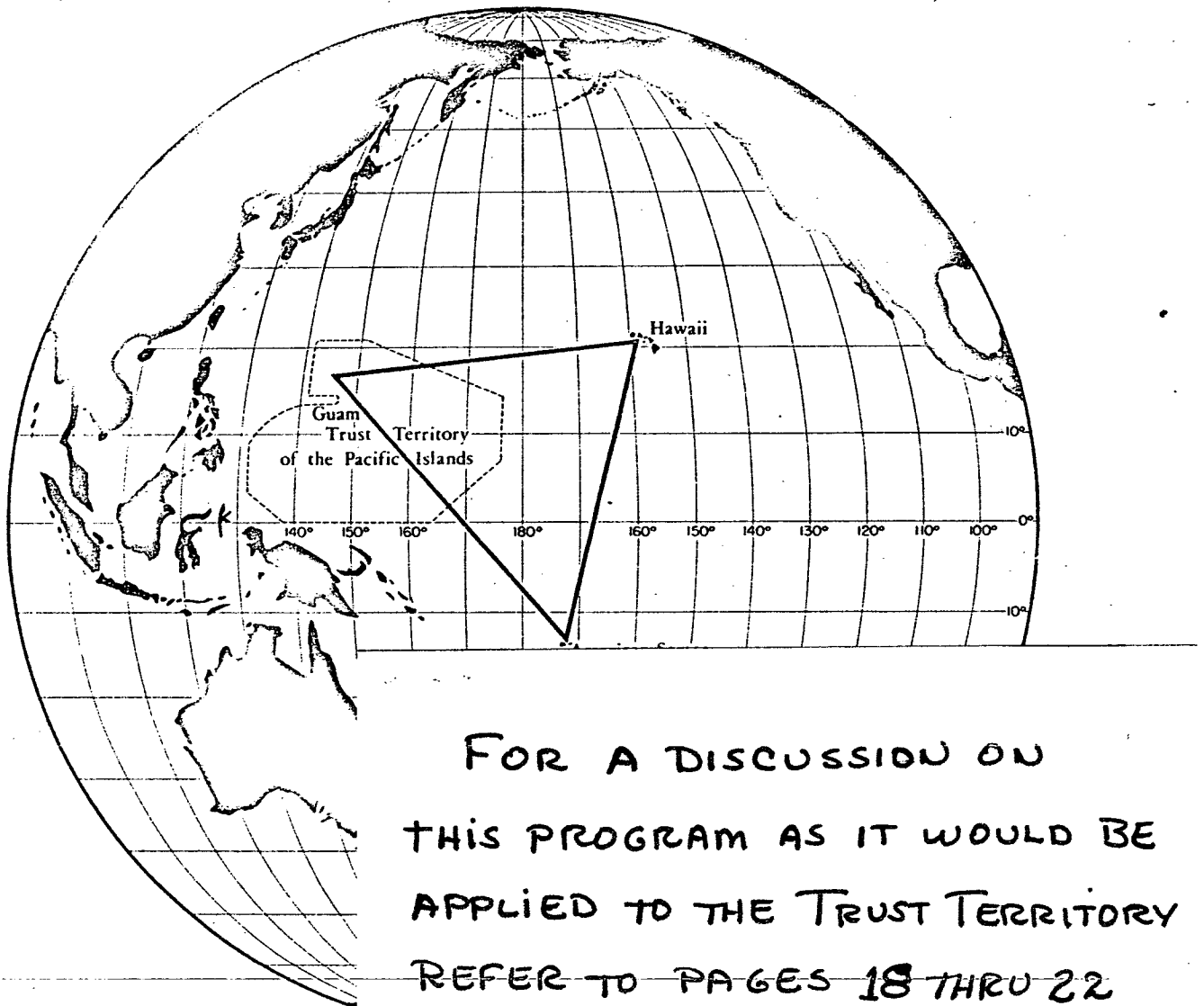


AN AMERICAN FISHERIES OPPORTUNITY IN THE CENTRAL AND WESTERN PACIFIC



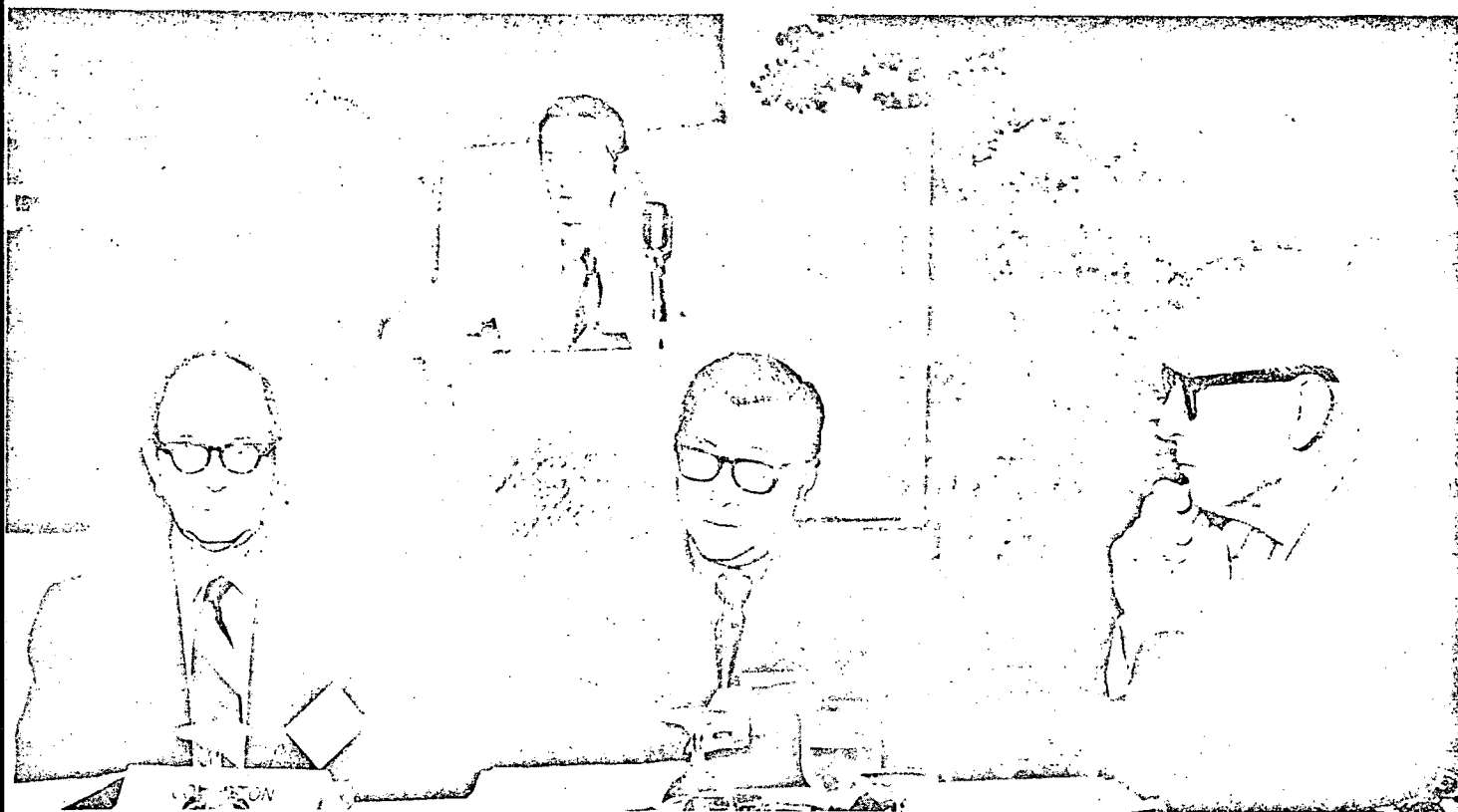
FOR A DISCUSSION ON
THIS PROGRAM AS IT WOULD BE
APPLIED TO THE TRUST TERRITORY
REFER TO PAGES 18 THRU 22

025353

APRIL, 1971

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Addressing the Pacific Islands Development Commission meeting on February 18, 1971 is Governor John M. Haydon of American Samoa. The other Commission members from left to right are: High Commissioner Edward E. Johnston, Trust Territory of the Pacific Islands; Governor Carlos G. Camacho, Guam; and Governor John A. Burns, Hawaii.

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A COOPERATIVE PROGRAM

Hawaii and the Pacific Territories realizing the importance of cooperative economic development effort formed the Pacific Islands Development Commission in February 1970. The Commission consists of the Chief Executives of the Governments of Hawaii, American Samoa, Guam and the Trust Territory of the Pacific. PIDC's first priority has been to stimulate the development of the considerable, latent Skipjack fisheries resources of the Central and Western Pacific. The PIDC has sponsored three meetings in this respect which involved the four governments, the U.S. Tuna Industry, Federal officials and the United Nations. From these meetings has been developed a \$4,410,000 program to develop the Pacific fisheries resources.

