



INTER-AMERICAN TROPICAL TUNA COMMISSION AND
AGREEMENT ON THE INTERNATIONAL DOLPHIN CONSERVATION PROGRAM

PERFORMANCE REVIEW

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Prepared by:

Moss Adams LLP

999 Third Avenue
Suite 2800
Seattle, WA 98104
206-302-6500

MOSS ADAMS LLP

Certified Public Accountants | Business Consultants

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I. EXECUTIVE SUMMARY

A. INTRODUCTION

In 2007, at the Kobe Meeting of tuna Regional Fisheries Management Organizations (tRFMOs), the regional tuna bodies agreed to undertake periodic reviews of performance against their objectives. As part of that process, this review focuses on assessing the achievements of the Inter-American Tropical Tuna Commission (IATTC or the Commission) and Agreement on the International Dolphin Conservation Program (AIDCP or the Program) related to fish stocks; human resources planning, management, and development; operating structure, decision making, planning, and communication; financial planning, accountability, and monitoring; and efficiency and effectiveness. This study was conducted between October 2015 and June 2016.

Although the focus of the IATTC and AIDCP Performance Review was to identify opportunities for improvement, it is important to note the areas of strength that can be leveraged and utilized for further improving the organization. Areas of commendation include strong science outcomes, a successful observer program, highly dedicated scientific staff, and success of the AIDCP.

We would like to thank IATTC's staff, management, and appointed leadership for their willingness to assist us in this review process.

B. FINDINGS AND RECOMMENDATIONS

In summary, this review found the scientific program structure and outcomes achieved by the IATTC and AIDCP to be highly commendable. One of the primary opportunities for improvement is modernizing the business operations of the Secretariat, the management arm of IATTC, and strengthening the interfaces between the Secretariat, IATTC, and AIDCP. Findings and recommendations were grouped into three primary categories, which include governance, management, and science. The findings and recommendations in each area are listed below.

Governance		
1	Finding	The consensus model of governance has limitations that impact the Commission's decision-making ability.
	Recommendation	Consider establishing protocols for situations that would benefit from voting in a non-consensus model.
	Recommendation	Take measures to improve meeting efficiency and decision-making.
2	Finding	The scientific resources and knowledge of commissioners varies widely.
	Recommendation	Continue to utilize the Capacity Building Fund for education and resource development.

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	Recommendation	Develop and deliver new commissioner and representative orientation sufficiently in advance of each annual meeting.
	Recommendation	Consider establishing a Fisheries Management Committee (FMC) to advise the IATTC and the SAC on correct approaches to the management of the tuna fisheries.
3	Finding	Commissioners and representatives require a higher level of communication than is currently delivered.
	Recommendation	Develop a communication plan and dedicate resources to external communications.
4	Finding	The budget approval process is inefficient and difficult to understand.
	Recommendation	Implement budget best practices, utilizing an ad-hoc budget subcommittee.
	Recommendation	Modernize the Secretariat's budget process and format.
	Recommendation	Enforce Antigua Convention repercussions for non-payment.
	Recommendation	All proposals for additional work that go to the Commission should include a complete budget.
5	Finding	The Chairmanship the Commission does not have adequate continuity and stability.
	Recommendation	Adopt measures to stabilize the chairmanship of the Commission.
6	Finding	Procedural limitations impact the Commission's ability to quickly implement meeting decisions.
	Recommendation	Take steps to improve the documentation of Commission meeting discussions and implementation of decisions.
	Recommendation	Adjust the timing of the IATTC annual meeting to late August or early September to allow for more time between the Scientific Advisory Committee (SAC) and the annual meeting.
Management		
7	Finding	The Secretariat does not have a strategic plan or multi-year work plan to guide annual activities.
	Recommendation	Develop a five-year strategic plan, with biennial implementation plans tied to the budget.
8	Finding	A high number of impending retirements present a both risk and opportunity to the Secretariat.
	Recommendation	Develop a strategy to address succession planning and document procedures for key positions.

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9	Finding	The scientific staff and Director are responsible for responding to a large volume of research and data requests.
	Recommendation	Improve information request processes.
10	Finding	Roles, responsibilities, and reporting relationships are unclear.
	Recommendation	Develop a staffing plan tied to the strategic plan to clarify and document roles and responsibilities.
11	Finding	The Secretariat does not employ a human resources specialist.
	Recommendation	Engage a human resources specialist to handle the human capital needs of the organization.
12	Finding	Staff report a need for more consistent, timely communications.
	Recommendation	Increase internal communications efforts and foster collaboration across the Secretariat.
13	Finding	Staff salaries increased a total of 8% from 2010 to 2015.
	Recommendation	Ensure that staff salaries are competitive compared to peer entities and the regional cost of living.
Science		
14	Finding	Dolphin mortality has continued to decline significantly under the AIDCP.
	Recommendation	Assess risks associated with the dolphin survey program hiatus.
	Recommendation	Review the operations of the small vessel purse seine fleet and if necessary implement an observer program for these vessels.
	Recommendation	Develop an ongoing dolphin research program so that necessary research is conducted to ensure that the objectives of the AIDCP continue to be met.
	Recommendation	Review the process for addressing infractions, including developing strong incentives and penalties.
15	Finding	The AIDCP operates at a deficit.
	Recommendation	Review and adjust the levy rate on a biennial basis to cover the costs of operating the AIDCP.
16	Finding	The AIDCP meeting process is costly and time consuming.
	Recommendation	Consider making adjustments to AIDCP meeting procedures, while maintaining rigor and independence.
17	Finding	The IATTC science program is unique and provides significant value to fisheries management, yet it could provide even more value.

	Recommendation	Increase collaboration between research units.
18	Finding	Member country scientists do not feel adequately connected to or involved in IATTC scientific activities.
	Recommendation	Take measures to improve communications and build relationships with Scientific Advisory Committee (SAC) members.
	Recommendation	Recommendation: Review and improve the process for the chairing of the SAC.
	Recommendation	Ensure the integrity of the SAC report presentation to the Commission.
	Recommendation	Increase collaboration between internal research units.
19	Finding	The Achotines Laboratory provides significant value to the Commission at a relatively low cost.
	Recommendation	Continue to support and strengthen research at the Achotines Laboratory.
20	Finding	There is limited observer data from longline, small purse seine, and artisanal fishing vessels.
	Recommendation	Develop strategies to increase observer coverage of longline and artisanal fleets.
21	Finding	The IATTC outsources observers for high seas transshipment vessels.
	Recommendation	Review the at sea observer program to ensure the safety of observers.
22	Finding	Stock outcomes vary for species under IATTC management.
	Recommendation	Review the status of these key stocks and take immediate action to address Pacific Bluefin stock.
	Recommendation	Collaborate with the WCPFC to review stock assessment models used for the major tuna stocks in the Pacific to ensure the parameters are consistent.
	Recommendation	Adopt a system of regular external peer review of stock assessment models.
23	Finding	Capacity limits are not adjusted for effort creep in the fleet.
	Recommendation	Review the capacity measure and application.
24	Finding	Annual research budgets and programs presented to the Commission lack specificity and clarity.
	Recommendation	Develop a long-term research plan and detailed annual budgets.
25	Finding	Shark, seabird, and turtle mortalities have been negatively impacted by industrial purse seine and long line fishing.
	Recommendation	Explore opportunities for supporting the improvement in data collection of shark, seabird, and turtle mortalities particularly from the longline and artisanal fleets

26	Finding	The IATTC has established a Compliance Committee, but it is unclear what action the Commission has directed based on information provided by the Committee.
	Recommendation	Utilize annual meetings to make well-documented decisions to improve compliance with Commission resolutions.

