INTER-AMERICAN TROPICAL TUNA COMMISSION

A N N U A L M E E T I N G
April 19-20, 1966
Guayaquil, Ecuador

A G E N D A

(1) Opening of meeting by Chairman

(2) Consideration and adoption of Agenda

(3) Discussion of current program of research

(4) Recent history and development of the tuna fishery in the eastern tropical Pacific, Background Paper (B.P.) #1

(5) Condition of yellowfin stocks and recommendations for 1966, B.P. #2

(6) Research program and budget for 1966/67, B.P. #3

(7) Research program and budget for 1967/68, B.P. #4

(8) Proportion of contributions by Member Governments, B.P. #5

(9) Approval of Commission's Annual Report for 1965

(10) Election of Officers

(11) Place and date of next meeting

(12) Other business

The eighteenth regular annual meeting for the year 1966 convened at 10:00 A.M., April 19, 1966, in the Conference Room, National Fisheries Institute, Guayaquil, Ecuador.

The following persons attended the sessions:

Carlos Donoso Varas, Representative of the Ecuadorian Government, Ministry of Industries and Commerce

Representatives of Member Government:

Costa Rica:

José L. Cardona-Cooper, Commissioner
Eduardo Bravo P., Commissioner

Ecuador:

Héctor A. Chiriboga G., Commissioner
Luis A. Pareja Pera, Director General of Fisheries
Vinicio Reyes Egas, Ministry of Defense
Antonio Vaca Ruilova, Legal Advisor, Ministry of Industries and Commerce
Wilson Vela H., Advisor, Territorial Waters, Ministry of Foreign Relations

Mexico:

Rodolfo Ramírez Granados, Commissioner

Panama:

Rosa Parada de Püig, Commissioner

United States:

J. L. McHugh, Commissioner
John G. Driscoll, Jr., Commissioner

Advisors of Member Countries:

Ecuador:

Luis Arriaga, National Fisheries Institute
Luigi Farina, " " "
Romain Lafont, " " "
Harold Loesch, " " "
Aníbal Orbes, " " "

United States:

B. H. Brittin, Department of State
C. R. Carry, Tuna Research Foundation
Richard S. Croker, U.S. Embassy, Mexico
Clifton D. Day, California Packing Co.

William C. Herrington, Department of State
Donald R. Johnson, Bureau of Commercial Fisheries
William M. Terry, Bureau of Commercial Fisheries

Staff of Inter-American Tropical Tuna Commission

John L. Kask, Director of Investigations
William H. Bayliff, Senior Scientist
Antonio Landa, Scientist
Cuthbert M. Love, Oceanographer

Observers from Member Countries:

Ecuador:

Ernesto Donoso, "Pesca y Marina" Magazine, Quito
Fausto Silva, "Pesca y Marina" Magazine, Quito
Oswaldo Trujillo Bustamante, INEPACA, Guayaquil

Official Observers from Other Countries:

Canada:

William E. Ricker, Fisheries Research Board of Canada

Chile:

Ernesto Illanes Edwards, Ministry of Foreign Relations
Aníbal Palma Fourcade, " " " "
Luis Humbser Pinochet, Consul General of Chile

Guatemala:

Francisco Gosenza Galves, Ambassador of Guatemala, Quito

Japan:

Hiroshige Ehara, Fisheries Agency, Tokyo
Shojiro Shimura, Federation of Japan Tuna Fishermen's Association, Tokyo
Takaaki Masuyama, Japanese Embassy, Mexico

Peru:

*Oscar Guillén, Instituto del Mar del Perú

Representatives from International Organizations:

F A O:

Roy I. Jackson, FAO of the United Nations, Rome, Italy

*Sr. Guillén also served as scientific delegate for his Instituto in Peru.

Representatives from Scientific Institutes:

Chile:

Wilhelm Brandhorst, Instituto de Fomento Pesquero
Christopher J. Molteno, " " " "
Gunnar Saetersdal, " " " "

Peru:

Oscar Guillén, Instituto del Mar del Perú

Interpretation Team:

Carlos Diez, Interpreter
Genera Lara, Engineer

Agenda Item (1) - Opening of Meeting by Chairman

The Chairman, on opening the meeting, introduced Sr. Don Carlos Donoso Varas, of the Ministry of Industries and Commerce in Quito, who welcomed Commissioners and guests to Ecuador on behalf of the Government of Ecuador. Sr. Donoso commented on the need for the conservation of international marine resources and on the good work the Commission was doing in this regard.

Following Sr. Donoso's remarks of welcome, Capt. Héctor A. Chiriboga, Chairman of the Ecuadorian Section of the Commission, gave an excellent review of the Commission's work during the past several years, and ended his inspiring talk with the request that all countries fishing for tunas in the eastern Pacific join the Commission and thus add to the strength and effectiveness of the Commission's work.

The Chairman thanked the speakers for their welcome and their words on behalf of all those present.

The Chairman then continuing the meeting commented on the sad passing during the year of Commissioner Robert L. Jones of the United States during active service for the Commission. He drew attention to the great contribution made by Mr. Jones in the cause of conservation. All stood for a minute of silence in his memory and in his honor.

The Chairman then introduced the Commissions from all national sections. He also asked observers, industry advisors and friends to introduce themselves, stating that the meeting could proceed more expeditiously if we knew each other better.