The U.S. Tuna Industry cognizant of the importance of this effort, has thus far pledged \$212,500 toward this program. On April 15, 1971, the Hawaii State Legislature passed a bill, a bill appropriating \$100,000, to be matched by the Pacific Territories as a group, for cooperative economic development efforts. It is expected that a nominal contribution from this fund will be made toward this development program.

The U.S. Tuna Industry program, Hawaii and the Pacific Territories are pledging earnest money toward the development of Central and Western Pacific fisheries resources. A project of the magnitude of \$4.4 million must largely be funded by the Federal Government.

The Federal Administration and the Congress are requested to support a grant of \$4 million in a special bill to the Pacific Islands Development Commission. The Commission will ask its Marine Research Development Committee (MRDC) to administer this project. The MRDC which is made up of fisheries experts from Hawaii, the Pacific Territories and the U.S. Tuna Industry is best qualified to administer this project under the policy direction of the PIDC.

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THE BASIC PROBLEMS

1. LIMITS IMPOSED ON THE U.S. TUNA INDUSTRY IN THE EASTERN PACIFIC

The regulatory program applicable to the yellow-fin tuna resource within the Inter-American Tropical Tuna Commission Regulatory Area (CRA) has considerably reduced the opportunity for the U.S. tuna fleet to fish this resource and is threatening the economic existence of this fleet unless it finds other resources.

2. ECONOMIC DEVELOPMENT NEEDS OF THE PACIFIC TERRITORIES AND HAWAII

The Trust Territory of the Pacific, American Samoa, Guam and the State of Hawaii are in need of diversified economic development and look to the development of fisheries resources as a way to improve and diversify their basic economies.

3. FOREIGN COMPETITION

Foreign governments are giving considerable assistance to their fisheries industries in the development of the resources in the Central and Western Pacific while the U.S. Government has lagged considerably in this area, giving foreign fleets the advantage in this development. Further, the U.S. Tuna Industry believes that most of the ocean fisheries will be covered by international treaties and that allocations of fish catch to participating nations will be based in great part on past development and catches.

4. FOREIGN SEIZURES OF U.S. TUNA VESSELS

A number of South American Countries which claim a 200-mile territorial ocean jurisdiction are forcibly seizing U.S. Tuna clippers requiring payment of heavy fines before releasing them. This action further limits the opportunities for fish catch in the Eastern Pacific and emphasizes the need to develop additional fisheries resources for the U.S. Pacific tuna fleet.

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POTENTIALS

1. TUNA RESOURCE

Estimates vary on the extent of the tuna resources in the Central and Western Pacific but range upward to a total of one million tons. The exact size of the resource will not be known until the fisheries based upon it are well developed. Of the potential increase in production of tuna from world oceans of about 1.38 million short tons, some 880,000 short tons (all Skipjack) can come from the Pacific Ocean. At \$250 per ton, 800,000 tons of skipjack tuna would be worth about \$200 million to the fisherman, \$500 million to the processor and some \$800 million at the retail level. Even if only half of this resource is developed in the next decade, it would be a significant contribution.

2. WORLD TUNA CONSUMPTION PROJECTIONS

World tuna consumption demand is expected to increase from some 1.7 million short tons in 1970 to some 5.5 million tons in 1990 based on projected population and per capita income increases. However, the maximum sustainable yield from the world's oceans is estimated at approximately 2.9 million short tons and based on increasing costs and changes in demand, it is estimated that the demand and supply for tuna will be equated at about 2.2 million tons.^{a/}

3. U.S. OPPORTUNITY FOR DEVELOPMENT OF THE PACIFIC ISLANDS

Government employment in American Samoa is about 58 per cent of those employed, on Guam 62 per cent, in the Trust Territory some 64 per cent and even in Hawaii, it is over 20 per cent. The national average of government (Federal, State and local) to the total employed population is only 11 per cent. There is a clear need for economic diversification and a build up of basic industry to support the growing population of these areas. The U.S. has both national and international responsibilities for the Pacific Territories with the eyes of the world closely watching the U.S. performance in this area of the world. The U.S. has a great opportunity to develop the fisheries resources of the Central and Western Pacific and at the same time make significant contributions in the economic development of the Pacific Islands under its jurisdiction.

^{a/} Economic Projections of the World Demand and Supply of Tuna, 1970-90, by Frederick W. Bell, Chief, Division of Economic Research, Working Paper No. 18, June 1969, Bureau of Commercial Fisheries (National Marine Fisheries Service). Note: Metric tons converted to short tons.

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U.S. EASTERN PACIFIC TUNA INDUSTRY

Until 1956, the United States was one of the world's leading producers of fishery products ranking second only to Japan in size of catch. By 1960, the U.S. dropped to fifth among the fishing nations of the world. Among the nations passing the U.S. in fish catch (in addition to Japan) are Mainland China, Peru, Russia and Norway.

The U.S. tuna fleet developed the tuna fishery in the Eastern Pacific. Before the regulatory program was established, relative to Yellowfin Tuna, the U.S. tuna fleet caught almost all the tuna in the Eastern Pacific. In 1966, a quota system was established in order to conserve the Yellowfin Tuna resource in the Eastern Tropical Pacific under the Inter-American Tropical Tuna Commission. Members of the IATTC include: the United States, Canada, Mexico, Japan, Costa Rica and Panama.

The present regulatory scheme reduces the opportunity of the new, modern U.S. Tuna Clippers to catch the regulated yellowfin and non-regulated tunas during the closed season. Estimates of the loss in catch have ranged from a high of 50,000 tons to a low of about 20,000 tons.

The regulatory program within the Commission regulatory area (CRA) has limited total tuna fishing effort by the U.S. tuna fleet so as to force this fleet to divert to limited non-regulated tuna resources and to seek non-regulated resources away from the Eastern Pacific in order to survive. It has been clearly determined over the past five years' experience that there is little economic relief that can be expected in diverting to non-regulated tuna resources or to non-tuna fishery resources. Based upon present information, the best alternative is to develop new fishing grounds outside of the regulatory area, particularly in the Central and Western Pacific. At stake is a modern tuna purse seining fleet valued at more than \$200 million. Unless new fishing grounds are developed, the loss of revenue resulting from the regulatory program could well bankrupt many vessel owners. The economic implications of dealing such a severe blow to the Nation's greatest ocean fishery are obvious.

Table I shows the problems faced by U.S. Pacific Tuna fleet since the quota system. It will be noted that when the quota system was instituted in 1966, the open season was eight and one-half months long, while in 1971 the season lasted less than three and one-half months. The importance of Yellowfin is indicated by the fact that more than 60 per cent of the total tropical tuna catch consisted of Yellowfin in 1970.

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TABLE I.

YELLOWFIN QUOTA,
U.S. TUNA FLEET SIZE & TOTAL TROPICAL TUNA CATCH
1966 - 1971

Regulation Year	Closure Date	YF Quota Tonnage (Short Tons)	U.S. Fleet Size Capacity, Dec. 31 (Short Tons)	Total Catch Tropical Tunas (Short Tons)
1966	15 Sept	79,300	40,700	157.7
1967	24 June	84,500	41,400	222.1
1968	18 June	106,000	46,385	192.5
1969	15 April	120,000	52,085	189.9
1970	23 March	120,000	57,242	194.5
1971	9 April	140,000	65,000 est.	---

Source: American Tunaboat Association

Although the Yellowfin quota has been increased considerably since 1966, the fishing season has been continuously shortened. The trend is for less of the total quota to be made available to the U.S. tuna fleet and more to foreign countries. The quota system has crept up on the U.S. tuna fleet at a time when it was increasing in capacity. It will be noted that the U.S. fleet has grown from some 40,700 tons in 1966 to an estimated 65,000 tons in 1971. This consists of more than 130 tuna clippers (100 tons or more frozen capacity) -- of probably the most modern, efficient fishing fleet in the world.

In addition to the increase in the U.S. fleet frozen tuna carrying capacity, the foreign flag tuna fleet is increasing in number and carrying capacity. According to the Inter-American Tropical Tuna Commission (IATTC) the international tuna fleet operating within the CRA numbered about 313 vessels with a total carrying capacity of about 72,048 short tons. Further, the IATTC reported that at the present time at least 40 tuna purse seiners are under construction comprising about 38,000 tons carrying capacity. Most of this capacity tonnage will operate within the CRA.

In 1968, for the first time during a regulated fishing year, three U.S. flag seiners operated in areas west of the CRA boundary. In 1970, 45 U.S. vessels, or about 36% of the international Eastern Tropical Pacific (ETP) fleet's capacity,

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reported fishing west of the CRA boundary. Seven of these vessels made exploratory fishing voyages to the Central and Western Tropical Pacific. As in the case of prior years, there were U.S. flag tuna seiners operating in the South Atlantic; 26 seiners representing 27.8% of the international ETP fleet operated both in the Eastern Pacific and the Atlantic. It appears that the Yellowfin stocks in the Atlantic may also soon be under regulation. In 1970, the IATTC reported that 63.3% of the total U.S. fleet was active in the CRA.

The trend is established for fishing activity outside the CRA for the U.S. fleet, what is now required is more deliberate and planned direction on development and exploration of the areas in the Central and Western Pacific.

