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COMISIÓN INTERAMERICANA DEL ATÚN TROPICAL

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**PROGRAM AND BUDGET FOR FISCAL YEAR 2008
(OCTOBER 1, 2007-SEPTEMBER 30, 2008)**

Requested research budget FY 2008	US\$ 5,503,347
Agreed research budget FY 2007	US\$ 5,336,110
Change	US\$ 167,237

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1. PREFACE

In this document the proposed research program and estimates of expenditure for FY 2008 are presented, by project and specific budget objects, in US dollars. At the 73rd meeting of the Commission, in June 2005, the FY 2007 budget of \$5,336,109 was agreed.

Consistent with last year's presentation, the paper reflects the cost of the observer program, how it is funded jointly by the IATTC and the Agreement on the International Dolphin Conservation Program (AIDCP), and how other AIDCP costs are funded.

Expected regular operations expenditure in FY 2006 is \$5,187,171, with an expected total surplus for the year of \$124,478.

The budgets proposed for FYs 2007 and 2008 were made assuming inflation will increase general costs by 3% and salaries by 3.4%.

The costs of the IDCP exceeded its income during 2000-2004. At their meeting in June 2003, the Parties to the AIDCP approved a plan to cover all of the costs of the IDCP. In 2005 revenue exceeded expenditure and at the time of writing, the revenue for the AIDCP this year has been \$1,975,039, compared to a forecast expenditure of \$2,152,592.

Before 2003, the Commission has had sufficient cash reserves to carry its operations into the new financial year without receiving member contributions at the beginning of the year. This is no longer the case, and in 2003, the Commission amended its financial regulations to require member contributions to be paid by 1 November of each financial year. Not all members comply with this regulation. Of the \$3,866,403 in total contributions outstanding, \$3,251,767 is from the current year.

2. INTRODUCTION

The IATTC was established in 1950 by a Convention between the governments of the Republic of Costa Rica and the United States of America, and now has 15 member governments. The Convention mandates that the populations of tunas, tuna-like fishes, and other kinds of fish taken by tuna-fishing vessels in the eastern Pacific Ocean (EPO) be maintained at levels of abundance that can support maximum yields on a sustained basis and provided for a program of investigation as a basis for management of the fisheries. Acquiring the information necessary to determine those levels of stock abundance requires a broad-based, comprehensive research program, which includes the collection of detailed data on the fisheries that take those species, and ancillary biological and environmental data.

The members of the Commission share the joint expenses of the research program. The Convention provides guidelines for determining budget contributions by the member governments. Each member's contribution is based on the proportion of the catch of tunas from the EPO taken by vessels of member nations that is utilized by that member nation. "Utilized" is understood to mean tuna eaten fresh or processed for internal consumption or export. Thus tunas landed by a member nation and subsequently exported round or as loins are not included in computing that nation's contribution, but those that are exported canned are so included. These contributions have been calculated from statistics compiled by the IATTC staff for calendar years before the budget period in question. In February 2004, the Finance Working group proposed that these data be provided by the members themselves, and that tuna caught by longlines and exported whole and frozen would be counted towards the utilization of the catching country, not the importing country.

To accomplish the variety of research required to meet its objectives, the Commission maintains an internationally recruited scientific staff. Most are situated at La Jolla, but others are assigned to field offices in Manta and Playas (Ecuador), Manzanillo and Mazatlán (Mexico), Mayaguez (Puerto Rico), Panama (R.P.), and Cumaná (Venezuela), and at a laboratory in Achotines (R.P.). During FY 2006, the field office in Ensenada, Mexico, was closed.

Fundamental to the Commission's work are basic data on the fishing activities of vessels, the catches they make, and the sizes of fish comprising the catch. These data are used to assess the impact of fishing on the abundance of the stocks being exploited. A large share of the Commission's research budget goes to this activity. A comprehensive program of placing logbooks aboard vessels based in the EPO is maintained, and the data on fishing effort and catch by time and location are extracted from these logbooks when the vessels return to port. In addition to the collection of basic statistical data, samples of the lengths of the fish in the catch are routinely taken when the fish are unloaded from the vessels. This length-measurement program is essential to studies of growth and size composition, which, in turn, are necessary for assessment of the effects of fishing on the various stocks.