C. REPORT CONTENT

The balance of this report consists of six sections. They include:

- Section II: Introduction
- Section III: Commendations
- Section IV: Findings and Recommendations
- Section V: Acknowledgments
- Appendix: Acronyms and Abbreviations

II. INTRODUCTION

A. BACKGROUND

The Inter-American Tropical Tuna Commission was created in 1949 through a treaty between the United States and Costa Rica. Twenty-one members¹ each appoint up to four Commissioners to the IATTC. The Agreement on the International Dolphin Conservation Program, which was entered into by 12 countries and the European Union in 1999, is administered by the IATTC. In 2003, IATTC member countries adopted the Antigua Convention, replacing the 1949 Convention and expanding the goals of the Commission. A Director is appointed to oversee the day-to-day operations and scientific research of the Secretariat, including 43 full-time staff and eight remote offices.

In 2007, at the Kobe Meeting of tuna Regional Fisheries Management Organizations (tRFMOs), the regional tuna bodies agreed to undergo periodic performance reviews against their objectives. In response to growing concerns within the international community over the status of fish stocks under the purview of tRFMOs, these reviews were initially proposed by the Food and Agriculture Organization (FOA) of the United Nations at the FAO Committee on Fisheries (COFI) in 2005. As of the beginning of this review, all other tRFMOs had undertaken a performance review.

B. SCOPE

The objectives of this review include assessing the achievements of the IATTC and AIDCP related to:

- *Fish stocks*: The Commission's objectives regarding fish stocks, including, but not limited to, adherence to the mandate of the Antigua convention, collaboration with non-members of the IATTC, research, data collection and analysis, reporting, and overall efficiency and effectiveness of conservation and management activities.
- *Human resources planning, managing, and development*: Personnel policies and procedures, training and development, resource forecasting and management, recruiting and retention, and hiring practices.
- *Operating structure, decision making, planning, and communication*: Goals and tasks, organizational structure, staffing levels and skills, roles and responsibilities, centralization versus decentralization, insourcing versus outsourcing, use of technology, problem solving, annual planning, decision making, internal and external communication, coordination and collaboration, transparency and public information dissemination, and response to information requests.
- *Financial planning, accountability, and monitoring*: Budget planning and forecasting, financial reporting, financial and procurement procedures, revenue and expenditure controls, financial oversight, bookkeeping, budget request approvals, and five-year history of budget increases.

¹ 19 nations, the European Union, and fishing entity Chinese Taipei

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- *Efficiency and effectiveness*: Overall cost efficiency and effectiveness, achievement of objectives of the Antigua Convention and Resolutions and other Commission decisions, possible reasons for any non-compliance, decision-making processes and consensus building, and alignment between objectives and human, financial, and technical resources.

C. METHODOLOGY

The study was conducted from October 2015 through May 2016. Work was conducted in three phases:

1. *Fact finding*: Conducted interviews of staff, IATTC commissioners, AIDCP representatives, and stakeholders; an online survey of staff, commissioners, and representatives; and a document review.
2. *Analysis*: Identified gaps between current operations and best practices, developed preliminary findings, and developed options to address gaps.
3. *Reporting*: Delivered draft and final reports, including commendations, findings, and recommendations.

III. COMMENDATIONS

Although the focus of the IATTC and AIDCP Performance Review was to identify areas where improvement could be made, it is important to note the areas of strength that can be leveraged and utilized for furthering improvement within the organization. The IATTC and AIDCP should be commended for the following accomplishments:

- *Strong Science Outcomes:* The scientific staff of IATTC is highly regarded internationally, and their work has contributed significantly to improved outcomes for tuna and dolphins. In November 2015, IATTC was awarded the Outstanding Group Achievement Award of the American Institute of Fishery Research Biologists, in recognition of the IATTC’s “dedication to nurturing excellence in fishery science, as a most important factor for the achievement of its objectives under the Antigua Convention.”
- *Successful Observer Program:* The IATTC has a very well-developed observer and data collection program for purse seine fisheries that is recognized as one of the best programs of its kind. Dolphin mortality began to decline in 1986 from a peak of around 132,000 per year. Under the La Jolla Agreement and the AIDCP, mortality has declined to around 975 dolphins in 2014.
- *Highly Dedicated Scientific Staff:* Among the scientific staff of the IATTC, turnover is low and many stay with the Secretariat for their entire careers. The scientific staff has an average of 23.5 years of service. During interviews, scientific staff reported strong morale, dedication to their work, and motivation to achieve scientific goals.
- *Success of AIDCP:* The AIDCP program has adopted a comprehensive suite of resolutions over the period of the program, covering situations such as illegal, unreported, and unregulated activities (IUU), small vessels, night setting, dolphin safe certificates, infractions, and a working party looking into captain’s incentives. The International Review Panel’s (IRP) role in reviewing infractions provides a level of independence that helps with credibility.
- *Transition to the Antigua Convention:* The IATTC managed a successful transition to a new convention (the Antigua Convention) while continuing to operate effectively under the 1949 Convention.
- *Collaboration with tRFMOs:* The advent of the Western and Central Pacific Fisheries Commission (WCPFC) led to confusion over the physical area of competence of the IATTC and WCPFC. The two tRFMOs successfully negotiated a working arrangement over the so-called “overlap area” to the satisfaction of both Commissions.

We would like to thank IATTC’s staff, management, and appointed leadership for their willingness to assist us in this review process.

IV. FINDINGS AND RECOMMENDATIONS

The Terms of Reference (TOR) of this review encompassed the operations, science, and leadership of the IATTC and AIDCP. Findings and recommendations for improving the efficiency and effectiveness of the IATTC and AIDCP are grouped into three categories:

- Governance, addressing the appointed leadership of the Commission;
- Management, focusing on the day-to-day operations of the Secretariat; and
- Science, assessing the progress, outcomes, and processes of the IATTC's scientific operations including bycatch management; and compliance.

A. GOVERNANCE

1. Limitations of the Consensus Model

Finding: The consensus model of governance has limitations that impact the Commission's decision-making ability.