The potential tuna stocks that await development in the Western Pacific are comprised of surface fish, primarily skipjack, but also including Yellowfin and Bigeye, and some Albacore. Skipjack, however, has the greatest potential ranging in the hundreds of thousands of tons.

Surface tunas may be either taken by live bait fishing, purse seining or trolling. Therefore, the thrust into the area would be threefold: (1) by large purse seiners, (2) bait boats based at appropriate locations, and (3) investigate the possibility of establishing a viable troll fishery in certain locations.

With respect to purse seiners, the techniques currently utilized in the Eastern Pacific and Eastern Atlantic require modifications. These are required because the mixed layer is much deeper, the water much clearer, and school behavior much more erratic in the Western Pacific, making purse seine fishing with techniques developed for other areas difficult.

In respect to bait boat fishing in the area, proven bait sources must be developed along with the proper techniques for taking bait. Those areas that have sufficient bait of the proper species must be determined. On the basis of current knowledge, the best areas in the Trust Territory appear to be Truk, Ponape, Jaluit and other islands in the Marshall chain. American Samoa and Guam also offer potential in this area.

The possibility of developing troll fisheries around islands lacking bait should also be investigated.

Guam is uniquely located so that purse seiners operating from this location can not only fish the tropical grounds to the south, but also the tuna grounds to the north of the island.

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Here the mixed layer is seasonally shallow offering conditions much like that encountered in both of the traditional U.S. grounds, the eastern Pacific and the eastern Atlantic.

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SOURCE OF U.S. CANNED TUNA

Although the demand for tuna is increasing rapidly, the U.S. tuna fleet -- the most modern in the world -- is providing a decreasing proportion of the supply. This is primarily due to the restrictions placed upon it reviewed in the foregoing.

Demand is increasing rapidly, the U.S. tuna fleet is increasing in capacity and is the most modern and efficient in the world -- yet is not only unable to provide the supply it is able to catch, but is facing severe reduction in capacity or even extinction.

Table II shows the sources of supply for canned tuna consumed in the United States over a nine year period. It will be noted that the domestic catch contribution to the U.S. pack has had a relative decrease over the period 1961 to 1969. In 1969, for example, imported fresh and frozen tuna for the U.S. pack and imported canned tuna accounted for 61.7% of the total supply of U.S. canned tuna. The U.S. pack from the domestic catch decreased from 44.4% in 1961 to 38.3% in 1969 while the U.S. pack from imported fresh and frozen tuna increased from 39.7% to 46.1% during the same period.

Of the some 100 million pounds increase in the U.S. supply of canned tuna from 1961 to 1969, only about 17 million pounds came from U.S. tuna boats -- the rest came from foreign imports. This despite the fact the U.S. tuna fleet is far ranging and able to compete without subsidy, with any fishing fleet in the world.

TABLE II.
U.S. SUPPLY OF CANNED TUNA, 1961-69

Year	U.S. pack from domestic catch 1/		U.S. pack from imported fresh and frozen tuna 2/		Total	Imported canned		Total supply
	Thousand pounds	Percent	Thousand pounds	Percent		Thousand pounds	Percent	
1961 ..	163,853	44.4	146,759	39.7	310,612	58,663	15.9	369,275
1962 ..	147,586	37.6	187,920	47.9	335,506	56,719	14.5	392,225
1963 ..	160,822	41.8	165,890	43.2	326,712	57,494	15.0	384,206
1964 ..	154,208	38.1	195,626	48.4	349,834	54,647	13.5	404,481
1965 ..	161,515	39.5	196,890	48.1	358,405	50,961	12.4	409,366
1966 ..	153,231	33.6	*241,037	52.9	394,268	61,560	13.5	455,828
1967 ..	*183,236	40.3	205,609	45.3	388,845	65,321	14.4	454,166
1968 ..	175,691	37.9	220,266	47.6	395,957	67,173	14.5	463,130
1969 ..	179,806	38.3	216,242	46.1	*396,048	*73,116	15.6	*469,164

1/ Includes pack from the U.S. catch landed in Puerto Rico. 2/ Includes tuna canned in American Samoa. *Record.

Source--"Fisheries of the U.S. 1969," U.S. Fish and Wildlife Service, Current Fishery Statistics.

FOREIGN SEIZURES OF U.S. TUNA VESSELS

A number of Central American and South American countries claim that their jurisdiction and sovereignty extends to at least 200 miles off their coasts. These include, Ecuador, Peru, Chile, Argentina, Uruguay, Brazil, Panama, El Savador and Nicaragua. The U.S. position is that it has a territorial sea jurisdiction of three nautical miles and a contiguous fishery zone of nine nautical miles. Of the 105 maritime countries in the United Nations, 93 recognize a territorial sea of 12 miles or less and all other nations outside the United Nations accept a territorial jurisdiction of 12 miles or less.

The U.S. flag tuna fleet has sustained considerable economic hardship and high risks of injury to the men and vessels of the fleet as a result of forcible seizures by naval forces of the governments of Peru and Ecuador in the enforcement of their claims of a territorial sea of 200 miles.

During the 10 year period 1961 through 1970, there have been 92 seizures of U.S. flag tuna boats with total costs estimated at \$933,184. This does not include any estimate of losses resulting from the detention of the seized vessels totalling 374 days. Preliminary figures for 1971 indicate an acceleration of vessel seizures, all by Ecuador totalling 25 seizures through March 30. Costs resulting from fines, licenses, etc., totalled \$1,241,044.

The seizure of U.S. flag fishing vessels by nations claiming jurisdiction over 200 mile territorial sea is clearly illegal under international law. This report is not the place to analyze the equity of such seizures. The point to be made here is that the development of new fishing grounds in the Central and Western Pacific would reduce such economic hardships and risks by providing new areas for catching tuna.

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FOREIGN COMPETITION

The skipjack tuna resources in the Trust Territory are estimated at a minimum of 70,000 short tons per year. Japanese fishing vessels have caught an average of about 30,000 tons per year and were estimated to have taken some 50,000 - 60,000 short tons from the immediate area in 1970. The U.S. tuna fishery at Palau takes only about 5,000 tons per year.

The entire catch of some 30,000 to 40,000 short tons canned in American Samoa have been caught by Korean, Taiwanese and Japanese fishing vessels.

Potentially, the greatest competition in the catch of skipjack tuna with advance techniques such as purse seining, etc., is expected to come from Japan. The Japanese Government's Fisheries Agency and the tuna industry are increasingly directing their attention to the skipjack fishery since fishing for other tuna types has reached the level of maximum production. The government's Fisheries Agency is working together with industry organizations such as the Federation of Japan Tuna Fisheries Cooperative Associations, the Purse Seine Fishery Cooperative Association and the Japan Fishery Resource Conservation Association for a full-scale, systematic development of the skipjack resources. The Tuna Council of the Fishery Resource Conservation Association is the coordinating body for industry and was expected to have completed a general guideline for the development of the skipjack resource by April 1971.

The Fisheries Agency estimates there will be a 2.7 million metric ton shortage of fish supply in Japan in the next five years and is looking to the skipjack resource as having the greatest potential for supplying that demand for expanding Japan's fishery production.

The Conservation Association estimates that the skipjack resource can support 2.2 million short tons of catch. This coincides with a similar estimate made by the (U.S.) National Marine Fisheries Service. Japan now catches about 220,000 short tons of skipjack annually.

Japanese scientists strongly support the theory that the skipjack caught off Japan and those found in the Western Pacific (South of 24° N. Latitude) belong to the same population. Fear is being expressed that increased fishing activity in the southern waters will affect the skipjack resource off Japan and jeopardize the small boat operators who fish off the home coasts.