The simultaneous interpretation equipment was then tested and its operation explained. As everything was found to be in order, the Chairman quickly passed to the next order of business.

Agenda Item (2) - Consideration and Adoption of Agenda

The Chairman explained that the proposed agenda followed the format and content of former agendas which had served the needs of the Commis-

sion well. This agenda had been before the Commissioners for study for several weeks. He asked for comments or amendments.

On motion of the USA Section, seconded by Ecuador the Agenda as proposed was unanimously adopted.

Agenda Item (3) - Discussion of Current Program of Research

In introducing this item, the Chairman pointed out that each year members of the Commission's staff were asked to review researches that had been carried out since the last Annual Meeting. He asked the Director of Investigations to proceed with the review.

The Director called attention to the fact that researches during the year had been tailored to fit the resources. Work at sea, which had been recommended by the Commission, had to be abandoned almost entirely because of shortage of funds, and some proposed and approved researches had to be curtailed or postponed. However, the accomplishments for the year he thought were still quite acceptable and he would ask the Commission's Senior Scientist, Dr. William H. Bayliff, to review the research highlights of the year. The Director stated further that an El Niño meeting would be held on April 21 and 22 by oceanographers of the South American research institutes and the Tuna Commission in the same building as the present meeting. This latter was a cooperative project between the Institutes of Chile, Peru, Ecuador and Empresa Puertos de Colombia with some help from the Tuna Commission. He would ask Mr. Cuthbert Love of the Commission's scientific staff to briefly review the project and its accomplishments to date, since these studies were of first line of importance to the four South American countries involved. Progress so far was commendable and he pointed to a completed data report to further illustrate the vigor and thoroughness with which this complex problem had been attacked.

At this point, the Director of Investigations called on Dr. Bayliff. In reviewing the Commission's research program, Dr. Bayliff in summary stated as follows:

The research program of the Tuna Commission continued along the same general lines as in previous years. Changes in requirements and lack of funds resulted in some changes in emphasis in the different programs, however. The most important studies carried out in 1965 were:

1. Statistics of the fishery

Detailed statistics of the catch, effort and catch per unit of effort are essential for studies of any fishery. The Commission has always placed high priority on the collection of these data, and will continue to do so. The total catch data collected from many sources, include the catches of all the countries fishing for tuna in the proposed regulatory area. The principal sources of catch-per-unit-of-effort data are the logs of purse-seiners and baitboats. These are combined with the catch data to estimate the standardized total effort by all vessels.

The most notable use of the statistical data is with the mathematical models which are employed to determine the status of the yellowfin and skipjack fisheries. These data are also used in conjunction with

other data for studies of the relationship of the catch per unit of effort to oceanographic conditions, studies of year-class strength, computer simulation studies, and tagging studies.

Attention is being given to the improvement of the collection and interpretation of the statistics. For regulatory purposes, a system of rapid estimation of the catch, effort and catch per unit of effort to any given time has been developed. Efforts are being made to develop a method for standardization of skipjack effort, and the method of standardization of yellowfin effort is being scrutinized. Studies of the catch, effort, and catch per unit of effort by the Japanese longline fishery and by the small-boat fisheries of Latin America are in progress.

2. Population dynamics

The tuna fishery of the eastern Pacific Ocean has been simulated on a digital computer. This study is of great value for determining the probable reaction of the stocks to conditions which may occur in the future. Estimates of such parameters as growth, mortality, and vulnerability to the fishery are included in the model. Use of other reasonable estimates of these parameters in the model furnish information on which estimates most need to be improved, and thus which future field investigations should have the highest priority. The results to date indicate that the Schaefer model is a valid method for determination of the status of the yellowfin stock.

3. Vital statistics, population structure, and migrations

The collection of length-frequency data of fish from the commercial catch has continued. These data have been used, among other things, to estimate the total mortality rate and year-class strength of yellowfin and to estimate the parameters of age and growth of skipjack.

Genetic studies by starch-gel electrophoresis of the muscle proteins, eye lens proteins, serum, and hemoglobin of yellowfin and skipjack have been made. The results to date are encouraging, but considerable future analysis is needed. Due to lack of personnel, little has been done recently on blood serum antigens.

Due to lack of funds, only one tagging cruise (not a charter cruise) was undertaken in 1965. A double tagging technique was developed which makes it possible to estimate the rates of shedding of the tags which, in turn, is necessary for estimation of the mortality rates. Work was begun on the extremely difficult task of estimation of the rates of dispersion of tagged fish. The problem is confounded by inadequate fishing effort in many fishing areas, plus insufficient numbers of tagged fish.

4. Biology and behavior

A detailed study was made of the size structure of tuna schools to determine the feasibility of increasing the minimum legal size limit for yellowfin tuna. The results indicate that in order to catch less than 20 percent yellowfin under 28 pounds in a purse-seine set, it would be necessary to avoid all schools of mixed yellowfin and skipjack and all schools of pure yellowfin in which the fish averaged less than 40 pounds. This would not be economically feasible.

It has been indicated that funds for investigation of skipjack are badly needed. Since such funds have not been forthcoming, the available manpower has been devoted to preparation of a bibliography of the skipjack. This is an important part of the research, and it is anticipated that it will be very useful if and when funds for proper investigation of this species become available.