Similar to other tRFMOs, the IATTC and AIDCP governing bodies operate under a consensus model, as outlined in Article IX of the Antigua Convention. Consensus is the most egalitarian, collaborative decision-making model, but it has limitations. Chiefly, consensus tends to support the status quo and impede change, which can lead to stagnation. Occasionally, blocking is used as leverage, which can cause dysfunction in an organization. In a survey of IATTC commissioners and AIDCP representatives, "problem solving methods" were rated the least efficient area of the Commission and "decision-making processes" were rated the third least efficient.

The Antigua Convention states that "Unless provided otherwise, all decisions made by the Commission at meetings convened pursuant to Article VIII of this Convention shall be by consensus of members of the Commission present at the meeting in question." The Convention specifically outlines matters that must be decided by consensus. However, there is no clarification in the rules of procedure which matters can be decided by a simple majority, and the IATTC does not have any established voting procedures.

The impact of the consensus model can be seen across all tRFMOs, as measures tend to be weakened to accommodate self-interest rather than the best interest of the stocks or the species under consideration. The consensus model has had negative impacts on multiple situations in recent years, including the selection of chairs for meetings in IATTC, delays in commencing meetings, and an inability to come to an agreement on such issues such as Pacific blue fin tuna and silky shark.

Recommendation: Consider establishing protocols for situations that would benefit from voting in a non-consensus model.

Because consensus has impeded the Commission’s decision-making ability, the Commission should consider alternatives to consensus for some situations. Not all issues before the Commission necessarily benefit from a voting process; however, rules should be established to ensure that one member cannot impede progress by not agreeing to well-considered proposals and rules that would benefit the work of the Commission. Development of the rules should be consistent with Article IX of the Antigua Convention. Other RFMOs have developed similar rules to support efficient decision-making. For example, the Western and Central Pacific Fisheries Commission (WCPFC) has established within its rules of procedure a clarification on which issues can be decided by a simple majority, as well as associated voting procedures.²

Recommendation: Take measures to improve meeting efficiency and decision-making.

In addition to considering consensus alternatives, measures can be taken to improve decision-making. Prior to each meeting, the Commission Chair and Vice-Chair should work with the Director to prioritize the meeting agenda so that high priorities, like the budget, can be dealt with at the beginning of each meeting. A timekeeper should be appointed for each meeting, and the Chair should manage discussion to keep debates to a productive length. Commissioners and representatives should consider alternative methods of voting, including abstention, to minimize the use of blocking during meetings. Commissioners should thoroughly prepare for the meeting by consulting with one another and determining their priorities prior to the meeting.

2. Resource and Knowledge Variations

Finding: The scientific resources and knowledge of commissioners varies widely.

The multi-national nature of the IATTC and AIDCP presents a number of challenges to providing consistent, strong leadership. In particular, the scientific resources and knowledge of member nations varies widely between developed and developing countries. In some cases, it is not possible to send full delegations to scientific committee and Commission meetings. In addition, some governments change frequently, and with it new individuals are appointed to represent the country at the IATTC and AIDCP. Likewise, many modern commissioners and representatives are policy or government officials and do not have a background in fisheries or fisheries management. As a result, they possess a limited understanding of the science supporting the Commission.

A Capacity Building Fund has been established to provide training to build stronger knowledge and capacity in science for members to allow them to participate more effectively in the science discussions and decision making in the Commission. The first Fund-sponsored training was conducted in Peru in 2015. The budget of the Fund has been established as a percentage of IATTC’s total budget, and varies

² WCPFC Rules of Procedure 21-30 (Annex2)

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year-to-year. Some members also contribute additionally to the Fund. It is important to note that this is not a meeting participation fund and is not intended to be utilized for travel expenses.

Article 25 of the UN Fish Stocks Agreement provides guidance to RFMOs on action it should take to support the participation of developing states in RFMO processes, including capacity building and participation. Other tRFMOs have established similar programs: The Indian Ocean Tuna Commission (IOTC) established a meeting participation fund, which enables the participation of at least one developing member country representative to attend each meeting of the Commission. It is written into the WCPFC's Convention that the budget will include this cost and that a developing country representative will be able to attend each meeting of the Commission.

Recommendations: Continue to utilize the Capacity Building Fund for education and resource development.

The establishment of the Capacity Building Fund by the Commission is a best practice that should be built upon. Along with the Fund, the Commission should continue to update and implement the development plan. This plan ensures that funding, which may be limited in some years, can be allocated to address priorities and areas of specific need in a targeted manner. As noted in Finding 7, the capacity development plan should be based on, and in service of, the strategic plan, goals, and objectives of the IATTC. The Commission should also review and discuss Article 25 of the UN Fish Stocks agreement to determine if additional action and monetary support is necessary for developing parties.

Recommendation: Develop and deliver new commissioner and representative orientation sufficiently in advance of each annual meeting.

The continuity of appointees cannot be controlled by the Commission, but steps can be taken to ensure that institutional knowledge is passed on to new appointees. The Director, when possible, attempts to visit new heads of delegations and orient them to the operations of the Commission. It is important to note that the Director's ability to assist is limited by invitation.

The IATTC should develop a one- or two-day new appointee training and orientation to be delivered sufficiently well in advance of each annual meeting. The training should cover the history of the IATTC, the role of and expectations for appointees, current and prior year budget data, and enough information about the policies, procedures, and science of the organization to allow new appointees to fully participate in decision-making. Information packets should be sent to new appointees within two weeks of their appointment. Training could also be provided regionally prior to the annual meeting.

In return, appointees are responsible for familiarizing themselves with the material, and with their nation's priorities and positions, in order to effectively participate in meetings. New delegates have a responsibility to quickly understand the business of the IATTC so that they can be effective at meetings and advise their governments of the intent of the decisions taken by the IATTC.

Recommendation: Consider establishing a Fisheries Management Committee (FMC) to advise the IATTC and the Scientific Advisory Committee (SAC) on correct approaches to the management of the tuna fisheries.

As noted above, many delegates to tRFMO meetings are political or career appointees to these positions and lack a background in fisheries management. A strong understanding of fisheries management is essential for effective decision making, and this lack of expertise is emerging as an issue for all RFMOs. To bridge this knowledge gap, the IATTC should consider establishing a Fisheries Management Committee (FMC) to advise the IATTC and SAC. The role of a FMC would be twofold: First, to attend the SAC, questioning the scientists and providing guidance. Second, having considered the SAC advice, the FMC would provide a report to the Commission recommending fisheries management approaches. Recommendations would include harvest strategies and catch levels, capacity changes, and recommendations on improvements necessary to deal with bycatch data and management issues.

3. Communications

Finding: Commissioners and representatives require a higher level of communication than is currently delivered.

Engaging a large number of multi-national, appointed officials with varying levels of experience and knowledge is a difficult task. Many commissioners and representatives reported a desire for more insightful information to be provided on a more frequent basis, especially for financial and key policy matters. During interviews, appointed officials likewise expressed interest in receiving more information regarding the budget, expenditures, and specific, measurable outcomes of the IATTC's work.