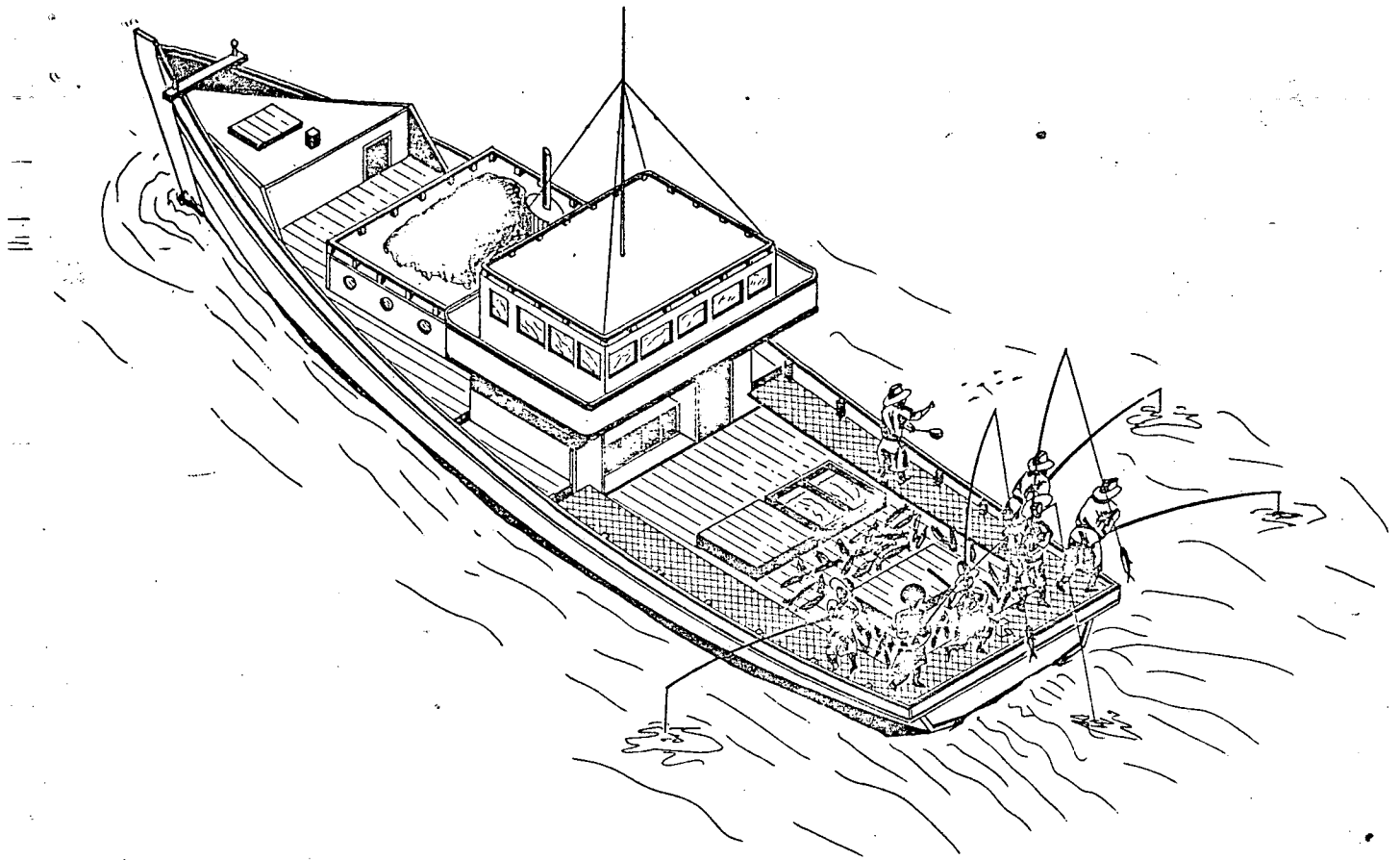
Progress is being made in gear improvement and several manufacturers have developed automatic poling machines. The emphasis by the Japanese fishing industry is on bait fishing, at which they are perhaps the best, as an effective way of catching skipjack. Efforts are being made to solve the bait fish problem for distant-water fishing. The Japanese, however, realize they must make advances in long-distant purse seine fishing. The opportunities in the Central and Western Pacific and the need for developing new purse seining methods (as opposed to Eastern Pacific practices) for this area could quickly place the Japanese in a good competitive position in

purse seining.

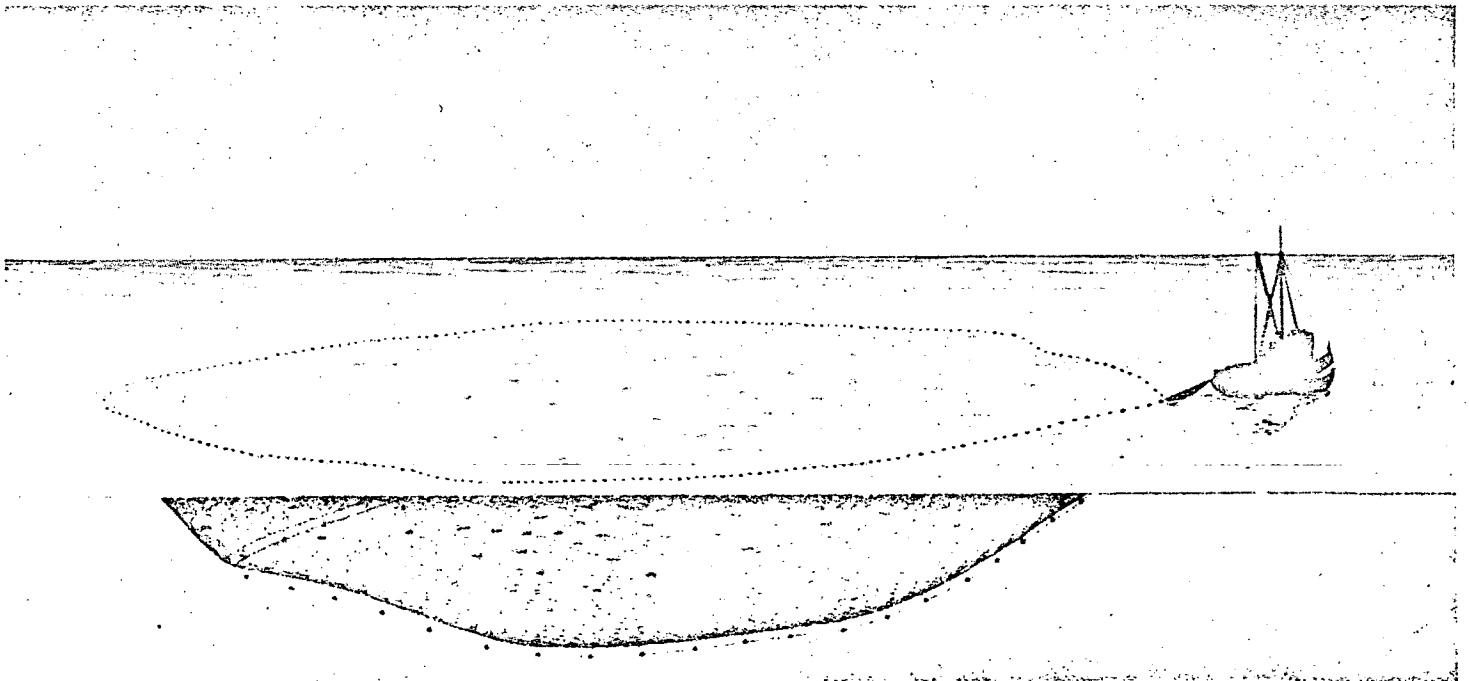
A Marine Resource Development Center is scheduled to be established this year. The Japanese fishing industry is looking to the Center for some effective work in the skipjack resource development program.

In addition to Japan, Korea and Taiwan are moving ahead to develop their distant skipjack fisheries. The governments of these countries are giving their fishing industries substantial assistance. The Eastern Pacific fishing fleet is efficient and competitive but sorely needs U.S. Government assistance to develop the fisheries resources in the Central and Western Pacific. In a strong sense, the national government which gives the most effective assistance to its industry will reap the rewards of the development of the skipjack resource in the Central and Western Pacific.

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In live-bait fishing, tunas are attracted to the stern of the vessel (and the surface of the water) by casting overboard small baitfish.



Pole-and-line fishermen catch only a portion of a skipjack tuna school; the purse seine encircles a school and catches all or most of it.

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PROGRAM

Presently in the Central and Western tropical Pacific the skipjack resource is harvested by (1) small commercial fisheries using the pole-and-line method with live bait, e.g., Hawaii and Palau, (2) a relatively large Japanese pole-and-line fishery in the Western tropical Pacific, (3) subsistence fisheries using various methods of capture, e.g., trolling, and (4) incidental catches made by the far-ranging longline fisheries of foreign countries. Because of factors related to baitfish, e.g., effectiveness, hardiness, and mostly availability, the possibility of a substantial growth in the skipjack fishery in the Central and Western Pacific based on an expanded pole-and-line fishery appears to be limited to certain island groups.

The purse seine seems to be the other gear best suited to harvest skipjack tuna in commercial abundance in the Central and Western Pacific. Modern purse seine methods have not yet been introduced here. Extensive field trials are needed to develop techniques which would be applicable for these areas. In the eastern Pacific success in purse seining for skipjack has been attributed to certain environmental factors, e.g., shallow thermocline depth, murky waters, and an oxygen minimum layer close to the surface. These conditions do not exist in the Central and Western Pacific where the thermocline is generally deep (300 feet is not uncommon), the water is very clear, and for the most part oxygen does not appear to be a limiting factor.

In developing this program, the Pacific was divided in two at the International Dateline. That area from the Dateline to the Americas includes Hawaii and American Samoa. This region is generally islandless and most suited for development by large, high seas tuna purse seiners.

To the west of the Dateline lies the Trust Territory of the Pacific and Guam. This area, being island and bait-rich, is more suited for island based bait boats and small seiners. Second, the economic needs of the Trust Territory requires jobs for the people. Because tariff regulations discourage cannery development, sea-going employment is particularly desirable. Small, labor intensive vessels are acceptable here.

For this reason, the proposed program calls for conducting high seas purse seine operations in the Hawaii/Samoa area with medium and small seiners and bait boats in the Trust Territory and Guam area.

In order to optimize the chances for success, this is envisaged as a three-year program. After the first year, the operation will be reviewed and the second year's program developed according to the findings during the first. Some of the vessel types and sizes may be changed, seasonal operations and localities may be shifted and gear may be modified.