5. Baitfish

An investigation of the small anchovy known as the "colorado" at Manta, Ecuador, had to be terminated due to lack of funds. Analysis of research conducted in the Gulf of Panama in previous years was completed, and routine processing of catch, effort, and catch-per-unit-of-effort data from the logbooks of baitboats has continued.

6. The Japanese longline fishery

Japanese longline fishing boats entered the eastern Pacific Ocean in appreciable numbers for the first time in 1956. Since then, the number of boats has increased and the effort has extended nearer the mainland of the Americas. From 1956 through 1963, the principal species sought was the bigeye tuna, which made up about 65 percent of the catch. The other principal species, in order of importance, were yellowfin (about 15 percent of the catch), blue marlin, striped marlin, and albacore. The yellowfin catch reached a maximum of 5,600 short tons in 1962. During these years, fishing took place mostly between 10°N and 10°S. By 1964 the catch per unit of effort for bigeye had declined. Some of the boats left the area and others shifted their operations to the southern Mexican coast where the catch is mostly striped marlins and sailfsih. As a result, the catch of striped marlin was nearly equal to that of bigeye tuna in 1964. Yellowfin made up about 13 percent of the catch in that year.

In cooperation with scientists from the Nankai Regional Fisheries Research Laboratory studies have been made of the Japanese longline fishery in the eastern Pacific Ocean and of the biology of the yellowfin and bigeye tunas caught by this fishery. This is important, as the fish taken by the longline fishery are larger, on the average, than those taken by the surface fishery.

7. Oceanography and tuna ecology

The Commission is engaged in a cooperative study with Chile, Peru, Ecuador, and Colombia, of the El Niño phenomenon. This involved series of oceanographic stations taken off the Pacific coasts of each of the four South American countries at quarterly intervals. The data are sent to the Commission for processing on the computer at the University of California, and will soon be published by the National Fisheries Institute of Ecuador. Mr. Love will give a more detailed account of this cooperative project.

The Commission has also made four oceanographic cruises in the Panama Bight, chartering for this purpose the Empresa Puertos de Colombia's vessel, Bocas de Ceniza. Relatively little is known of this area. Tuna are caught there seasonally, so comparison of the oceanographic conditions with the tuna catches is expected to be of considerable value.

At the conclusion of Dr. Bayliff's remarks, the Director of Investigations asked Oceanographer Cuthbert Love to briefly review the cooperative El Niño project as carried out during the past year. A summary of Mr. Love's remarks follows:

The El Niño project is an international cooperative project for study of the ocean waters along the west coast of South America, with the objective of collecting more data about, and reaching a better understanding of, the phenomenon called El Niño. The meteorological and oceanographic consequences of El Niño can cause serious economic difficulties to several countries in the area. The project hopes to collect data which will be of assistance in the eventual development of forecasting techniques which would permit advance warning of an El Niño occurrence.

The countries and institutions at present engaged in the project are: Chile (Instituto de Fomento Pesquero, Santiago), Colombia (Empresa Puertos de Colombia), Ecuador (Instituto Nacional de Pesca del Ecuador, Guayaquil), Peru (Instituto del Mar del Perú, Callao), and IATTC.

Field work on the project began in November 1963 with cruises by Ecuador and Peru and has continued until the present.

Cruises are at quarterly intervals. Each country runs either one or two lines of oceanographic stations (sections) off its coast. IATTC has been involved in the project in several ways: by sending personnel to assist on the Colombian cruises, machine processing of the data, and assisting in preparation of the data reports.

The ACENTO Program, on the other hand, is a joint study of the oceanography of the Panama Bight region by IATTC and Empresa Puertos de Colombia. The field work covered one year, with quarterly cruises in May, August, and November 1965 and February 1966 aboard the Colombian vessel Bocas de Ceniza which was chartered by IATTC. The first three cruises consisted of 38 stations each; for the last cruise the area covered was enlarged and 52 stations were made. A variety of oceanographic parameters were measured. Analysis of the data is still in progress. One anticipated result of the program is a better understanding of why tuna catches vary seasonally and from year to year, and what oceanographic conditions are conducive to good catches, and vice versa.

On completion of Mr. Love's statement, the Chairman commented favorably on the progress of investigations during the year and he remarked on the splendid cooperation which obviously existed among universities and national and international research organizations, which allowed such complex international researches to be undertaken and to be carried out.

At this point, the Chairman moved on to the next item.

Agenda Item (4) - Recent History and Development of the Tuna Fishery in the Eastern Tropical Pacific

The Chairman pointed out that this subject had been dealt with in Background Paper No.1. At the request of the Chairman, the Director of Investigations assisted by staff scientist Antonio Landa summarized the contents of B.P. No.1 as follows:

Fishermen from 9 countries (Canada, Chile, Colombia, Costa Rica, Ecuador, Japan, Mexico, Peru and the USA) fished for tuna in the Commission's proposed regulatory area during 1965. Their combined catch of yellowfin and skipjack amounted to 89,500 short tons and 86,200 short tons (preliminary figures), respectively. The catch of yellowfin exceeded the recommended quota (81,800 short tons) by almost 8,000 short tons and exceeded the equilibrium yield by about 3,000 short tons, resulting in a slight further reduction in yellowfin stock size over last year.