The IATTC was originally structured in such a way that the Secretariat and the scientists held the knowledge and influence over the Commission's decisions. Over time, the dynamic has evolved to a more collaborative, modern organization. As a result, member countries expect more information about and input on how the organization is run, what its priorities are, how work is accomplished, and the costs associated with running the organization. Although the adoption of the Antigua Convention has facilitated significant improvements in engagement and communication between member countries and the Secretariat, there is still significant room for improvement.

Commissioners and representatives want to be sufficiently informed in order to fully understand and defend the activities and costs of the organization. As such, they require a strong working knowledge of the organization's work plan, operations, staffing, and budget. It is the responsibility of the Secretariat to meet the information needs of the commissioners and representatives, just as it is the responsibility of the management of a company to meet the information needs of its board of directors.

In addition, the Secretariat's website is outdated, and navigation is not intuitive or user friendly. The site's search capacity is limited, and it takes multiple steps to access most documents. An upgraded website, including collaboration tools for Commissioners and Representatives, would significantly improve communication, collaboration, and information flow. A budget request to update the IATTC's website was submitted in 2015, but it has not been approved to date.

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Recommendation: Develop a communication plan and dedicate resources to external communications.

The Commission should develop a communications plan with clear expectations on what information will be provided by the Secretariat on a monthly, quarterly, and annual basis. The best way to facilitate results-based communications is to 1) quantify goals and outcomes in a strategic plan and 2) report on the achievement of those goals and outcomes, at a minimum, prior to each annual meeting. This information should form the core content of the Secretariat's external communications.

The Secretariat should consider establishing a Communications Coordinator position to oversee, coordinate, and deliver communications to appointed officials, partner organizations, and the public. Duties of a Communications Coordinator should include, but not be limited to:

- Oversee outreach to appointed officials, ensuring each member country delegation is equipped with the information necessary to fully participate in meetings
- Coordinate with the Director to respond to information requests
- Create and handle the ongoing management of the IATTC communications calendar
- Manage e-communications for appointed officials
- Conduct media relations for programs or events
- Write and distribute press releases
- Social media and website content development and management
- Support grant proposal development

It is important to recognize the role of appointed officials in effective communications. Commissioners and delegates should be specific about their needs. This will allow the Secretariat to deliver information as a professional service to their members.

A number of other recommendations also support the need for increased communications capacity within the Secretariat. As noted in Finding 2, training and information should be developed and regularly delivered to increase the capacity of new appointees. In addition, the Secretariat should revise the format of the budget and provide detailed information depicting the budget and actual expenditures of operations and research, as recommended in Finding 4. Also, regular reporting of progress toward strategic goals and objectives should be enhanced, as described in Finding 7.

4. Lack of Budget Transparency

Finding: The budget approval process is inefficient and difficult to understand.

Both staff and appointed officials cite the budget process (development and approval) as a significant challenge for the Commission. Budget requests are provided to the Committee on Administration and Finance (CAF) during the first week of IATTC meetings, and they are typically approved the Friday before the annual meeting is scheduled to begin. IATTC budget documents are not detailed enough to provide transparency into operational costs, although the budget format is evolving and has been more

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detailed per the requests of Commissioners. Commissioners, representatives, and staff report a lack of understanding of how budgets are developed.

Commissioners and representatives have reported that budget documents provided in advance of annual meetings frequently do not match the presentations and documents presented during the meetings. However, a review of presentations and meeting materials since 2012 showed consistency between the two documents, with minimal changes based on member payments made during the meetings. The perception may be impacted by different formatting, or a general lack of understanding of the budget process.

As a result, appointed officials report reluctance to approve budget increases, and budget discussions can be contentious. With the exception of 2015, the IATTC approved budget has increased an average of 2.2% per year since 2011, similar to the 2% average increase in the Consumer Price Index in San Diego for that period. The 2016 approved budget decreased 2% from the prior year, for a six-year average of 1.3%.

The total annual contributions received have ranged from a low of 67% to a high of 98% of the approved budget from 2011 to 2015, due to the number of countries that are behind on payments.³ As a result, the Secretariat has a total deficit of \$3.2 million over those five years. Some countries have difficulty making payments, while others are reported to be purposely withholding contributions for various reasons. To date, the Commission has not enforced the provision in Article XV of the Antigua Convention, which removes the right to participate in the adoption of decisions from countries in arrears for 24 months or longer. This places the Secretariat in the awkward position of accomplishing work plans and meeting expectations without adequate resources.

In addition to running a deficit for many years in a row, the Secretariat must accommodate unfunded mandates. New projects and programs are regularly requested during annual meetings. However, these are rarely accompanied by additional allocated funds. The IATTC budget does not include contingency funds to account for these requests, nor is the budget adjusted during the annual meeting to account for them. Without strong budgeting practices, it is difficult to gauge the cost in financial and human resources allocated to undertake these tasks. Also, the accounting manual has not been updated in many years.

Recommendation: Implement budget best practices, utilizing an ad-hoc budget subcommittee.

An ad-hoc budget subcommittee of the Committee on Administration and Finance should be formed to develop expectations for budget documents, timing, and communications. The subcommittee's major task should be to develop a budget format possessing a level of detail that meets the transparency and accountability needs of the commissioners.

Recommendation: Modernize the Secretariat's budget process and format.

³ Percent of approved budget received per year:
2010, 92%; 2011, 96%; 2012, 67%; 2013, 98%; 2014, 92%; 2015, 96%

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The Secretariat's budget process and format should be modernized to reflect the expectations of contemporary business practices. Accounting policies and procedures should also be updated to reflect best practices. The Government Finance Officers Association (GFOA) has published a number of best practices in budget and financial management that can be used as a guide. Other tRFMO budgets, such as the WCPFC's, can be utilized as a template for a new budget format. At a minimum, the Secretariat should:

- Develop a budget calendar and budget procedures
- Prioritize expenditures aligned with strategic goals and objectives, and the Secretariat's annual work plan
- Set aside a percentage of the annual budget for contingency funds, to accommodate new requests
- Determine specific program and personnel costs based on expenditures and program objectives
- Require requests for new programs and projects to be submitted for consideration in advance of annual meetings to the CAF
- Invite the WCPFC Finance and Administration Manager to visit and assist in the review and adjustment of budget and reporting processes

Recommendation: Enforce Antigua Convention repercussions for non-payment.

Article XV.4 of the Antigua Convention states, "Notwithstanding the provisions of Article IX of this Convention, unless the Commission decides otherwise, if a member of the Commission is in arrears in the payment of its contributions by an amount equal to or greater than the total of the contributions due from it for the preceding twenty-four (24) months, that member shall not have the right to participate in decision-making in the Commission until it has fulfilled its obligations pursuant to this Article." The Commission should enforce this provision, enacting agreed upon consequences for non-payment.

Recommendation: All proposals for additional work that go to the Commission should include a complete budget.