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Because of the remoteness of the area, all boats will operate in pairs.

First Year

Central Pacific - 140E to 170W Longitude. Two large, fast, modern purse seiners will spend three months exploring for tunas. Two medium West Coast bait boats will spend six months exploring for bait and tunas near American Samoa, the Line Islands and the Hawaiian Chain. These types of vessels were selected since they have the range and seakeeping ability for the open ocean and since the area's proximity to the Eastern Pacific grounds makes it the most likely for immediate expansion of that fishery by West Coast boats.

Western Pacific -Trust Territory and Guam. Two medium purse seiners for six months and 8 bait boats, 6 for one year and 2 for six months. The smaller seiners were chosen since the goal for this area is to develop island based fisheries. These types of vessels are large enough to be efficient and seaworthy, yet are less costly to operate than their bigger sisters. The bait boats will be of three types to test various methods of baiting and fishing. The West Coast style is capable of ranging further offshore and hold more bait and fish, the Hawaiian style requires less crew and the Okinawan style is cheapest and use less bait. Any or all types may be well suited to the area but all three should be tried.

All of these vessels will be operated by commercial fishermen--the best money can hire. Scientific observers will accompany each vessel but the masters will be free to fish the best they know how. No money is requested for administration, this being handled by the PIDC. Gear expenses and modifications will be borne by the vessels. The only additional expense requested in this proposal is for aircraft scouting as needed.

The Fisheries Development Program will be administrated by the Pacific Islands Development Commission through its Marine Research Development Committee. This Committee is most uniquely qualified to undertake the administration of such a program under the policy direction of the Pacific Islands Development Commission.

The makeup of the PIDC and the MRDC are included as addenda to this report.

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BUDGET SUMMARY

2 large modern Class VI purse seiners for a 3-Month Period
in the Central Pacific - \$1,600K

2 medium (Class IV & V) purse seiners for a 6-Month Period,
plus 60 days running time in the Western Pacific - \$1,200K

Bait Boats

2 U.S. West Coast style boats for one year in the Western
Pacific - \$ 500K

2 U.S. West Coast style boats for six months in the
Central Pacific - 250K

2 U.S. West Coast style boats for a six months period in
the Western Pacific 250K

2 Hawaiian style boats for one year in the Western
Pacific 300K

2 Okinawan style boats for 1 year in Western Pacific 260K

Aerial Surveys 50K

T O T A L \$4,410K

ECONOMIC DEVELOPMENT OF HAWAII
AND THE PACIFIC TERRITORIES

In addition to assisting the U.S. flag tuna fleet, reducing imports of tuna, and expanding the U.S. tuna canning industry, one of the greatest benefits that would result from the development of the fisheries resource in the Central and Western Pacific would be the contribution to be made to the development of Pacific Island economies.

The United States has both national and international responsibilities in the Trust Territory of the Pacific. Although it does not have a direct international political responsibility with Guam and American Samoa, those areas have, along with the Trust Territory, yet to choose their form of government and the kind of affiliation, if any, with the United States. The eyes of the world are on the United States in respect to the extent and quality of the effort it exerts in the social, political and economic development of these areas. Perhaps the most important of these is economic development as success in this area will provide the basis for success in the social and political areas as well.

The job options offered the citizen of American Samoa are starkly few: he can work for government or he can work for the fish canneries and associated businesses. The latter employ about 1,500 persons. There are few other job opportunities in American Samoa. Nearly two-thirds of Guam's 24,500 civilian labor force is employed by government and the majority of the remaining 9,313 workers are indirectly supported by government generated monies (except for the small watch assembly and the growing visitor industry).

The citizen of Micronesia faces equally limited choices. About two-thirds of the 8,000 jobs available are with the government. Small business and services provide the rest.

In contrast, citizens of the Pacific State, Hawaii, have many options. Yet even in that diverse community, the economy is narrowly based. Government, tourism, sugar cane, and pineapple provide most of the jobs. A cut in government expenditures, a decline in the number of tourists, a poor year for crops and Hawaii faces pressing problems.

Thus, all of the island areas must seek new or further sources of income for their peoples.

Programs for the Island Areas

In the following sections, the problems of each island area will be discussed in turn and solutions sought that would allow each to profit--in the basic human terms of jobs and opportunities for independent businesses--from them.

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Trust Territory

In the Western Pacific, the United States, through the Department of Interior, has the responsibility of administering the area and seeing to the welfare of the 100,000 people of the Trust Territory of the Pacific Islands. Also, one of the islands in the region, Guam, has long been a U.S. possession.

On the matter of the economic development of the Trust Territory, the Trusteeship Agreement with the U.N. Security Council is explicit:

"Article 6

"In discharging its obligations under Article 76(b) of the Charter, the administering authority shall:

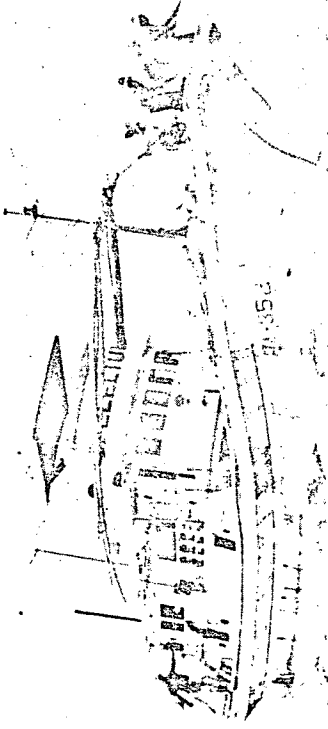
"1....

"2. Promote the economic advancement of the inhabitants and to this end shall regulate the use of natural resources; encourage the development of fisheries, agriculture, and industries; protect the inhabitants against the loss of their land and resources;...."

The economic structure of the Trust Territory of the Pacific Islands is primarily based upon subsistence farming and fishing. The possible avenues of economic development are few. Land is scarce (2,100 islands cover 700 square miles in an oceanic area of 3 million square miles) and its relatively low productivity limits land-oriented commerce. Although the present economy is based largely on agriculture, the potential value of agriculture has been estimated at only about \$12 million. Tourism is just beginning to enter the picture. (By far the greatest immediate potential source of economic growth appears to lie in the sea and its resources, of which the skipjack tuna resource holds the greatest promise.)

Unlike American Samoa, where the skipjack tuna fishery is prosecuted on a subsistence level, (the skipjack tuna) resource in and adjacent to the waters of the Trust Territory is presently being fished by Japan at a level of about 40,000 tons per year. (In addition to the Japanese fishery, there is a U.S.-sponsored skipjack tuna fishery in Palau which takes about 5,000 tons of fish per year. This fishery is prosecuted by a fleet of eight small boats manned by Okinawan and Micronesian fishermen. (The landings are less than 20 percent of those taken by the Japanese in these same waters before World War II.) Thus, the potentials of the skipjack tuna resource in the Trust Territory are obviously great. (A recent estimate places the potential of the skipjack tuna resource at a minimum of 70,000 tons per year, valued at about \$14 million to the fishermen.)

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Fishing by pole and line in Trust Territory Waters (Official Trust Territory Government photograph).

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If the tuna can be canned in the Trust Territory, rather than frozen and shipped elsewhere for processing, as at present, the value would increase to about \$35 million. There are, however, various constraints which put a cannery out of reach at the present time. Chief among the constraints is the tariff barrier to the movement into the United States of tuna canned in the Trust Territory. Tuna canned in the Trust Territory is subject to a duty of up to 35 percent ad valorem upon entry into the United States. Thus, tuna canned there could not be profitably marketed in the United States unless the existing tariff barrier is removed.

Notwithstanding the lack of a cannery in the near future, the skipjack tuna harvested in the Trust Territory can be transported (shipped to processors elsewhere (e.g., to American Samoa as is done presently but could be done on a much larger scale), (or) (processed locally into dried skipjack sticks) (katsuobushi) (and exported to Japan and other Asian countries), or possibly canned on a small scale for local consumption.

Before the War, the Japanese processed much of their catch into sticks. The product is durable; when the process is finally completed, the sticks can be held without refrigeration for months. The processing plants need not be centralized; they can be scattered throughout the Trust Territory wherever vessels can unload their catches. Such plants would require relatively little in the way of investment. Packaging is simple, as it is only necessary to wrap the individual sticks in paper and ship them in wooden barrels or boxes.

In 1941 the Japanese produced 1,334 metric tons of skipjack sticks and 67 metric tons of tuna sticks valued at about \$1.1 million at plants located in Saipan, Palau, Truk, Ponape, and Jaluit. (No data are available for 1937 when record landings of skipjack tuna were made by the Japanese, but presumably even more skipjack sticks were exported to Japan.)

In addition to skipjack sticks, there is also the possibility for the Trust Territory to operate a small experimental tuna cannery which at first might produce canned tuna for local consumption. As the product acceptance grows, and as income level increases, there will be greater demand for the product. Eventually, there may be an export market in other Pacific Islands. As an example, the Japanese in 1939 built a small cannery in Palau with a capacity of only 500 cases a day, but was able to operate it at capacity for only a short time before the outbreak of war.