The catch and fishing effort data are used to describe the distribution, by area and time, of fishing effort and the catches of each species. To manage the stocks of fish taken by tuna-fishing vessels in the EPO, the staff formulates models that can provide assessments of the impact of fishing on the stocks. This requires an understanding of the biology of the fish. Therefore, the research program provides for studies of stock structure, growth, rates of mortality and natality, times and locations of spawning and recruitment, the rates of mixing of fish among areas, behavior, and physiology of the fish, effects of the environment on the abundance and distribution of the fish, and the relationships of tunas with other organisms in the ecosystem.

To manage fish stocks it is necessary to understand the relationships of fish in one area of the fishery to those in other areas, so that any management measures can be applied to all members of the stocks of fish being exploited, wherever they occur. The staff has used several approaches to study the relationships of fish of different areas. Mark-and-recapture experiments are used widely in fisheries science to provide estimates of characteristics such as growth, mortality, movements, and mixing. Increases in purse-seine catches of bigeye tuna has put additional pressure on bigeye stocks which previously had been exploited mainly by the longline fishery which took large bigeye. Accordingly, Japan has made a commitment to provide funds for a multi-year tagging program. The initial pilot bigeye tagging project during 2000 was followed with additional tagging thru 2004. For 2006, funding was obtained from Japan of \$204,294. This is shown separately in Table 1. Following this valuable work, the staff and other scientists working in the Pacific Ocean have proposed that more extensive tagging of tunas on a Pacific-wide basis be carried out. However, funding sources for this have not yet been identified.

The study of the early life history of fish is vitally important in determining the dynamics of a fishery. Because of the low density of the larvae and the enormous areas in which they occur, this research is most effective when complemented by rearing larval and juvenile fishes in the laboratory, which makes large numbers of specimens available for study. Tuna are being reared at the Commission's Laboratory at

Achotines, Panama, through the early life stages, and the characteristics of growth and mortality are being investigated. The annual operating costs for the laboratory, including the local staff are about \$320,000, and in addition the project includes four full-time equivalent head office staff.

Tunas are pelagic during all stages of their lives, and changes in the ocean environment affect their apparent and real abundance. An understanding of how oceanic conditions change and how the tunas respond to their changing environment is necessary for the most efficient management of the stocks. Oceanographic, physiological, and behavioral studies are long-term, time-consuming, and expensive. Comprehensive programs of this nature are beyond the Commission's means, and efforts in this direction are therefore of a cooperative nature. The Commission's oceanographic studies are conducted on a limited scale, and rely on publicly available data.

The tuna fishery in the EPO is better documented than any other tuna fishery and, in particular, the dynamics of the yellowfin stock in the EPO are better understood than are the dynamics of most other stocks of tuna. Accordingly, the IATTC's research program in the EPO has set standards and formed the basis for study and comparison in other parts of the world. Also, the yellowfin resource has been alternately underfished and overfished on two occasions in the past, making it unique among tuna fisheries and rare among all marine fisheries. It would obviously be a terrible loss to interrupt this series of data. Furthermore, after a long period up until 1998, during which the fishing effort was generally lower than the levels that would produce the maximum sustainable catches, the purse-seine fleet has increased to a level at which management measures for both yellowfin and bigeye are routinely necessary.

At its 34th meeting in 1977 the Commission directed the staff to formulate a dolphin research program that would include, *inter alia*, monitoring population sizes and mortality incidental to fishing through the collection of data aboard tuna purse seiners, aerial surveys, tagging dolphins to study their movements and abundance, analyses of indices of abundance of dolphins, and gear and behavioral research and education.

To assess the status of dolphin populations, the Commission instituted an observer program for tuna vessels of the international fleet. The observers, among other things, count the dolphins that are killed or seriously injured during fishing operations and collect data that are used to estimate the relative abundance of the various species and stocks of dolphins. The budget for the research program provides funding for observers on 30% of the fishing trips of large purse-seine vessels.

Information obtained through the observer program and other surveys, coupled with logbook data gathered for the tuna studies described earlier, is being used to assess the effects of fishing on both the tuna and dolphin populations.