The United States fleet continued to be the major force in the fishery, catching as it did 87 percent of the yellowfin and 64 percent of the skipjack. The number of vessels employed in the U.S. fishery based in southern California and Puerto Rico was 155 of which 111 were purse-seiners and 44 were baitboats. The total carrying capacity of the U.S. fleet was approximately 40,000 short tons. This is an increase of some 8000 short tons over 1962 when overfishing of yellowfin first became apparent.

Changes in the Latin American tuna fleet during the year were summarized by Commission scientist Antonio Landa. Mr. Landa is stationed in Lima, Peru from which point he covers the Latin American fishing ports several times a year. He pointed out that Chile in 1965 had 9 purse-seiners as against 4 in 1964. Their catch, however, consisted mostly of bonito and skipjack; the catch of yellowfin (at the southern limit of this species distribution) during 1965 was negligible.

Peru had 7 large purse-seiners (all American flag vessels) and 11 bolicheros or small purse-seiners during 1965 as it had in 1964. All 11 Peruvian bolicheros, however, had moved to other fisheries or out of the country by October 31, 1965. Their catch of yellowfin during the year was much reduced over that of last year.

The 1965 Ecuadorian fleet consisted of 65 non-refrigerated baitboats and 3 bolicheros. This represented 8 more baitboats and 1 more bolichero than in 1964. The Ecuadorian fleet catches mostly skipjack but they also caught about 700 tons of yellowfin.

Costa Rica had 2 vessels (baitboats) or the same as in 1964. These vessels, with some fish from American flag vessels, caught about 650 tons each of yellowfin and skipjack, and Colombia's Pacific catch of about 200 tons each of yellowfin and skipjack was made near shore by relatively few small vessels.

Canada entered the eastern Pacific tuna fishery during the year with a new modern purse-seine vessel, and Japan continued to fish by the long-line method with a reduced number of Japan-based ships. Due to reduced catches of the principal species of interest (the bigeye and billfish), Japan's effort in the area was reduced by some 40 percent, and her incidental catch of yellowfin was reduced accordingly.

The skipjack fishery continued unpredictable and the catch per standard day's fishing bore no recognizable relation to the total effort expended. The catch of skipjack of 86,200 short tons was higher than the 1955-64 average, but less than the record catch of 103,000 short tons in

1963. The scientific staff of the Commission believes that the skipjack caught in the eastern Pacific form a part of a larger stock and that catches of this species could be substantially increased if we knew more of its distribution in time and space. With the demand for tuna constantly growing and the yellowfin taken in this part of the tropical Pacific already fully utilized, it falls to the skipjack (and perhaps the bigeye) to supply the additional catches needed.

More research on this species seems to be clearly indicated.

Agenda Item (5) - Condition of Yellowfin Stocks at the End of 1965 and Recommendations

In introducing this item, the Chairman pointed out that this subject had been covered by Background Paper No.2 which had been in the hands of Commissioners and Industry Advisors for several weeks. At the request of the Chairman, the Director of Investigations and Dr. Bayliff reviewed the contents of B.P. No.2. Their statement can be summarized as follows:

The catch per day's fishing by standardized purse-seiners (in this instance Class III purse-seiners or those between 100 and 200 short tons carrying capacity), the dominant gear in the area, is a fairly good indicator of the relative abundance of yellowfin even though this measure is influenced to some extent by availability and vulnerability.

The catch per standard day's fishing (CPSDF) has varied over the past several years as follows:

	1960	1961	1962	1963	1964	1965
Catch YF (millions of lbs)	244.3	230.9	174.1	145.5	203.9	177.2
Effort (standard days)	35,841	41,646	40,499	33,242	39,482	40,075
Catch per day	6,817	5,544	4,298	4,376	5,166	4,420

As can readily be seen, in 1960 and 1961, the first 2 years in which the purse-seiners were the dominant gear, the CPSDF declined markedly. The catches of yellowfin in both the years were considerably higher than the maximum equilibrium yield of approximately 91,000 short tons. This high catch reduced the stock size, which in turn caused the decline in the CPSDF. In the unregulated fishery which followed, the lower stock level persisted and under a heavy fishery in the years following, the CPSDF remained low. In 1963, due to lower fishing effort brought about by economic forces outside the fishery itself, the stock was allowed to recover, to very nearly its optimum level. This, as would be expected, resulted in a higher CPSDF in 1964. The unregulated catch in 1964 was again considerably higher than the calculated equilibrium level so that the stock size declined once more and was lower again in 1965.

Most recent calculations of the maximum equilibrium yield of yellowfin is about 91,100 short tons. The catch per standard day's fishing at

the stock size that would yield the maximum equilibrium yield is 5,677 pounds at an annual effort level of 32,095 standard days of fishing. In 1965 the effort of more than 40,000 standard days of fishing produced 89,000 short tons of yellowfin from an already reduced stock. This heavy fishing reduced the stock a little more, so that an equilibrium yield of about 85,000 short tons can be expected for 1966. To bring the stock back to its optimum level, it is calculated that about 17,000 short tons should be restored.