Although the dollar value of exports and imports in the Trust Territory have both increased in recent years, the volume of imports has increased at a far faster rate than has volume of exports. In 1967 exports amounted to \$2,321,671 (chiefly copra), while imports amounted to \$9,819,480. About 90 percent of the total money income received by the Micronesians is derived either directly or indirectly from government

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spending. Clearly a dynamic fishery for skipjack tuna will bring about a balance in trade, and at the same time generate new income for the Government of the Trust Territory. While about two-thirds of the 8,222 Micronesians employed today are employed by the government, a growth in the fishing industry would increase employment in the private sector and foster a healthier economy for the island community of the Trust Territory.

With the exception of the Palau fishery, the tonnage of tuna which is harvested in Trust Territory waters is of no economic benefit to the people of the islands, for it is taken directly back to Japan. Even the fish which are landed in Palau are only stored there and shipped to canneries in Samoa and the United States, thus depriving the islanders of the much greater economic benefits which are derived from processing the product in the islands with island labor.

While the live-bait supplies in Palau are ample for the existing fishery, they are not extensive enough for a large expansion of the fishing fleet. In addition, live-bait supplies in Truk, Ponape, Saipan, and the Marshall Islands are limited and unable to support fisheries of the magnitude that could be developed if baitfish were not required for harvesting skipjack in commercial quantities.

While there is no question as to the availability of suitable quantities of skipjack tuna, the question as to how these enormous stocks of available fish can be taken by U.S. and Micronesian fishermen has yet to be resolved. The most promising method appears to be by developing a new rapid sinking and closing purse seine capable of capturing skipjack in tropical waters. The high cost of a suitable net and vessel and crew capable of handling it have precluded any unilateral efforts by island governments to develop such a technique on their own.

Therefore, it appears essential for the various Pacific island groups to work together, pooling their technological know-how, finances, and support facilities to overcome the problem of harvesting the skipjack tuna of the Central and Western Pacific.

With the exception of Palau, fresh fish consumption is limited, owing to the fact that the people in each district cannot even produce enough fish to feed themselves, much less export fish in any quantity. This obvious deficiency must be corrected by providing the essential infrastructure and programs required to make the islands more aware of their natural resources and means by which they can be developed and utilized to the benefit of the people.

Opportunities for significant economic development are restricted in the tropical Pacific, being in most

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instances limited to the lagoons and sea which surrounds the islands. It is recognized that the world's last major tuna resource is located in the tropical Central and Western Pacific and that the rapidly growing world tuna demand will more than treble.

As the Trust Territory tuna are actually located in international waters and therefore available to fishermen of all nations, the only way by which the Pacific islanders, with their limited capital and small labor force, can hope to participate in a meaningful way in the development and utilization of this resource is in cooperation with the U.S. tuna fishery, which is the most efficient and advanced in the world. Therefore, if the United States is to meet its obligations to the people of the Pacific Islands, it is absolutely essential to embark on a high priority program adequately financed and with the specific objective of developing a new method of harvesting tropical skipjack tuna which does not require the use of live bait.

The objectives of developing the skipjack fisheries of the Trust Territory of the Pacific Islands are:

- (1) To promote the commercial exploitation of the stocks of skipjack tuna by Micronesian fishermen and the development of freezing, canning, and processing operations at suitable locations throughout the Trust Territory.
- (2) The removal of the U.S. tariff restrictions on Trust Territory exports such as canned tuna if such tuna is caught by U.S. or Micronesian fishermen.
- (3) Provide the necessary infrastructure such as ice and cold storage plants, docks, slipways, etc., either by constructing them with government funds or by inducing private capital and experienced commercial fishing companies to provide the funds and technical supervision necessary for the development of commercial fishing operations.
- (4) The improvement of the island economy by the creation of new jobs for men and women, in shoreside plants as well as on the commercial fishing vessels.
- (5) The development of a large export fishery which would reduce the high ratio of imports to exports.
- (6) The creation of additional jobs in supporting industries such as shipyards, farms, supply houses, etc.

The need for the United States tuna industry to expand its fishing areas has been apparent for several years. U.S. seiners

now fish the Atlantic stocks of tuna after the eastern Pacific limit on yellowfin tuna has been met. If an improved technique can be developed which will make it possible for these seiners to harvest the skipjack and yellowfin tunas of the Central and Western Pacific, it should mean a significant increase in American tuna production.

(Such an expansion by American tuna seiners into the) (Central and Western Pacific would result in a great increase) (in badly needed job opportunities within the Trust Territory) (as a large variety of support functions would be required) (just to service and provision any vessel of this size calling) (in an island port. Fuel sales would increase substantially) (as would sales of fresh, frozen and canned foods. Ship repair) (activities and other ancillary businesses will be needed. In) (all probability, new cold storage plants would have to be built.) (The removal of the tariff for U.S. and Micronesian caught fish) (would make possible the establishment of tuna canneries which) (would employ 300 to 400 people per district. By-products from) (canning operations could be used to increase the development) (of chicken and egg farms, pig farms, etc. As the islands are) (so widespread in the Trust Territory, it is probable that) (canneries would spring up in each of the district centers).

In summary, the development of skipjack seining and its related support operations would make possible the extensive development of a tremendous resource which is large enough to provide a suitable base for the immediate economic development of the islands of the Trust Territory. It will also provide to the people of the islands the means whereby they can develop themselves and their islands utilizing their natural resources and without having to be dependent on the development of industries which are smaller in magnitude and based on economic conditions outside of the Trust Territory.

Guam

Guam is a tiny speck of U.S. territory sitting amidst vast stretches of ocean. Its 220 square miles of land area, populated by 102,000 people, have no readily available raw material which can be used to develop an industry. On the other hand, the island is surrounded by thousands of miles of ocean that potentially could yield much valuable raw material.

Guam is presently dependent almost exclusively upon Federal (basically military) spending to sustain her economy. The present economic structure can be maintained in the long run only by expanding Federal spending to parallel the island's population growth rate, which incidentally increased by 5.8 percent during 1969 (military and dependents not included).

How long can we count on the military expanding or even maintaining the present level of spending should the situation in Southeast Asia ease off?

The present goal is to develop on Guam an economy having maximum viability should military expenditures level off or decline. A small watch assembly industry and a tourist industry aimed at the nearby Japanese market have been started. A petroleum refining plant utilizing imported oil is now in operation.

Nevertheless, the only developable raw material presently available in substantial quantity on or near Guam is the potentially tremendous skipjack tuna resource that the Japanese are now harvesting by the live-bait pole-and-line method.

Guam lacks the live-bait resource to harvest the skipjack tuna that the Japanese are now harvesting. Presently, the island's only hope of utilizing this vast resource is to develop a purse seine technique that will work in the clear tropical waters of the Pacific Islands.

The Japanese have had some success purse seining for skipjack in this area. A Russian purse seiner was also sighted in the area between Yap and Guam in March of 1968.

Skipjack tuna are available in the tropical Western Pacific all year round but there appears to be a major peak in abundance during February-March and another minor peak during July-September.

In order to test the feasibility of commercially purse seining for skipjack tuna in the clear tropical waters of the Western Pacific, fishing trials by the top boats of the U.S. West Coast tuna purse seine fleet are needed. Either the presently utilized purse seine of the top boats or the U.S. National Marine Fisheries Service fast sinking net should be tested. A trial period of at least 2 years during the various seasons of the year should be planned.

Owing to the lack of an adequate live-bait supply in Guam and the questionable resiliency of bait supplies that may be available in some of the other islands of this area, adequate purse seine tests should be made without the use of live bait to hold the skipjack tuna schools. Owing to the clarity of the waters of this area, night sets of the purse seines should also be considered. This will require the development of electronic gear that can locate skipjack schools at night.

If the purse seine technique of harvesting the skipjack tuna resource proves to be economically feasible, Guam would gain the economic benefits of a raw material-based industry with its multiplier effect. It is estimated that for every six jobs created in basic industry on Guam, about four more jobs will be generated in local service industries. The operation of two 50-ton per day capacity tuna canneries will employ 700 people directly and an estimated 230 more indirectly. Also this will require a minimum of five large purse seiners with a total crew of 70 men. A part of the crew eventually could be replaced by local fishermen. A service industry based on providing the purse seiners with food, fuel, recreation and repair work will also generate jobs.

American Samoa

The tuna fishing industry is the only important private enterprise in American Samoa. With the exception of a single bottom-fishing operation, the present commercial fishing industry in American Samoa consists solely of foreign longline vessels which supply the two local canneries with large deep-swimming tunas. Fresh fish occur in the markets only sporadically and in small volumes, yet preliminary evidence indicates large stocks of pelagic and inshore fishes in Samoan waters. The untapped resource with the greatest potential appears to be skipjack tuna.

Further development of a Samoan-based fishery is necessary to alleviate two of American Samoa's more pressing problems: insufficient tax revenue income and shortage of employment opportunities.