To meet its objective of making every reasonable effort to avoid the needless and careless killing of dolphins, the Commission's Tuna-Dolphin Program includes study of the design, development, and implementation of fishing gear and techniques that will reduce the mortality of dolphins taken in association with tunas. This program also includes workshops to pass on information to fishermen about the use of fishing techniques and gear that have proven effective in reducing dolphin mortality.

In 1999 the AIDCP, which formalized and expanded the 1992 La Jolla Agreement, came into force. The Commission has two principal functions under the IDCP: the IATTC observer program covers the majority of fishing trips made by purse-seine vessels over 363 t carrying capacity (the others are covered by the respective national programs), and the IATTC staff acts as secretariat to the IDCP. As noted above, the IATTC dolphin research program provides for 30% coverage of the trips made by these larger vessels. The remaining cost of the coverage required by the AIDCP, along with certain other costs associated with the IDCP, is met by the assessments paid by these vessels based on their individual carrying capacities. Small and/or inactive vessels also pay assessments to support the program.

Since the initiation of the program, the information collected by the observers has included records of the catches and bycatches of tunas and bycatch species. Because it is difficult to allocate the costs of the observer program, the costs of all data collection by observers and research associated with bycatches have

been included in the Tuna-Dolphin Program. In 1997 the Commission established a Working Group on Bycatch, whose objectives recognized the need to ensure the sustainability of the stocks of all target and bycatch species. International standards require the consideration of ecosystems in fisheries management, and the information gathered by the observer program and the work of the Working Group on Bycatch are important contributions to that end.

Table 1 shows the FY 2005 (actual), 2006 (estimated), 2007 (agreed), and 2008 (recommended) expenditure, by project and income. Table 2 shows total expenditure by budget objects. In Table 2, the total expenditure for externally funded projects is combined in a separate category, and not allocated into budget objects. The staff has been involved in several externally-funded projects concerning mitigation of the effects of longlining on sea turtles.

3. PROGRAM DESCRIPTION BY PROJECT¹, FY 2008

PROJECT A

816,868

Administrative and other costs jointly chargeable to all projects

The costs of administration and bookkeeping and various expenses of the headquarters, such as some of the costs of printing, translation, library, postage, etc., not easily allocated to individual research projects, are allocated and accounted for under this heading. Includes the costs of work related to the Commission's fisheries management policies and costs associated with meetings.

414,170 All or part of the gross salaries of administrative personnel, including the Director, two fisheries policy and management staff, Executive Officer, Administrative Assistant, secretary to the Director, one bilingual secretary, the computer systems and web page management staff, and a translator.

93,760 Meeting expenses, travel to and from Commission meetings and travel of administrative staff.

PROJECT C

1,020,347

Collection, compilation, and analysis of catch statistics and logbook data

Statistical records of the tuna fishery, obtained directly from the fishing fleet and processing plants, provide the data base for measuring the effects of fishing on the abundance of the stocks, and hence are of paramount and continuing importance to the Commission's program.

713,024 Gross salaries for 10 full-time equivalent headquarters staff.

PROJECT D

2,060,804

Investigations of the biology, life history, vital statistics, population structure, and behavior of tunas and billfishes

This project consists of several important studies, which are designed to increase the available knowledge of the life history of the tunas and billfishes of the EPO. Such knowledge, along with catch and effort data, is used to formulate models for evaluating the effect of fishing on the abundance of the stocks. The project has several important objectives, which can be grouped into the following categories:

1. Investigation of biology and behavior.
2. Determination of the important features of the early life history of the fish and the factors that affect the recruitment of young fish to the exploitable population.
3. Stock assessment and the description of the dynamics of the populations of tunas and other fishes in the EPO.

¹ Only the main items are listed under each project; other items are office costs, insurance, taxes, etc.

4. The development of models of ecosystems, including tuna, in the EPO.
 5. Studies of some of the species of billfishes taken by commercial and recreational fisheries in the EPO.
- Data for these types of research are obtained from the examination of tunas and billfishes at ports of landing, the analysis of information from vessel logbooks, studies conducted at sea on research and fishing vessels, and laboratory experiments.