Requests for new programs, projects, and additional work should be submitted in advance to the CAF. Each request should include a full description, justification, and cost estimate. Requests that do not include member country fiscal sponsorship should also include a budget reallocation request so the CAF can determine whether they are of sufficient priority to set aside current, planned work.

5. Lack of Continuity in Commission Chairmanship

Finding: The Chairmanship and Vice Chair of the Commission do not have adequate continuity and stability.

Article VIII of the Antigua Convention provides for the Chair and Vice Chair to be elected for a one-year term. In other tRFMOs, this period is longer. For example, for the WCPFC and ICCAT (International Commission for the Conservation of Atlantic Tuna), the tenure of the Chair is two periods of two years.

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This allows the Chair to develop a working relationship with the Director and work jointly to develop and advance a work plan for the Commission.

The tasks of the Chair described in the Convention are as follows:

- Declare the opening and the closing of the meeting;
- Preside over the meetings of the Commission;
- Decide on all questions of order that may arise at the meetings of the Commission. However, Representatives may request that any decision by the Chair be submitted to the Commission for approval or rejection.
- Encourage and facilitate consensus on matters under consideration at the meetings of the Commission.
- Act in representation of the Commission, in accordance with the tasks that the Commission may assign.
- In general, carry out such functions as the Commission may assign.

These tasks are consistent with the expectations of a Chair with a one-year term. However, in other Commissions the Chair has a far stronger role in helping the Director manage the business of the Commission, deal with issues of procedure raised by members, helping resolve disputes, reviewing the performance of the Director, and sometimes taking the lead in developing key resolutions that are proving problematic for members, but are necessary for the Commission to move forward.

Members tend to pay little attention to the qualifications and abilities of a one-year Chair. In other tRFMOs, members pay significant attention to the qualities of a Chair to be appointed for potentially four years, and the appointment of the Chair is one of the most important decisions that the Commission makes.

In the ICCAT and WCPFC, the chairs can serve a maximum of 2, two year terms with the second two years dependent on performance in the first 2 and this period builds a strong working relationship and policy agenda with the Director. As the Chair and the Director develop a working relationship, the Chair is able to handle more meeting responsibilities and have a greater impact as he or she better understands the business of the Commission, the priorities of members, and the general direction the Commission needs to take. With only a one-year term, the Chair does not have time to develop a level of comfort in leading the Commission, which diminishes the Commission's ability to make decisions and implement policy.

Recommendation: Adopt measures to stabilize the chairmanship of the Commission.

The Commission should consider shifting to a model of electing a chair to a minimum of two and ideally four terms, consistent with approaches taken in the ICCAT and the WCPFC. Under the Antigua Convention, a Chair can be re-elected for additional periods as there are no term limits. Without changing the Convention, the Commission can adopt a "gentlemen's agreement" that a Chair will be able to serve two periods of two years, with the second period dependent on a review of the Chair's

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performance. The Chair's role and expectations for performance should be clear and linked to the strategic plan.

The Chair should be selected on his or her proven capacity to independently lead meetings and achieve results. The Commission Chair should be experienced in chairing international meetings from a neutral perspective by separating themselves from their national position and acting independently.

When a new Chair is elected, it should be at the end of the term of the current chair. Specifically, when the current Chair's term is up, the election of a new Chair (and Vice-Chair) should occur at the end of the annual meeting. Only in the case of emergency or unforeseen circumstances should a Chair be elected at the beginning of the meeting he or she is intended to chair.

6. Accountability and Consistency

Finding: Procedural limitations impact the Commission's ability to quickly implement meeting decisions.

Meeting minutes and related information lack clarity and detail and are not efficiently distributed. For example, the 2015 Compliance Committee annual report gives no direction to the Committee, the Secretariat or the members as to what actions need to be accomplished. As a result, work cannot commence immediately after annual meetings. Each year, the Commission decides on a number of actions to be undertaken by the Secretariat. However, based on the minutes for the annual meetings, it is difficult to determine what actions have been agreed to and what direction has been given to the Secretariat.

In addition, meeting minutes typically take months to distribute, losing time and giving the appearance of a lack of accountability and importance. Per the Antigua Convention, the first round of review of the minutes allows for three review periods of 14 days, but any issues after the first round have no time limitations. In some cases, meeting minutes can be held up by a dispute that delays them up to a year.

As noted previously, communication between the Commission and the Secretariat can be improved. When surveyed, a majority of commissioners and representatives reported being "somewhat dissatisfied" with the timeliness of IATTC meeting reports. A critical element of governance is a clear understanding of the work to be accomplished, and the current meeting recording, translation, and minute distribution process impedes progress.

Likewise, there is insufficient time allowed between the SAC meeting and the Annual meeting of the Commission. Traditionally this is around 4 weeks and this is insufficient time to complete the minutes of the SAC and to attend to other preparatory work necessary for the efficient conduct of the Annual meeting of the IATTC. To address some of these challenges, additional translators for meetings were requested in the 2015 budget, but they were not approved. There is also no official meeting Secretary, although audio recordings are prepared, and there are often multiple rounds of edits to minutes to clarify discussions and decisions. In many other organizations, administrative staff with expertise in taking minutes record meetings and prepare minutes.

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Recommendation: Take steps to improve the documentation of Commission meeting discussions and decisions to support implementation of decisions.

A professional recorder and additional translators would enable a draft meeting summary to be distributed at the end of each meeting. The Commission should develop a procedure to distribute draft or annotated minutes after the first review period, even in the case of a dispute between members. The Chair should ensure that all decisions taken at any meetings of the commission are agreed at the meeting and then these decisions are not re-opened in agreeing to the minutes of the meeting. In this way members cannot re-open issues on the grounds that they were misunderstood and hence delay the work of the Commission.

Recommendation: Adjust the timing of the IATTC annual meeting to late August or early September to allow for more time between the Scientific Advisory Committee (SAC) and the annual meeting.

The outcomes of the SAC and the annual meeting would be improved with a longer period for planning and analysis between the meetings. It is also important that the SAC and the Compliance Committee decisions are recorded that highlight the agreement to individual recommendations from the two committees.

B. MANAGEMENT

7. Strategic Planning

Finding: The Secretariat does not have a strategic plan or multi-year work plan to guide annual activities.

As established in the Antigua Convention and founding charters, the goals of the IATTC and AIDCP are broad, multifaceted, and long-term. A scientific activities plan is developed each year, and progress is reviewed during Scientific Advisory Committee (SAC) meetings. However, the Secretariat does not have a strategic plan or multi-year work plan to guide annual activities. Instead, research programs and other project requests are frequently developed during annual meetings.

As a result, it can be challenging to establish annual work plans and budgets to make steady progress towards multi-year goals. Without the continuity provided by a plan to guide decision-making over a multi-year period, work can become diluted and priorities unclear. The lack of clear, prioritized goals and transparent outcomes in reporting also contributes to challenges with the budget approval process.

Recommendation: Develop a five-year strategic plan, with biennial implementation plans tied to the budget.