The two canning operations provide full-time employment for almost 1,000 Samoans. Several direct support industries have developed. The American Can Company established a plant adjacent to the canneries in 1964 and employs an average of 43 Samoans. The Marine Railway, whose main source of income is repair and maintenance of the fishing vessels, employs 156 Samoan laborers. There are three stevedoring companies which derive an important part of their income from unloading supplies for the tuna canneries and the American Can Company, and loading out canned fish items and byproducts of the canning industry. These companies employ 381 Samoans.

Thus, the tuna canning activity is largely responsible for 1,558 jobs for the Samoans. This represents 83 percent of the 1,880 Samoans employed in gainful occupation outside of the Government of American Samoa. Furthermore, the economic activity which provides employment for the remaining 322 jobs outside the government is indirectly dependent on tuna canning.

The canneries are the principal source of taxes and are the major users of water and electricity; the fuel requirements of the fleet of longline vessels require the operation of a large oil bulk storage system. In short, the tuna canneries have been a major motive force behind the recent rise of the American Samoa economy.

In 1967, exports of fishery products resulting from the tuna canning industry totaled \$27,158,346 out of a total export of \$27,243,586 (99.7%). Thus, the economy of the island community is virtually dependent upon this industry. It is the basis of a monetary economy which has gradually evolved under American administration. Since fully three-fourths of the corporate tax revenue of the Government of American Samoa is derived directly from the fishing industry, a cessation of tuna canning would devastate the economy of the island, requiring additional Federal funds to replace the tax revenue lost in order to enable the government to operate.

Although the fishery (largely for albacore) has expanded considerably since its inception in 1953, the catches in recent years have declined noticeably. Most of the Japanese longline vessels have left Samoa to fish elsewhere. Vessels from the Republic of Korea and the Republic of China have replaced the Japanese. The peak in landings was reached in 1967 when about 38,000 tons of tuna were landed; the catch provided about \$28 million worth of canned tuna for export from American Samoa to the United States.

While labor costs are lower in Samoa than in California, successive increases in the Samoan minimum wages have brought them closer with those obtaining in the United States. The original tax exemptions enjoyed by the canneries have expired.

The decline in catch has created concern among members of the fishing industry and the Government of American Samoa. While this decline may be a transitory phenomenon, alternatively it may reflect the state of the resource, since scientists are becoming more and more convinced that many of the tuna resources are being harvested at or near the level that is maximal. To broaden the fishing base of the industry in American Samoa it is urgent to seek an alternate resource, one which can provide a significant supplementary source of raw material for the canneries, in order to maintain the industry at the level needed to keep an important segment of the economy of American Samoa viable. The resource is surface-caught skipjack tuna. Already the industry has canned skipjack tuna caught in the eastern Pacific (about 5,000 miles away) and the Trust Territory (about 2,000 miles away).

Yet, skipjack tuna are known to occur in waters far closer to American Samoa--almost offshore; thus it is logical that efforts be made to exploit this resource. Further, the tropical waters in which skipjack tuna occur also contain an unknown quantity of surface-swimming yellowfin tuna which would supplement the catch of skipjack tuna. The purse seine appears to be the gear with the greatest potential for successful application in harvesting skipjack tuna from waters around American Samoa.

Purse seining for skipjack tuna should be tried in American Samoa for the following reasons:

(1) Skipjack tuna are known to occur in waters around Samoa. Reports of large schools have been received from time to time. In February 1970, the National Marine Fisheries Service research vessel Charles H. Gilbert encountered numerous large schools near Samoa.

(2) Since cannery and shipyard facilities are available, skipjack and yellowfin tuna catches resulting from an exploratory field trial can be processed immediately and the project need not be hindered by problems related to the processing of the catch.

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(3) Industry in American Samoa faces a potentially critical problem in operating the tuna canneries. The deep-swimming tuna resources on which they are presently based appear to be declining. The development of a purse seine fishery for surface-swimming skipjack tuna based in American Samoa would certainly solve the need for an alternate resource. Further, this fishery can be fully a U.S. fishery involving U.S. flag fishing boats.

A yield of 20,000 tons of skipjack tuna per year would have a value of \$5 million to the fishermen, \$12 million to the processors, and \$20 million at the retail level. Cannery employment of 300 to 500 additional Samoans would result, as well as a substantial increase in support facilities.

Hawaii

The harvesting segment of the Hawaiian skipjack tuna fishery is moribund. The number of boats has declined steadily from a high of 28 in 1951 to a low of 12 in 1971. As boats sink or become unserviceable, they are not replaced. The boats that are still fishing average 28 years in age, with a range of 15 to 44 years. The number of fishermen has decreased by 38 percent from a high of 260 in 1948. The decrease would be even more drastic were it not for the importation of fishermen-trainees from the U.S. Trust Territory, Okinawa, and more recently, from Japan. Very few young men from Hawaii are entering the fishery. Apparently, the irregular and often low earnings, long working hours, and primitive working conditions on the local boats account for much of this decline. In spite of all these declining trends, the skipjack tuna catch has remained at nearly a steady level, admittedly with large fluctuations. This means that the remaining boats have increased their productivity by approximately 37 percent through increased efficiency and increased fishing effort.

While some advances have been made to increase productivity, the financial returns from the pole-and-line method of fishing in Hawaii have not been able to keep pace with the economic growth achieved by land-oriented industries.

Considerable information is available on the biology, behavior, and life history of the skipjack tuna occurring in Hawaiian waters. Studies of the skipjack tuna schools around Hawaiian waters show that fishermen using solely the pole-and-line method catch a very small proportion of fish in the schools they encounter. Furthermore, the fishing method is entirely dependent upon live bait whose supply is not always reliable, thus causing fishermen to spend considerable amount of time in obtaining a sufficient amount for skipjack tuna fishing. Some other method, therefore, must be devised to capture a greater proportion of each school contacted by the fishermen, and also one that is not entirely dependent upon live bait. To triple or quadruple the catch now taken by the present pole-and-line method would provide sufficient stimulation to bring the Hawaiian fishery back into the competitive labor market.

Authorities in research and industry agree that netting the skipjack tuna school appears to be the best way to increase the catch: the problem, of course, is how to do this in Hawaiian waters. The purse seine appears to be the most likely netting device to experiment with in Hawaii. Modern tuna purse seiners, because of their size and operational range, have the potential capability of changing the local fishery from an "inshore" fishery to a wide-ranging one, moving up and down the entire Hawaiian Island chain in response to the movements of the skipjack tuna. Such mobility would tend to alleviate the erratic yearly fluctuations which the local fishery presently experiences. This stabilization of the catch would be reflected in the earnings of the boat and the wages of the crew. Job security and steady income should improve the attractiveness of the fishery to young men in Hawaii.

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If purse seine fishing is successful, the development of a fishery landing 20 to 25 thousand tons of skipjack tuna annually from waters immediately adjacent to the Hawaiian Islands is not unreasonable. The catch could be further increased if the purse seiners ranged farther afield during the off-season in Hawaii. The landings of skipjack tuna, particularly during Hawaii's off-season, would relieve the local cannery of its dependence upon foreign imports. A purse seine fishery would also broaden the base of operation of the U.S. tuna fishery by permitting a part of the eastern Pacific fleet to fish in the Central Pacific after the closure of the yellowfin season.

In outline, we see that the development of skipjack tuna resources in the Central and Western Pacific might have the following basic sequence:

(1) After the pinpointing of the location of the resources, the Eastern Pacific American tuna fleet would begin to fish the waters of the Central and Western Pacific using Hawaii and other Pacific areas as the base for operations.

(2) As the economics of this newly-developed fishery prove out, some of the Eastern Pacific-based fishing vessels may use Hawaii as their major base, supplemented by new fishing vessels financed by Hawaii entrepreneurs.

(3) Additional fish canning operations will be established in Hawaii and other Pacific territories to process and can the skipjack tuna.

If the fishery is successfully developed, Hawaii will not only revive a dying fishing industry but will inject new and diversified employment and income into its economy. In summary, the basic benefits to Hawaii would be as follows:

(1) Diversification of economic base

Hawaii has too many of its economic eggs in the tourism basket. In 1970, Hawaii had some 1,595,00 visitors resulting in visitor expenditures of some \$589 million. The slowing down of the national economy has already had its effect on visitor arrivals in Hawaii. For 1971, the months of February and March have shown a decrease in the number of visitor arrivals over the same months in 1970. This, coupled with an expanding visitor plant on construction commitments made before the current visitor downturn, means that many hotels will face a serious situation should this trend continue. The visitor industry is very sensitively responsive to downturns in the general economy and overemphasis on the development of this industry, as has occurred in the last 10 years, could lead to a serious economic situation for Hawaii, the beginnings of which we may be experiencing now.

Another major egg in Hawaii's economic basket is defense expenditures which total \$700 million in 1970. The current drive against inflation by the President and the resulting cuts in civilian defense jobs is directly affecting Hawaii.

The construction industry which registered some \$700 million in construction completed in 1970 is expected to take a sharp drop in 1971.