The restoration can be achieved by a formula having different time scales roughly as follows:

Schedule	Catch quota	Tons restored	Years to optimum
A	85,000 s.t.	0	Never
B	81,600	3,400	5
C	80,800	4,200	4
D	79,300	5,700	3
E	76,500	8,500	2
F	68,000	17,000	1

Any of the above schedules can be chosen without further reducing the stock size. All schedules except Schedule A would start some restoration. Schedule F would be the most profitable from the point of view of fish production as after one year of rigorous curtailment, approximately 91,000 short tons of yellowfin could be removed from the fishery every year thereafter and this with considerably less effort (about 20%) than it took to make a catch of 89,000 short tons from a smaller stock in 1965.

Because of the importance of this matter, the Chairman recommended further study of B.P.No.2, and the proposed schedule during the evening. He would open the subject for discussion again the next day.

At this point the Chairman announced that a cocktail party hosted by the Director of Fisheries of Ecuador, Sr. Luis Pareja Pera, would be held at the Tennis Club during the evening and that all Conference participants were invited to attend. He also announced that a reception hosted by the U.S. Section would be held at the residence of the Consul General of the USA on Wednesday (April 20) evening to which all participants were invited.

The Chairman thanked the two prospective hosts for their generous hospitality and said he felt sure all would gladly accept their kind invitation.

Agenda Item (6) - Research Program and Budget (Revised) for Fiscal Year 1966/67

The Chairman in introducing this subject pointed out that the item had been fully covered in Background Paper No.3. He further stated that the Director of Investigations had requested an opportunity to review the matter of this budget and budgets in general before the assembled Commission. He then asked the Director to proceed.

The Director of Investigations reviewed the budget history of the

past few years and how some uncertaintaies at present inherent in establishing budget amount and scheduling are passed on to research programming and staff and have a tendency to undermine both efficiency and morale.

The proportion of contributions made by Member Governments toward the operation of the Commission is based by treaty agreement on a "catch-utilization" formula: that is the country that catches and utilizes the most yellowfin and skipjack from the eastern tropical Pacific pays proportionately the highest contribution. As the USA catches and utilizes by far the greatest amount of these species, her contribution is proportionally the greatest. Thus any action taken by the U.S. government on any proposed budget effectively determines its size.

The actual size of a recommended budget is theoretically determined by operational needs as assessed by the Commission in joint session. This amount in turn is usually arrived at after careful study and recommendation by the Commission's Director of Investigations assisted by members of his staff. All programs and budget proposals are in the hands of all Commissioners at least 2 months before action on the recommendation is required at a Commission meeting. So each program and budget receives long and careful study by Commissioners from all national sections.

So far as Commission records show, in its 15 years of operation only in two years (1958 and 1959) have recommended amounts to carry out necessary programs been supplied. In all remaining years it has been something less than the amount requested. As other Member Governments cannot be billed for their contribution until U.S. government budget action is known, the effective amount for continued operation of the Commission is established by the U.S. Bureau of the Budget and the subsequent action of U.S. Congress Committees, and the amount established by these organizations is often not known until well along in the fiscal year in which programs are to be executed.

The U.S. contribution is the effective amount in another very important sense too. Besides being the biggest contribution, it is the only contribution that is paid on time. It is no secret that continuing staff salaries and other operating costs which are now running at the rate of about 35 thousand dollars a month, cannot be paid regularly from late or from unpaid contributions. For instance, now in April of 1966, with only 2 months left in this fiscal year, only one Member Government has paid up for this year, and one government is 2 years in arrears. Payments made late in the operational year, or payments deferred for a number of years, cannot be counted on for effective program planning or execution.

In addition to late payments or deferred payments, the Commission's scientific staff is often troubled by the fact that we are almost regularly in the dark until well along in the operational year and at times until the middle of the year as to just how much will be available to carry out any program. Thus programs made two years in advance, as required by the Commission, have to be adjusted 3 or 4 times (according to latest budget intelligence) before the final budget is known. It is only when the final authorized U.S. budget is known that other governments can be billed for their shares. Thus late billing and late receipts are built into the system. It is not necessary to point out that this does

not lend to efficient programming or program execution.

From the year 1962, when demonstrated overfishing of yellowfin required the Commission to formulate and recommend conservation measures, two important and pressing problems were brought into sharp focus. One was the need for better and more detailed knowledge of the population structure of yellowfin, particularly near the boundaries of the proposed regulatory area, and the other was the need for further information regarding the distribution and abundance of skipjack, especially in areas beyond the present fishery, since this presumably underfished species would have to bear increased fishing pressure as demand for tuna increased and no greater yield of yellowfin could be expected. These two necessary problems required additional moneys for their solution, especially for vessel charter, as fish can only be effectively studied at sea during the field data collection stage. Each year since 1962, the Commission has requested funds for this purpose, but so far such support has not been forthcoming. For this reason, it has not been possible to make the most efficient use of the Commission's professional and support staff.

During the 5-year period from fiscal 1962 to fiscal 1966, the Commission's appropriations have increased by 20 percent, but staff salaries alone, which account for more than 75 percent of the present budget, have increased by 27 percent. Other operating costs have increased proportionately so that in total we are actually operating with smaller real resources than we were in 1962 when the Commission first recommended conservation measures and when it considered increased research activities as highly necessary to comply with treaty requirements and to keep abreast of rapid fishery developments in their area of responsibility.

This brings us to the approved program of work and the budget for carrying it out for 1966/67. This, as you will recall, included work at sea discussed above. The total recommended budget amounted to $823,403. On advice from the U.S. Department of State we have learned that the U.S. contribution will most probably be reduced to the same level as that authorized for last year. This would make the total new budget $459,983 or $363,420 less than requested. This effectively cuts out work at sea again, and we will not even have this amount unless all members pay their contributions.