1,185,459 Gross salaries of 12 headquarters full-time equivalents (FTEs), divided among the following areas of research:

	FTE
Biology and behavior	2
Tuna early life history	4
Stock assessment of tunas and billfish	5
<u>Ecosystems inhabited by tuna</u>	<u>1</u>

320,000 Utilities, fish food, and other supplies, and salaries for 20 locally-contracted staff, for the Achotines Laboratory.

PROJECT E **25,949**
Investigations of the oceanic circulation and other aspects of chemical and biological oceanography and their relationship to the populations of tunas and billfishes

Fishing success depends on the abundance and behavior of tunas, which in turn are influenced by oceanographic conditions. Oceanographic information forms a vital part in the assessment of stocks. However, in recent years, this project has operated on a much-reduced scale, without permanent scientific staff and using publicly-available data.

20,361 Gross salary of less than one full-time equivalent.

PROJECT F **222,970**
Tuna tagging and recovery to study movements, rates of intermingling of stocks, mortality, and growth

Tuna tagging experiments yield knowledge on movements, population structure, growth, mortality, behavior, and availability and vulnerability to capture of tunas in various areas of the fishery at various times.

Current activities include tagging of bigeye tuna, the maintenance of the tagging data base and collection of information on fish tagged by other organizations which are returned to IATTC personnel in ports at which they are stationed.

Additional voluntary funding has been provided for bigeye tagging for FY 2004-2006. The projected expenditure and funding for this is shown separately in Table 1.

165,194 Gross salary of two full-time equivalents.

PROJECT H **546,533**
Tuna-Dolphin Program (excluding observer costs)

In keeping with the objectives of the Commission's dolphin investigations and the major areas of research outlined in the introductory statement, this program has been grouped into the following major areas of activity, summarized below.

1. Participation in the planning, execution, and analysis of scientific surveys.
2. Studies of indices of dolphin abundance, using data collected by observers on purse seiners.

3. Keeping abreast of gear and behavioral research and evaluating new concepts aimed at reducing dolphin mortality, organizing gear workshops, identifying, developing, and preparing recommendations for the adoption of dolphin-saving technology, and furnishing advice and assistance to fishermen to ensure that their dolphin-saving gear is working properly.
4. Staff support for the IATTC portion of the observer program.
5. Studies of bycatches of turtles and other species incidental to fishing for tunas.
415,347 Gross salaries for 5 headquarters full-time equivalents.

PROJECT I

2,699,587

Observer program costs

Direct costs of observers and the costs of administering the program. The funding for this project is divided between the IATTC and AIDCP in the proportions of 30% and 70%.

1. Collection of dolphin data aboard purse seiners by observers. The scientific objective is to have these observers aboard enough trips of Class-6 purse seiners equipped to fish for tunas associated with dolphins to ensure that the estimates of the total dolphin mortality derived from the data collected are statistically reliable.
2. Collection of fishery or biological data by observers on catches and discards of tunas and associated species. These data supplement data collected from vessel logbooks.

The information is also used to monitor compliance with rules established by the IATTC and AIDCP.

773,646 Gross salaries for 12 headquarters full-time equivalents.
1,544,182 Observer compensation, taxes, travel, and equipment.

PROJECT J

427,234

Other AIDCP costs

Providing logistic and administrative support for the IDCP, the secretariat role for the International Review Panel (IRP), and the cost of crew seminars and trial sets.

368,886 Gross salaries for 4 headquarters full-time equivalent administrative staff.

OTHER SPECIAL PROJECTS

0

This category includes projects funded by from extra-budgetary sources. There is no income forecast for FY 2008. In 2006, the US National Oceanic and Atmosphere Administration (NOAA) funded a project to place observers on small purse-seine vessels and to sample their catches, which was started during the year. As well, during FY 2006 other projects included mitigation of the effect of longline fishing on sea turtles in coastal countries, funded by the World Wildlife Fund, NOAA, and the US Western and Central Pacific Management Council, and two contracts funded by the Pelagic Fisheries Research Program of the University of Hawaii, one dealing with modeling of protected species and the other with trophic structure of communities including tuna.