Sugar and pineapple, long the mainstays of Hawaii's economy until the 1960's, have had a history of reduced labor input and a relatively stable income ranging between \$350 million and \$400 million a year.

The only major basic economic activity showing growth potential is manufacturing with sales of some \$420 million in 1969 expecting to increase to some \$440 million in 1971.

It can readily be seen that Hawaii needs new basic economic activity to diversify its economy and to provide employment for its rapidly growing population.

(2) Diversified employment opportunities

Hawaii's high school and university graduates located in an insular community do not have the variety of employment opportunities offered their counterparts in similar mainland urban areas. The visitor industry, the fastest growing of Hawaii's industries, offers jobs which are limited in their scope and in income and caters primarily to particular groups. There are certain segments of Hawaii's population which are not readily employable in retail trade, transportation and the visitor industry but which would be attracted to the fishing industry and cannery operations.

(3) Potential benefits to less developed areas

Cannery operations could very well be located in rural Oahu (Campbell Industrial Park when the harbor is developed) or the Neighbor Islands. These are areas which are considerably less developed than the immediate Honolulu area and would provide a considerable boost to the economies of those areas.

(4) Opportunities for local investment

A growing amount of Hawaii's available investment funds are being directed outside the State. Hawaii's major firms are investing in retailing, manufacturing, recreational, office and agricultural developments on the mainland and in foreign areas. Opportunities for investing in new fishing vessels to harvest skipjack tuna resources and to invest in new cannery operations could very well come in a major degree from Hawaii.

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(5) Economic impact of new jobs

The economic impact of new factory jobs varies from community to community but certain rule-of-thumb measurements can be used to give reasonable estimates of the impact of such jobs on the economy.

If we assume that a thousand new jobs would be created as a result of new fish cannery operations, we can assume the following economic impact:

New Payroll	\$6 million plus
New Households	1,150
Increase in retail sales	\$4 million
Increase in bank deposits	\$3 million
Increase in retail establishments	40

In addition to these basic jobs, this new cannery employment would stimulate the creation of an additional 750 new jobs in a variety of activities. The multiplier effect takes place in terms of income expenditures as well. For example, the U.S. Department of Commerce publication "The future of tourism in the Pacific and Far East" estimates a multiplier effect of 3.27 for every visitor dollar spent. If we assume a conservative multiplier effect of 2.0, there would be an additional \$10 million to \$12 million injected into the economy as a result of the turnover or a total of between \$15 million and \$18 million injected into the economy.

In summary, Hawaii needs diversified economic activity and diversified employment opportunities. There are few eggs in Hawaii's economic basket and downturns in the economy have an immediate effect on a vulnerable industry such as tourism. The establishment of major fishing and fish canning activity in Hawaii would strengthen and diversify the economic base allowing Hawaii to better overcome downturns in the economic cycle.

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ADDENDUM

ORGANIZATION OF
MARINE RESOURCES DEVELOPMENT COMMITTEE
AS AGREED TO AT LONG BEACH, CALIFORNIA
MARCH 21, APRIL 1 & 2

The Pacific Islands Development Commission at its meeting in Honolulu on February 18 and 19 accepted the recommendation for the establishment of a Marine Resources Development Committee.

The purposes of the MRDC are to:

1. Develop as first priority the tuna and baitfish resources of the Central and Western Pacific Ocean;
2. As second priority, assess the other living marine resources of the area;
3. Provide a mechanism for continued coordination of fisheries research and development;
4. Encourage and fund special fishery projects of mutual interest to PIDC; and
5. Act as spokesman for the needs of the fishery community to PIDC.

The MRDC consists of:

1. A member from each participating unit of the PIDC.
2. One member of the scientific community appointed initially by the Pacific Islands Development Commission and thereafter to be nominated by the MRDC and appointed by the PIDC.
3. One member from each voluntary contributor from industry - the PIDC to determine what constitutes a minimum contribution for membership.
4. An Executive Secretary with a fisheries background; the Executive Secretary preferably to be a full-time employee of MRDC or, lacking sufficient funds, to be provided by a participating agency on an "additional duty" basis. The Executive Secretary of the PIDC to act as secretary of the MRDC until a permanent Executive Secretary is appointed.

Funds to operate MRDC, which is estimated to be \$50,000 per year, be raised as follows:

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1. A minimum annual contribution of \$5,000 from each PIDC member;
2. The balance of \$30,000 to be contributed by industry in such manner as industry may determine.

-Such funds collected will be disbursed by MRDC to defray expenses of MRDC, provide contractual monies for special projects, and provide the basis for matching fund projects.

A scientific advisory group to the MRDC consisting of one representative from each interested research body in the area concerned with fisheries. The advisory group will be steered by a seven-man panel representing American Samoa, Hawaii, Guam, Trust Territory of the Pacific Islands, National Marine Fisheries Service, University of Hawaii, and the Sea Grant Program of the University of Hawaii.

The Executive Secretary of MRDC will act ex officio as Chairman of the Scientific Advisory Group.

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ADDENDUM

ORGANIZATION OF
PACIFIC ISLANDS DEVELOPMENT COMMISSION

Members

Governor John A. Burns, Hawaii

Governor Carlos G. Camacho, Guam

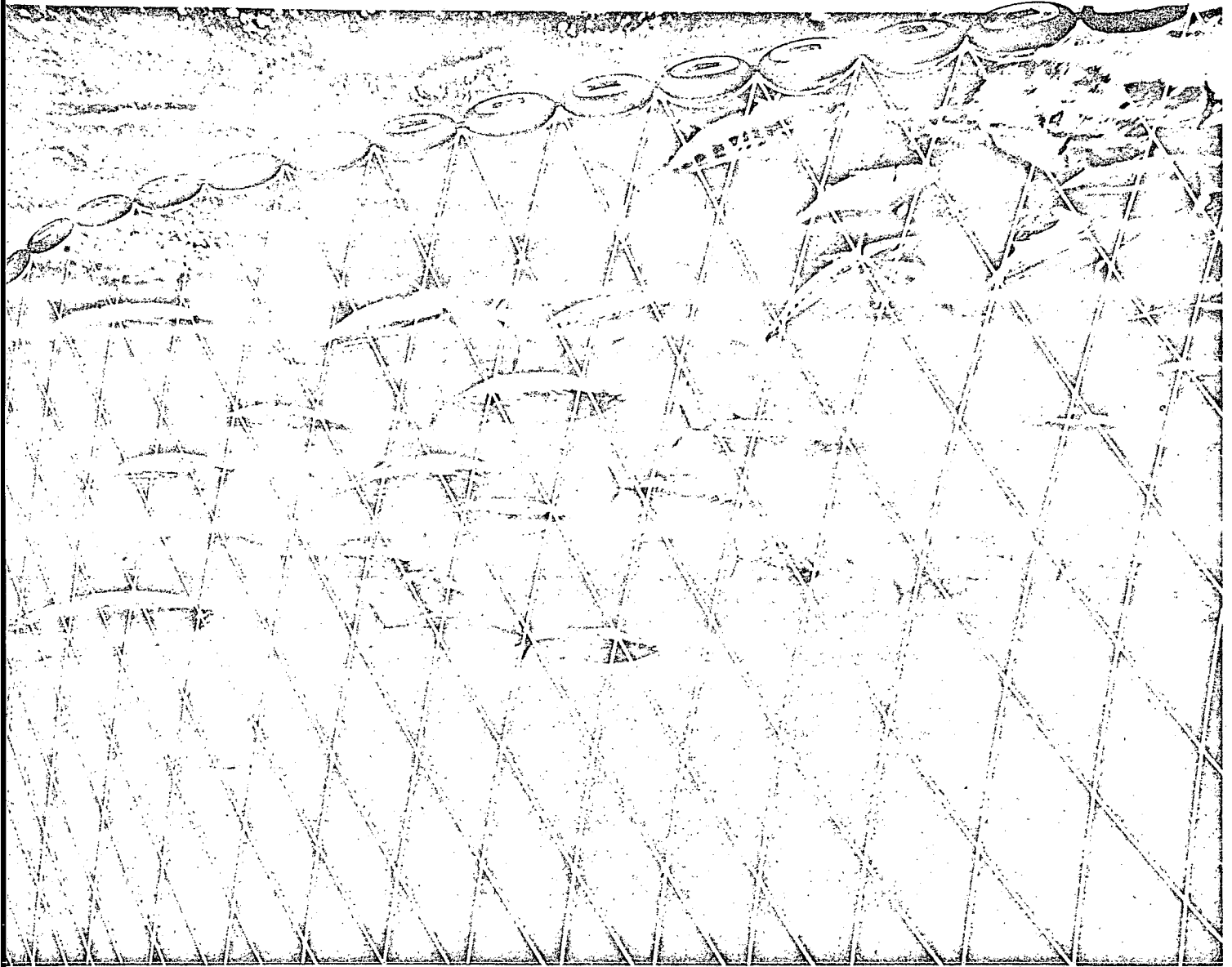
Governor John M. Haydon, American Samoa

High Commissioner Edward E. Johnston, Trust Territory of the
Pacific Islands

Executive Secretary

Andrew Gerakas, Hawaii

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