A critical factor in modernizing the Secretariat's business practices will be to develop a five-year strategic plan. The strategic planning process should engage staff, management, and appointed officials in developing short- and mid-term goals and objectives to address the long-term goals of the IATTC and AIDCP. The strategic plan will provide a comprehensive framework for the prioritization of work.

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As part of the strategic plan, the Secretariat should establish clear outcomes and associated performance measures that are reported to the Commission on a regular basis. Regular output and outcome performance reporting will help to guide and improve decision-making. Output performance measures should focus on operational cost effectiveness and efficiency, and outcome measures should focus on progress toward scientific goals.

Once the strategic plan is complete, a staffing plan and communications plan should be developed, as noted in Findings 3 and 10. Biennial work plans should be developed as part of the budget process, and they should be evaluated quarterly and adjusted accordingly. Work plans and budgets should clearly link to strategic goals and objectives.

8. Management Succession

Finding: A high number of impending retirements presents both a risk and opportunity to the Secretariat.

Of the 44 full-time employees as of 2015, 20 have more than 20 years of experience with the Secretariat, and eight have more than 30 years of experience. The Secretariat retains significant value from this team of long-term, highly skilled employees. Low turnover indicates high job satisfaction, which was confirmed through interviews. Another benefit of low turnover is that retaining employees is much more cost-effective than replacing employees, due the costs associated with recruiting, onboarding, training, and ramping up new employees. The existing team also provides invaluable continuity, both internally for coworkers and externally for officials and other stakeholders.

However, without procedural documentation, cross-training, or succession plans, the Secretariat is also at risk of losing valuable institutional knowledge due to retirements. A significant number of employees leaving in a short period of time could have significant negative impacts on operations, especially in specialized disciplines. This risk is increased for the Secretariat, because it is a small organization staffed largely by experts in the field.

If managed properly, the potential loss of a number of senior staff also presents an opportunity for the IATTC to bring innovative ideas to the Secretariat. Organizations with very low turnover can become stagnant and resistant to change. A well-managed generational change in personnel can lead to increased productivity and renewed energy in the organization.

Recommendation: Develop a strategy to address succession planning and document procedures for key positions.

The Secretariat should develop a strategy and timeline for developing succession plans for key positions. This is an initiative that is typically led by Human Resources (see Finding 11), which should prepare a template for succession plans, provide guidance and technical support, and review plans to ensure completeness and accountability. An effective succession planning process should contain the following elements:

- Active executive involvement

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- Integration with the organization's strategic plan
- Process to identify essential positions and their critical competencies
- Procedures to identify, promote, and select high potential staff, along with plans for individual career development
- Procedures to monitor individual development through coaching, mentoring, and performance management
- Method for identifying and filling gaps in succession (i.e., strengthen internal capabilities and/or recruit from the outside)
- Regular review of each plan to ensure its effectiveness

The Secretariat should analyze employee demographics to forecast potential retirements and prioritize the development of succession strategies for those positions most likely to be impacted by retirements.

9. Managing Information Requests

Finding: The scientific staff and Director are responsible for responding to a large volume of research and data requests.

Scientific functions within the Secretariat receive a large volume of research and data requests from commissioners and representatives. These requests focus on inquiries regarding scientific studies, including explanations of results, correlation to other studies, and forecasting trends. Most requests for information are sent directly to the Director. However, the Director's highest and best use is not in responding to data requests.

Recommendation: Improve information request processes.

The Secretariat should develop a structured process for efficiently handling information requests. The Secretariat should develop a standard web-based form and internal process to receive all external information requests. The requests should be triaged by an administrative assistant and assigned to the appropriate program for response, rather than being sent first to the Director. An automatic response should be generated for each request, establishing a reasonable turnaround time and providing a contact for questions.

Once a process is in place, the Secretariat should assess the volume of requests, length of time to respond, and associated workload. This will enable the Secretariat to determine whether additional resources are necessary.

10. Organization Structure and Responsibilities

Finding: Roles, responsibilities, and reporting relationships are unclear.

The Secretariat is structured like many other research organizations, with administrative and policy units separate from scientific units, which are overseen by the Chief Science Officer. There is no Deputy

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Director or Director's designee in the event that the Director is absent. All staff reported improvements in collaboration and outcomes as a result of the scientific reorganization that occurred in 2008. However, there is no formal organizational chart depicting clearly defined chains of command. During interviews, staff noted that reporting relationships are somewhat unclear, and there is no middle management layer. Rather, all scientific staff report to the Chief Science Officer, and all other staff report to the Director. The lack of an intermediate layer results in a lack of cohesiveness and integration across the organization. Insufficient alignment and linkage results in staff and leadership that are not always able to operate at the highest level.

In addition, field offices and the Achotines Laboratory operate remotely from IATTC headquarters. Staff survey results indicated that most personnel desire more clarity regarding roles and responsibilities. Job titles that are in place are consistent, but there is a lack of job descriptions. While most staff members have been in their roles for several years and know what their day-to-day duties are, there is a lack of understanding of how some roles fit in the larger organization and associated reporting relationships.

Recommendation: Develop a staffing plan tied to the strategic plan to clarify and document roles and responsibilities.

As recommended in Finding 7, the Secretariat should develop a five-year strategic plan with clear goals, objectives, and performance measures. As a result of the strategic planning process, a staffing plan should be developed to:

- Determine the human capital necessary to achieve goals and objectives
 - Identify core competencies and requirements
 - Identify training and development needs
- Define career paths
- Project turnover due to retirements and identify key positions for succession planning
- Conduct gap analysis
 - Analyze current workforce and future labor supply
 - Identify gaps between human capital needs and current workforce skills and abilities
- Identify strategies to reduce turnover and expand applicant pools
- Follow the established procedure for a senior member of the staff to serve as Director designee in the Director's absence

A detailed organization chart should be developed and shared with all staff, depicting the hierarchy and reporting relationships in the organization. Job titles and descriptions should be developed and consistent across the organization. Job descriptions should be developed for each position identified in the staffing plan. Each employee should have annual performance goals that directly relate to their duties, which should be aligned with the strategic goals and objectives.

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11. Human Resources Personnel

Finding: The Secretariat does not employ a human resources specialist.

The Secretariat has limited human resource capacity and expertise. As noted in Finding 10, the organization lacks a detailed organizational chart and job descriptions. Performance evaluations are not conducted. Recruitments and appointments of new staff are of particular concern to employees, who reported a lack of knowledge of openings and hiring decisions that excluded key personnel. Workforce planning, tied to a strategic plan and annual business plans, is especially important in a small organization. While training is supported, it is not centrally tracked or managed.

Recommendation: Engage a human resources specialist to handle the human capital needs of the organization.