4. EXPLANATION OF OBJECT CLASS ESTIMATES, FY 2008

Salaries (01)

3,792,601

The permanent scientific, administrative, clerical, and technical personnel required to carry out the duties of the Commission. Salaries of US-based staff are based on US government salary scales, and cost of living increases of between 3 and 4% have been experienced in recent years.

Social Security (02)

260,736

US social security taxes on employees.

Retirement Plans (03)	482,683
The IATTC's pension plan is administered by the International Fisheries Commissions Pension Society (IFCPS) in Ottawa, under a deposit administration plan that provides level funding over periods of approximately three years. A reduced return on the pension funds invested has required a higher funding by the Commission for the plan during 2006-2008. In FY 2002 a defined contribution plan was introduced for new employees in place of the existing defined benefit plan.	
Group Insurance (04)	329,890
California Workmen's Compensation, life, disability, medical, dental and accident insurance. The cost of medical insurance is rising much faster than the rate of inflation, but this has been offset by reductions in Workmen's Compensation insurance.	
Rents, Utilities, Maintenance (05)	143,201
Rent and utilities for the Commission's field offices and laboratories and maintenance costs for Commission property.	
Materials and Supplies (06)	114,007
Includes office supplies, and the costs of other supplies for the Achatines Laboratory.	
Equipment and Property (07)	135,229
The major items in this category are computers and other office machines and vehicles. In 2006 this included set-up costs for the office in Manzanillo.	
Postage (08)	26,363
Includes mail and courier services.	
Printing and Duplication (09)	40,034
The prompt publication of research results is a necessary and important part of the IATTC's scientific program.	
Travel and Subsistence (10)	238,577
Travel and subsistence costs incurred by IATTC staff members. Does not include observer travel and other associated costs, which are accounted for under Observer Costs (13).	
Contractual and Professional Services (11)	632,137
Legal and professional fees (e.g. auditing), contracts with short-term specialists, casual labor costs, and simultaneous interpretation services. Also included in this category are costs related to permanent field office staff as well as related taxes and benefits.	
Direct AIDCP Costs (12)	39,653
Direct costs associated with the IDCP such as trial sets, dolphin-safe certification and staff travel for AIDCP meetings.	
Observer Costs (13)	1,544,182
Wages and related taxes, travel, training and other expenses for observers.	
Taxes, Insurance, and Licenses (14)	27,776
Insurance and licenses for Commission vehicles, insurance and taxes on real property, and the cost of permits.	
Miscellaneous (15)	13,221
Dues, subscriptions, interest, bank and finance charges, losses (or gains) on currency exchange, and similar miscellaneous costs.	
Other Special Projects (16)	0
Various costs to carry out research as defined by contractual agreement with outside funding sources.	

TABLE 1. Comparative figures, in US\$, by project, FY 2005-2008.

TABLA 1. Cifras comparativas, en US\$, por proyecto, AF 2005-2008.

EXPENDITURE – GASTOS					
FY-AF	2005 (actual-- reales)	2006 (estimated-- estimados)	2007 (agreed-- acordados)	2008 (recommended-- recomendados)	Change from-- Cambio de FY/AF 2007
REGULAR OPERATIONS—OPERACIONES REGULARES					
A Administrative expenditures Gastos administrativos	757,369	771,240	791,254	816,868	25,614
C Collection and analysis of catch statistics Recolección y análisis de estadísticas de captura	1,067,557	963,353	988,352	1,020,347	31,995
D Biology of tunas and billfishes Biología de atunes y peces picudos	1,786,825	1,945,693	1,996,183	2,060,804	64,621
E Oceanography Oceanografía	21,046	24,499	25,135	25,949	814
F Tuna tagging Marcado de atún	147,250	210,516	215,979	222,970	6,991
H Tuna-Dolphin Program (excluding observer costs) Programa Atún-Delfín (excluye costos de observadores)	549,382	516,005	529,395	546,533	17,138
I IATTC observer costs (30%) Costo de observadores de la CIAT (30%)	756,052	755,865	789,812	809,876	20,064
Total regular operations Total operaciones regulares	5,085,481	5,187,171	5,336,110	5,503,347	167,237
SPECIAL PROJECTS—PROYECTOS ESPECIALES					
Bigeye tagging project – Proyecto de marcado de patudo	240,829	232,056	0	0	0
Externally funded research contracts — Contratos de investigación financiados de otras fuentes	106,401	458,460	0	0	0
Subtotal:	347,230	690,516	0	0	0
AIDCP—APICD:					
I Observer costs (70%)—Costos de observadores (70%)	1,764,122	1,763,685	1,842,895	1,889,711	46,816
J Other costs of AIDCP—Otros costos del APICD	421,682	388,908	410,176	427,234	17,058
Subtotal:	2,185,804	2,152,593	2,253,071	2,316,945	63,874
Total special projects Total proyectos especiales	2,533,054	2,843,109	2,253,071	2,316,945	63,874
TOTAL	7,618,535	8,030,280	7,589,181	7,820,292	231,111

