOCOPECO. Moreover 60% of the members argued that the cooperative often does not have money to pay for shells or fish.

Unemployment has not been adequately addressed by personal involved in Colorado's community development. Seasonal activities are inaccurately evaluated, because when surveys are conducted in the community, people classified themselves in one of the major seasonal activities. As a result of this approach most studies done in the past do not have accurate estimates on unemployment in the community. Erroneously, seasonal activities have not been properly evaluated. They have been considered to be a permanent source of unemployment.

### **3.8 Coocopeco**

To evaluate COOCOPECO'S success as a cooperative, we must analyze what it has done in the last five years. Its most important activities are fishing and sea-shell collection. These activities will be examined in terms of cooperative participation, income improvement, marketing of marine resources, and economic assistance.

Traditionally, fishing and sea-shell collection are done primarily by males. As a consequence of these two male oriented activities, most COOCOPECO members are men. When the cooperative was founded, there were 24 men and four women. In 1984, there were 28 men and seven women. Moreover, all full-time or part-time fishermen are males. Female participation is limited to shell fish activities.

COOCOPECO started with 28 participants in 1980. Membership increased to 35 in 1982. By 1984, 17 of the original members had left the cooperative, but they were replaced by other people. Some of the members have not been actively involved, Neither fishing or collecting sea shells. This is important because the development the cooperative is strongly influenced by the participation of its



members. For example, when meetings are held decisions are in the hands of the same small group of members.

### 3.9 Coonaprosal

To evaluate COONAPROSAL'S development and its role in the community's development, we must analyze what it has done in the last ten years. This cooperative's success can be evaluated in terms of member participation salt production and its participation in Colorado's development.

COONAPROSAL is not only the major employer in the community, but it is also the institution that pays the highest salaries. Furthermore, all employees receive social security benefits and have all the social guarantees provided by Costa Rican labor laws.

COONAPROSAL and COOCOPECO were created through two different efforts. COONAPROSAL has been linked to local resident's initiatives, while COOCOPECO originated due to external encouragement. In 1978 both organizations were linked together for six months. However, the special characteristics of the members of both groups, and different managerial orientations determined the unsuccessful outcome of this attempt to unify these cooperatives.

## 4. THE NATIONAL UNIVERSITY AND COOCOPECO

The National University of Costa Rica (Universidad Nacional) has played a key role in COOCOPECO'S fisheries and sea-shell development efforts during the past seven years. As part of its extension programs, two different groups have worked in Colorado.

The objective of the first group was to improve "education and conscious awareness" among fisherman and sea-shell collectors. A second group began a new program with COOCOPECO in 1981. This group has actively participated in COOCOPECO'S development. International financial assistance was approved thanks to the efforts of this group.

A proposal was submitted to **La Societe de Development International Desjardins (SDID)** to get its support and to encourage **Agence Canadiense de Development International (ACDI)** to provide COOCOPECO with financial assistance (Facultad de Ciencias 1984). The money was used to reinforce the program started by the National University and to develop the fishing and sea-shell activities through COOCOPECO.

The project was supposed to start in January 1984 and to be carried on until December 1986. Some structural and organizational changes were already made. However, the money was given to COOCOPECO in November of 1984. Among the requirements established by the S.D.I.D. for financial assistance to COOCOPECO was that the cooperative had a new manager and that the National University must provide technical and organizational assistance to the cooperative.



The objectives of the National University advising team were to better organize fishing communities, improve services and infrastructure, and to provide frameworks within which small-scale fishermen could improve their economic situation and enhance the quality of their lives. The main purpose of this program was to create a model to be implemented in other fishing communities along the Nicoya Gulf (Facultad de Ciencias, 1982).

## 5. CONCLUSION

A frequent tragedy of development efforts in Third World nations has been the outcome of the assistance provided by the development projects. These programs have often disrupted rural communities while failing to provide aid.

COOCOPECO'S poor performance and isolation from the rest of the community has also caused Colorado's other residents to consider the cooperative and its members as troublesome and inefficient. The fact that most COOCOPECO'S members are immigrants to Colorado has further exacerbated their isolation from the community.

In spite of the failure of previous efforts to develop small-scale fisheries, the approaches employed in recent attempts have not changed. The case of COOCOPECO suggested that development programs in fishing communities have not been carefully planned before they are implemented. Marketing, for example, one of the cooperative's most important problems, has not been addressed. The main focus of development efforts has been the production of marketable marine resources. Absolutely, no study of the marketing system has been undertaken.

In this research, the analysis of Colorado's salt cooperative COONAPROSAL helps underscore some of COOCOPECO'S basic problems. The support COONAPROSAL has received from the community and its success are due to the influences of the private sector. Private sector participation has been a great asset to both its internal operation and its good community relations. COOCOPECO, contrast, has been caught in the middle of bureaucratic organizations. Outside development personnel have not been sufficiently sensitive to the surrounding community or the needs of cooperative members and have been unable to deal effectively with the problems the cooperative has encountered.

In their development, COONAPROSAL and COOCOPECO have encountered nearly identical problems. Each cooperatives had similar infrastructural difficulties such as lack of electricity and water, means of transportation, and the search of a market for its products. Differences in the approaches to the development of the two cooperatives have been the major factors in the failure of COOCOPECO, and the success of COONAPROSAL to deal effectively with very similar problems.

Important lessons can be learned from this case study and others like it in which successful and unsuccessful cooperative development efforts occur under



essentially the same conditions. It is always possible to suggest a list of reasons why a cooperative development effort failed. The case of Colorado suggests that asking whether cooperatives are appropriate or not among small-scale fishermen may be the wrong question. Success or failure may be more of a matter of how well a development program meets the needs and interests of the target population than a question of the label applied to the organizational framework.



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