I have not tried to detail the program under the reduced schedule for this year (Appendix I) because the budget still has several hurdles to get over before it is finalized. I will, therefore, Mr. Chairman, once more have to ask the Commission to approve the best program that the staff can come up with after the final amounts available for program execution become known.

On recommendation of the United States Section, approval for the recommended procedure was made unanimous.

At this point the Chairman pointed out that progress thus far in covering the agenda had been quite good and as everyone had another important engagement for the evening, he proposed that the meeting adjourn for the day.

Before adjournment, the Chairman announced that the Directors of

the Instituto Nacional de Pesca del Ecuador, Sr. Francois Bourgois and Capt. Héctor A. Chiriboga had arranged for a conducted tour of the new Instituto building at 9:00 A.M. the next day, as well as a boat cruise on the Instituto's research vessel on the river starting at 3:00 P.M., if conference timing and arrangements allowed. All participants were cordially invited.

It being 5:30 P.M., the Chairman adjourned the meeting until 9:30 A.M. the following day.

April 20, 1966

The Chairman called the meeting to order at 9:55 A.M.

Agenda Item (7) - The Research Program and Budget for 1967/68

The Chairman referred to Background Paper No.4, which dealt in considerable detail with the proposed program and budget for this fiscal year. This paper had been before the Commissioners and government authorities for several weeks and had been thoroughly scrutinized. The Chairman then asked the Director of Investigations if he wished to comment on B.P. No.4 or any other aspect of this important subject.

The Director pointed out that most of the remarks he had made about Agenda Item (6) dealing with the former year's budget applied here as well. It might prove worthy of note, however, that the world catch of all tunas rose to a high in 1962 of about 900 thousand metric or about 1 million short tons. The catch fell somewhat in 1963 and presumably again in 1964. This fall was occasioned in large part by the precipitous fall in the catch rate of the tropical tunas, yellowfin and bigeye, by the Japanese longliners from a high of about 8 to 10 per hundred hooks a few years ago to 2 or 3 per hundred hooks today. Demand for raw tuna and effort to catch it remained high.

In the eastern tropical Pacific, the area of special interest to this Commission, it is well known now that the yellowfin stocks taken by the surface fishery were already fully utilized. The catch of approximately 90 thousand short tons taken this year was made by applying the very high effort of some 40 thousand standard days of fishing. At the present reduced stock size, it would take an even greater effort to make a catch of the same size next year. The skipjack catch on the other hand has varied from year to year according to availability, no matter what effort is applied. How then can increased demands be met?

The best answer we have to this question now is the same answer that the Commission has highlighted for several years, namely that the best way to increase the catch for tropical tunas in the eastern Pacific is to make the best use of known resources of yellowfin by maintaining their stocks at a level where the most can be continuously caught with the least effort, and to learn more about the erratic skipjack, and its distribution in time and space, so that this apparently underfished species could supply more of the raw material which is obviously in great and growing demand.

This need for more research at sea is the principal difference in

the reduced budget which has been authorized for 1965/66, and the budget recommended by the Commission for last year and which was also reduced, and that which your Director of Investigations is recommending again for 1967/68. It is your staff's view that these researches are much needed and should be carried out as expeditiously as possible. We have the professional staff and the desire to do the job, if given the tools. The tools in this instance being charter money for fishing and oceanographic vessels required to follow the researches at sea wherever they may lead.

The Chairman asked for comments on the proposed program as detailed in B.P.No.4 (Appendix II) or on the Director's remarks. Several comments from the floor and from Commissioners followed on the subject of necessary programs and rising costs.

The adoption of the program and budget was moved by the Commissioner from Mexico, seconded by Costa Rica and unanimously agreed to by voice vote. All delegates emphasized that the final amount of contribution by their governments would, however, be determined by appropriate authorities in their respective governments.

The Chairman and the Director thanked the Commissioners for their confidence and support and they expressed the hope that governments would see fit to support this program which it appeared was necessary for the Commission to carry out its obligations under the treaty which created it.

Agenda Item (8) - Proportion of contributions by Member Governments

The Chairman, in opening this item for discussion, pointed out that the subject of proportion of contributions fitted in nicely with Item 7 and that it had been dealt with in Background Paper No.5 (Appendix III). He asked the Director of Investigations if he wanted to say anything further on this subject.

The Director pointed out that the proportion of the payments made by Member Governments toward the operation of the Commission was determined on the basis of the "proportion of the total catch from the fisheries covered by this Convention utilized....etc. by each High Contracting Party". This formula was written into the treaty, hence the instructions were clear. Because of the necessity of presenting a program and budget 2 years in advance, the proportions cannot refer to the same year of catch as the program. Thus the proportions for the 1967/68 budget are based on "catch-utilization" in 1965, the most recent year for which these data are available. Under this formula, the proportions for 1967/68 are as follows:

Total budget requested: $859,992

U.S. share	$789,503
Ecuador	46,786
Mexico	16,895
Costa Rica	6,308
Panama	500
Total	$859,992

The Chairman asked delegates if they wished any further discussion on this subject.