TABLE 1. (continued)
TABLA 1. (continuación)

INCOME – INGRESOS					
FY-AF	2005 (actual-- reales)	2006 (estimated-- estimados)	2007 (agreed-- acordados)	2008 (recommended-- recomendados)	Change from-- Cambio de FY/AF 2007
REGULAR OPERATIONS—OPERACIONES REGULARES					
National contributions--Contribuciones nacionales	5,350,049	5,475,007	5,376,109	5,493,347	117,238
Interest & miscellaneous—Intereses y misceláneos	15,497	14,196	10,000	10,000	
Total regular operations Total operaciones regulares	5,365,546	5,489,203	5,386,109	5,503,347	117,238
SPECIAL PROJECTS—PROYECTOS ESPECIALES					
Bigeye tagging--Marcado de patudo	240,829	232,056	0	0	0
Externally funded research contracts— Contratos de investigación financiados de otras fuentes	200,067	458,460	0	0	0
Subtotal:	440,896	690,516	0	0	0
AIDCP—APICD:					
Vessel assessments--Cuotas de buques					
Vessels with observers—Buques con observadores	2,211,631	1,935,132	2,235,902	2,316,945	81,043
Other vessels—Otros buques	120,935	39,906	-		
Subtotal:	2,332,566	1,975,039	2,235,902	2,316,945	81,043
Total special projects Total proyectos especiales	2,773,462	2,665,555	2,235,902	2,316,945	81,043
TOTAL	8,139,008	8,154,758	7,622,011	7,820,292	198,281

TABLE 2. Comparative figures, in US\$, by budget object, FY 2005-2008.

TABLA 2. Cifras comparativas, en US\$, por categoría presupuestal, AF 2005-2008.

FY-AF	EXPENDITURE – GASTOS			
	2005 (actual— reales)	2006 (estimated— estimados)	2007 (agreed-- acordados)	2008 (recommended— recomendados)
1 Salaries Sueldos	3,476,327	3,476,965	3,678,680	3,792,601
2 Social security Seguro social	238,993	239,037	252,905	260,736
3 Pension plan Plan de pensiones	361,503	411,400	468,184	482,683
4 Group insurance Seguro colectivo	330,455	303,708	320,205	329,890
5 Rents, utilities, maintenance Alquileres, servicios públicos, mantenimiento	124,899	142,262	139,030	143,201
6 Materials and supplies Materiales y pertrechos	182,312	107,463	110,687	114,007
7 Equipment and property Equipo y bienes raíces	171,035	139,888	132,164	135,229
8 Postage Correo	27,481	24,850	25,596	26,363
9 Printing and duplication Imprenta y duplicado	23,123	37,736	38,868	40,034
10 Travel and subsistence Viajes y viáticos	278,674	224,882	231,628	238,577
11 Contractual services Servicios por contrato	502,796	699,883	613,726	632,137
12 AIDCP direct costs Costos directos del APICD	65,571	37,506	38,498	39,653
13 Observer costs Costos de observadores	1,455,973	1,455,540	1,499,206	1,544,182
14 Taxes, insurance, licenses Impuestos, seguros, licencias	18,189	26,182	26,967	27,776
15 Miscellaneous Miscelánea	13,970	12,462	12,836	13,221
16 Externally funded research contracts Contratos de investigación financiados de otras fuentes	347,230	690,516	0	0
TOTAL	7,618,531	8,030,280	7,589,180	7,820,290