Modern business operations require human resources expertise to ensure consistency, compliance, and adherence to best practices. At 44 total employees operating in a complex international environment, including international field offices, the Secretariat is large enough to necessitate a professional human resource service, whether via internal or external resources. A number of the findings in this study identify opportunities for a human resources specialist to assist in modernizing and streamlining Secretariat operations, including:

- Planning for management succession (Finding 8)
- Developing a staffing plan, organization chart, and job descriptions (Finding 10)
- Improving internal communications (Finding 12)
- Managing a compensation program (Finding 13)

12. Internal Communications

Finding: Staff report a need for more consistent, timely communication.

IATTC staff reported limited understanding of day-to-day operations or decisions outside of their areas of responsibility. While a monthly newsletter is distributed, it is focused on past travel and publications rather than internal matters. In addition, there is a lack of regular staff meetings, and the results of annual meetings are not communicated efficiently to staff. Many staff who responded to the survey for this study noted that internal communications could improve, especially between research groups. Staff specifically requested more information regarding policies, procedures, and personnel matters.

During interviews, staff members expressed strong interest in sharing information across business units and building relationships outside of their immediate peers. A contributing factor is the strained working relationship between some members of senior leadership, which has for several years led to a lack of information shared between certain groups and a lack of clarity among staff as to roles, responsibilities, and authority. This environment results in inefficiencies. As noted by the commissioner and representative survey results, “internal coordination” was rated as the second-most inefficient function of the IATTC.



Recommendation: Increase internal communications efforts and foster collaboration across the Secretariat.

The Secretariat should formalize internal communications protocols, including staff meetings, regular performance reporting, and newsletters. Management should encourage information sharing between departments, starting with leadership. Managers should communicate frequently and consistently, both vertically and horizontally within the organization. The Secretariat should also consider making the following adjustments to its internal communications to achieve enhanced efficiency and effectiveness:

- Conduct quarterly all staff meetings, including:
 - Report on progress toward goals and objectives
 - Research unit reporting on outcomes and upcoming work
 - Administrative update on policies and procedures
 - Recognizing employee achievements and contributions
- Immediately following annual meetings, the Director should disseminate draft meeting minutes to all staff, including an introductory email with major takeaways from the meeting. This information can also be used for external communications and press releases.
- Augment the monthly newsletter to include upcoming events, important dates, administrative and personnel information, and a report from the Director.

13. Staff Salaries

Finding: Staff salaries increased a total of 8% from 2010 to 2015.

Budget deficits and the impact of the global recession have limited the Secretariat's ability to provide salary increases to staff. Between 2010 and 2015, staff salaries increased an average of 8%, which was less than the 9.6% increase in the Consumer Price Index in San Diego over that period. Several members of the staff received salary adjustments due to promotions, or commensurate with their achievements in obtaining higher degrees, allowing them to further their scientific contribution to the IATTC research.

As noted previously, turnover within the organization is low. However, flat salaries over a multi-year period are a risk to the organization, since it can decrease morale and increase the probability of turnover. In particular, many scientific staff are highly valuable and internationally well-regarded, their departure could impact IATTC's ability to achieve research goals, and it could be difficult to replace them with individual's possessing equivalent expertise.

Recommendation: Ensure that staff salaries are competitive compared to peer entities and the regional cost of living.

As part of the biennial budgeting process, the Secretariat should plan for annual salary adjustments to align with cost of living increases in the San Diego metropolitan area, as defined by the U.S. Bureau of Labor Statistics. On a biennial basis, Human Resources should identify comparable positions for science and policy roles in the U.S. Federal Government and total benefit packages, and review pay and benefits

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to ensure total compensation remains competitive. Likewise, the salaries and benefits of administrative staff should be regularly benchmarked against comparable positions in the San Diego metropolitan area.

C. SCIENCE

The Terms of Reference (TOR) for the Review of IATTC requires the review to cover “the period since the entry into force of the Agreement on International Dolphin Conservation Program (AIDCP) to present.” The AIDCP entered into force in February 1999, and, as such, this review considered activities of the IATTC with respect to the review criteria from that date.

There are essentially two main components to the science programs; AIDCP and IATTC. The TOR requires an assessment of the achievements of AIDCP and IATTC and recommendations on how to improve the performance of both components. In line with the TOR, we assessed the following elements of the AIDCP and IATTC:

1. AIDCP

- Achievements to date
- Components and costs; including observer program, field offices and fleet education and monitoring
- Potential improvements to the program

2. IATTC Science program

- Extent to which the IATTC produces the best science advice regarding tuna and tuna like species under the mandate of the Antigua Convention
- Actions to manage effort and capacity
- Collaboration in decision making, including data collection and engagement capacity
- Structure and importance of the research program
- Efficiency in the conservation and management of species associated with tuna fishing (bycatch species)
- Relationship between assigned tasks and allocated resources (cost and capacity to deliver)

AIDCP

The yellowfin tuna purse seine fishery in the eastern Pacific Ocean EPO commenced in the 1960s, and grew into a fishery setting on herds of dolphins often associated with tuna schools. By 1977, concerns were being raised about the level of dolphin mortalities in the fishery and the IATTC agreed to work on the issue. In 1992, members signed the La Jolla Agreement to begin a formal process to reduce dolphin mortalities. The Agreement introduced some useful tools, such as individual vessel dolphin mortality limits (DMLs), and established the IRP to monitor and report on the program. This Agreement morphed into the Agreement on the International Dolphin Conservation Program (AIDCP), which was adopted in February 1999. The objectives of the AIDCP are to:

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- Progressively reduce the incidental dolphin mortalities in the tuna purse seine fishery in the Agreement Area to levels approaching zero, through the setting of annual limits;
- Eliminate dolphin mortality in the fishery and seek ecologically sound means of capturing large yellowfin tunas not in association with dolphins; and
- Ensure the long-term sustainability of the tuna stocks in the Agreement Area, as well as that of the marine resources related to this fishery, taking into consideration the interrelationship amongst species in the ecosystem, with spatial emphasis on, inter alia, avoiding, reducing, and minimizing by-catch and discards of juvenile tunas and non-target species.

14. AIDCP Achievements to Date

Finding: Dolphin mortality has continued to decline significantly under the AIDCP.

By any measure, the approaches taken by the IATTC since 1977 including the achievements to date of the AIDCP should be considered outstanding. In November 2005, the FAO recognized the “unqualified success” of the AIDCP, and awarded it the Margarita Lizárraga award in recognition of its “comprehensive, sustainable and catalytic initiatives” in support of the Code of Conduct for Responsible Fisheries.

Under the approaches taken by the IATTC pre-AIDCP and through the AIDCP, the mortalities of dolphins in the Agreement Area have reduced from around 132,000 in 1986 to 975 in 2014. The 2015 report on the performance of the AIDCP indicates continued improvements with 11,382 sets monitored and 975 mortalities, with an average mortality of 0.086 mortalities per set. DMLs allocated were 59 per vessel for 83 vessels, no vessel exceeded its mortality limits, and the number of sets with no mortalities rose from 38% in 1986 to 95.5% in 2014.