At this point it was moved by the USA, seconded by Ecuador and unanimously adopted that the proportion of contributions as reviewed in B.P. No.5 be adopted.

After the disposal of Items 7 and 8, the Chairman thought the time appropriate to return to Agenda Item 5, the completion of which had been held over from the previous day. This item dealt with the condition of the yellowfin stocks and Commission recommendations for conservation measures. In reopening this item for discussion and Commission action, the Commissioner from Mexico asked for the floor.

Biologist Rodolfo Ramirez Granados, the Commissioner from Mexico, spoke eloquently and reasonably on the research program of the Commission and the special obligation of Member Governments and the almost equal obligation of other governments fishing in the eastern tropical Pacific to act on the well-reasoned evidence supplied by the Commission's staff. He referred again to the schedule of choices that had been presented by the Commission's Director and staff, and he said taking into consideration the sociological and economic factors as well as the biological, he would move the adoption of a schedule about half-way down the scale, namely Schedule D which proposed a catch quota of 79,300 short tons of yellowfin for the year 1966 and which would, according to the schedule presented, restore the stocks of yellowfin tuna to their maximum sustainable level in 3 years.

The motion was seconded by the USA whose delegate stated he thought the proposal a very reasonable compromise and unanimous agreement was registered by voice vote.

The Chairman then asked that the adopted quota be framed into a resolution and read back to the Commission in its final form.

The Director of Investigations suggested that, if the wording of the resolution adopted last year by the Commission would serve, then with the substitution of the right year and of the quota figure just adopted, he could read the resolution immediately.

This procedure was agreed to and the resolution was read in its entirety (Appendix IV).

The Chairman referred the full resolution, as read by the Director, to the Commission, and without further discussion it was unanimously adopted.

Agenda Item (9) - Approval of the Commission's Annual Report for 1965

The Chairman pointed out that the draft of the 1965 Annual Report had been in the hands of Commissioners for more than 2 months and thus all had had full opportunity to study it. He asked for comments or criticisms. Several delegates expressed approval of the document as presented. On motion from Ecuador, seconded by the delegate from Mexico, the Commission unanimously approved the Annual Report and directed that it be printed and circulated.

Agenda Item (10) - Election of Officers

The Chairman pointed out that Commission officers were rotated each year and that according to the Director of Investigations, who kept track of these things, the turn for Chairman falls to Panama and the position of Secretary to the USA.

The Commissioner from the U.S. moved that Juan L. de Obarrio of Panama be named the next Chairman. This was seconded by Costa Rica and enthusiastically and unanimously agreed to. The delegate from Panama thanked the Commission for this honor.

For the position of Secretary, Commissioner Bravo of Costa Rica nominated Mr. Bennett of the USA. This was seconded by Capt. Chiriboga of Ecuador and unanimously agreed to. The new slate of officers was welcomed with applause.

Agenda Item (11) - Place and Date of Next Meeting

The Chairman asked the Director of Investigations to speak to this subject.

The Director reminded Commissioners that the present meeting was originally scheduled for San José, Costa Rica. As it was not convenient for Costa Rica to act as host, Ecuador undertook to hold the present meeting in lovely Guayaquil. This would mean that the next place of meeting according to rotation would, if convenient, be held in San José, Costa Rica.

The Chairman, as Chairman of the Costa Rican Section, and in the name of the Government of Costa Rica, invited the Commission to hold the next meeting in San José. This was agreed to with a round of applause.

The Chairman then asked the Director of Investigations as to convenient dates for the meeting from the staff's point of view.

To this the Director replied that a date should be sufficiently late in the new year to allow the staff to assess the previous year's fishery and early enough to let fishermen of fishing countries know what conservation recommendations the Commission made to allow proper implementation. A date in April, similar to this year's, would he thought be suitable and he suggested April 11 and 12, 1967 as possible dates.

It was pointed out by the Commissioner from Costa Rica that April 11 was a Costa Rican holiday. April 12 and 13 were suggested instead.

These dates appeared satisfactory to all. It was unanimously agreed that the 19th Annual Meeting of the Commission be held in San José, Costa Rica on April 12 and 13, 1967.

Agenda Item (12) - Other Business

The Chairman in opening this item stated that he and the Commission would like to hear a few words from all official observers who were good enough to grace our meetings during the past few days, but before he

called on them, he would ask the Director of Investigations if he had any matters he would like to refer to the Commission.

The Director stated that he had two items on which he would like to have Commission advice. The first of these was with respect to doing some tuna tagging and oceanographic work in the Gulf of Panama area for the Panama Canal Commission, a body appointed by President Johnson of the USA to advise him on the feasibility of construction and best location of a new sea-level canal in the general area of the Isthmus of Panama. The Commission had been approached by contractors of the Canal Commission to study the oceanography of the Pacific Canal approach and some of the living organisms (in our case the tunas) that might be affected by canal construction. As it appeared to the Director that both such studies would be in the direct interest of the Commission, he thought it might be advantageous to continue these studies (already in progress under ACENTO) if adequate financing were supplied by the Canal Commission or its agent.

The Commissioner from the USA stated that he could see no objection to conducting such studies which appeared to be of direct interest to the Commission and would help with financing as well. In directing a question to the Director, he asked if a tagging project of this kind would be of help in the proposed skipjack tagging which was to be undertaken by the Commission. The Director's reply to this was that so far as skipjack were tagged, it would be of direct help.

All Commissioners commented favorably on this matter and on request of the Chairman gave unanimous approval to carry out such studies if favorable conditions of work, program and financing were obtained.

The Director pointed out that as yet no firm proposals had been made and that the approval given was approval in principle only. He would keep Commissioners advised of developments.

The second matter brought up by the Director was about notification of all governments whose nationals fished in the convention waters of the eastern Pacific of the action taken by the Commission at this meeting with respect to a catch quota for yellowfin. In past years, the Commission had directed him to notify all countries of this action. He presumed that the Commission wished him to take this action on their behalf again.

The Chairman, with the consent of all Commissioners, directed that this be done.

In concluding this item, the Director thanked the Commissioners for their confidence in the researches and recommendations he presented to the Commission. He stated further on behalf of the staff that he hoped that governments this year would see fit to implement the Commission's recommendations since it was becoming discouraging to Commission staff that their studies and strong scientific evidence with respect to needed conservation measures were not being used to the advantage of all fishing countries.

As this concluded matters of business on the item, the Chairman called on official observers to say a few words.

In introducing the first speaker, Mr. Roy I. Jackson, Assistant Director General for Fisheries of FAO of the United Nations, and Official Observer from that body, the Chairman noted that FAO had been a lively force in fisheries development of this area of the world, and that the Commission had worked very closely with FAO-Fisheries Department. The Commission was pleased, he stated, that FAO sent such a high-ranking official to this meeting of the Commission and that on behalf of the Commission he welcomed him and thanked FAO.

Mr. Jackson in his remarks complimented Ecuador on the new Instituto building, touched on the close relation of our two organizations, FAO and IATTC, over many years, a relationship which had been further ratified recently by an exchange of letters. It was FAO's purpose to help regional fisheries organizations not to supplant them. He called attention to FAO fellowships to study with IATTC, to IATTC's close relation with South American fisheries institutes with which FAO is associated and to the El Niño and Guayaquil cooperative research projects as examples of close cooperation. With FAO's former fisheries division recently being elevated to a Department, he felt that his organization could be even more effective in assisting countries and regional organizations such as IATTC in the future than they have been in the past.

He called attention to the fact that all governments represented here were members of FAO and that a meeting of fisheries Directors of 30 governments, including some at this meeting, would be held in Rome soon. These Directors were to serve as advisors to the Director General in formulating world fisheries programs and policy.

Commenting on the Commission's researches, he said they were of a high quality, but that countries fishing in the eastern Pacific were doing an injustice to these good researches and a disservice to the cause of conservation when such sound evidence and recommendations were not followed. Recent ratification of the U.N. Fishing Convention on the High Seas made the practice of conservation a further responsibility and obligation of all fishing countries.

The Chairman next called on Dr. W.E. Ricker, Observer from Canada to say a few words. In introducing Dr. Ricker, he stated that the Commission considered itself very fortunate in the quality of delegates and observers that countries sent to Commission meetings. In this case, Dr. Ricker was an outstanding fisheries biologist with a world-wide reputation. He welcomed Dr. Ricker to the meeting and hoped he had found it instructive.

Dr. Ricker replied that he was happy to be present and though this was the first meeting of the Commission that he had attended as Observer, he had known many of the Commission's scientists for a number of years and that he was very familiar with Commission researches which he thought were of high quality.

Canada now has only one boat fishing in the eastern Pacific. He was surprised to find that this small effort showed up as significantly as it did in the Commission's statistics. More boats are being built so that Canada's share will almost surely increase.

Canada has had a long history of cooperation with international fisheries commissions. She is a member of six or seven now. If the Commission's recommended conservation measures are implemented, it was his view that Canada would go along.

He wished the Commission every success in their important work.

The Chairman thanked Dr. Ricker for his message and then asked the Japanese Observer to say a few words. The Chairman pointed out that Japan during the past few years had sent strong delegations to the Commission's meetings and this year was no exception. Japan had each year signified her intention to abide by Commission regulations if such were generally adopted. For this splendid cooperation and for the flow of Japanese catch statistics to the Commission's headquarters we were most grateful.

Mr. Takaaki Masuyama, speaking for the Japanese delegation, stated they were happy to be in Guayaquil and at another meeting of the Commission. Japan was interested in the Commission's work and they were happy to cooperate in supplying statistics. His delegation would report back to their authorities in Japan on the meeting and on recent developments.

The delegation from Chile stated, through the person of Ernesto Illanes E., that his government was interested in the work of the Commission and they were happy to be present to keep track of developments. He was complimentary to the scientific accomplishments of the Commission.

The Peruvian Observer, Oscar Guillén, said that he too was happy to represent Peru at the Commission's meeting and that he would report back to his government.

With this the Chairman again recognized all delegates, industry advisors, scientists and friends and thanked them for their excellent cooperation and attention. He thanked the Government of Ecuador for their hospitality and many services during the meeting as well as the Director and staff of the Instituto. He also paid tribute to the Commission's staff for their continuing good work.

Capt. Chiriboga, in the name of all Commissioners and others present, thanked the Chairman for a brilliant performance. This latter was greeted with prolonged applause.

At this point, at 1:00 P.M., the Chairman declared the 18th Annual Meeting of the Commission closed.

May 16, 1966
La Jolla, California