The AIDCP performance has been impressive, and there are four areas of concern identified by the review panel:

- The dolphin population survey program has not been conducted since 2006 despite concerns scientists have about the ongoing accuracy of the population estimates (MOP-30 INF-A).
- Although there is some monitoring and reporting from other vessels, IATTC staff are concerned that there may not be an accurate picture of the activities of the smaller purse seine vessels that are unobserved and may be setting on dolphins and may also be interacting with bycatch species due to an increased use of FADs.
- The review panel is concerned about the ability of the AIDCP/IATTC to fund research under the broader IATTC science program on dolphin biology; gear, equipment, and fishing techniques; and research on fishing large yellowfin not in association with dolphins as required in Article V of the Convention. The panel noted that research is continuing by IATTC staff on available data and some collaborative research on gear has been undertaken with the International Seafood Sustainability Foundation (ISSF). However, when reviewing the SAC Document SAC_06-10a, there is an emphasis on science research on Tuna and bycatch and little by way of dedicated research proposed on dolphins.

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- The review panel is concerned about the lack of program-wide penalties and follow-up action on infractions in the AIDCP program. The following comment appears in section 9 of the minutes of IRP 58 (October 2015): *“Eight cases of possible infractions under investigation were presented for which no updates had been received, three cases of use of explosives and five of night sets.”* In the 9th case, the captain was removed from the list of approved captains for using explosives. There are two areas of concern related to this comment: First, there appears to be a reluctance by the members to quickly and decisively deal with these issues; second, there should be a very strong, consistent set of penalties in place for behavior such as the use of explosives.

Recommendation: Assess risks associated with the dolphin population survey program hiatus.

The AIDCP and IATTC scientists should identify risks associated with the hiatus in the dolphin population’s survey program, and determine if it has the potential to significantly impact the accuracy of the assessments of the overall stock levels. If so, then AIDCP should define and fund a program to resolve the problem. MOP-30 INF-A provides a good discussion paper on this issue.

Recommendation: Review the operations of the small vessel purse seine fleet and if necessary implement an observer program for these vessels.

IATTC should review the operation of the small vessel purse seine fleet for interactions with dolphin herds and the use of FADs and if it is necessary establish and implement an observer program for this fleet to obtain more accurate data and information.

Recommendation: Develop an ongoing dolphin research program to ensure that the objectives of the AIDCP continue to be met.

The Commission should review AIDCP dolphin research funding to ensure it is at a sufficient level to lead to both the ongoing development of novel fishing techniques and methods to release dolphins and catch yellowfin away from dolphin herds. The development of a new set of research objectives, goals, and timeframes for the AIDCP would help in this regard.

Recommendation: Review the process for addressing infractions, including developing strong incentives and penalties.

The AIDCP should immediately review the current process for addressing infractions. Process improvements, including incentives and penalties, should be developed and enacted. The incentives and penalties should be strong enough to eliminate actions such as the use of explosives in the fishery.

15. Components and Costs of the AIDCP Program

Finding: The AIDCP operates at a deficit.

The main elements of the AIDCP program include:

- Observer program
- Field offices

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- Training workshops and certification of captains
- Data entry and program management by IATTC staff
- Meeting costs (AIDCP, IRP, Tuna Certification System Permanent Working Group on Tuna Tracking)
- Dolphin research program

It is important to recognize that while the AIDCP is a separate program, the 100% observer coverage and observer data contribute significantly to the broader science and assessment program of the IATTC. The field offices allow for the collection of unloading and cannery data, capacity building, and placement of observers. The research contributes to the understanding of the ecology and interaction of species within the fishery. As such, this program contributes in many ways to the scientific program within the IATTC.

The budget for the AIDCP program has two expenditure types, including Onboard Observer Costs and Other Costs. The Commission pays 30% of the former and none of the later. The Commission's 30% contribution to the observers reflects the level of observation that was required prior to the La Jolla Agreement and the remainder is recovered from the parties to the AIDCP, through a levy on cubic meter capacity of the vessel wells. The AIDCP has a number of elements essential to the program that contribute to the overall costs.

The budget for the program in 2014 was \$2,951,521. The program had an operational deficit of \$36,121, which was offset by the extraordinary assessments approved and recovered totaling \$355,394. The program is expected to continue to operate at a deficit unless the contributions from members increase. This deficit will be exacerbated by any increases to observer salaries and IATTC Secretariat costs.

While the Secretariat endeavors to find ways to reduce the gap between the receipts from the assessment levy and the budget approved by the AIDCP, the reality is the deficit would continue to grow without the extraordinary receipts. The main reason for the deficit is the levy rate of \$14.95 a cubic meter has not been increased since 2006. The Secretariat calculates that the levy needs to increase to \$17.61 per cubic meter to cover normal inflation and avoid further deficits.

Recommendation: Review and adjust the levy rate on a biennial basis to cover the costs of operating the AIDCP.

On a biennial basis, the Secretariat should develop a detailed line item budget for the AIDCP, including training and personnel costs. The Commission should review MOP 31-06 and adjust the AIDCP funding to cover the costs of AIDCP operation. If boats continue to fish on dolphin schools in the AIDCP Agreement Area, then justifiable cost increases should be implemented and not subject to consensus agreement. If not the AIDCP program will be underfunded and the quality of the program and its dolphin safe program compromised.

16. Potential Improvements to the AIDCP Program

Finding: The AIDCP meeting process is costly and time consuming.

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The AIDCP is a successful program. However, the fleet continues to fish on dolphin schools (11,382 sets in 2014). If the fish are to be marketed into the normal canning and loining markets globally, then the “dolphin safe” warranty of responsible fishing that comes from the AIDCP program will continue to be a requirement, and the label will require process certification. As such, the AIDCP program will need to continue.

At the 32nd meeting of the parties in October 2015, a member tabled document MOP-32 INF-B “*Rationalization of AIDCP Meetings.*” The AIDCP annual process comprises 2 sessions of four meetings held consecutively. MOP-32 INF-B outlines the pros and cons of reducing the number of meetings and notes that some changes would facilitate changes to the AIDCP Agreement itself. The paper proposes two options:

- Move to a yearly DML allocation, with the allocation bought forward to the IATTC Annual Meeting each year. The IRP would also meet only once a year; or
- Maintain the current timing and allocation of the DMLs but conduct a review and approval of the second semester DMLs via correspondence (virtual meeting), so there can be an inter-sessional allocation.

Another option is to roll the AIDCP program into the IATTC and let IATTC members manage the program. It is noted that not all IATTC members are AIDCP members and this will need to be managed if the programs were amalgamated. There would be benefits to this approach, since the meetings could be integrated, which would reduce travel time and costs, and the IATTC Secretariat would only have one set of meetings to support.

Recommendation: Consider making adjustments to AIDCP meeting procedures, while maintaining rigor and independence.

It is important for this program to maintain its rigor and independence in terms of certifying the dolphin free process and retain the Independent Review Panel (IRP). As such, the IATTC must have a dolphin monitoring program while fishing occurs on dolphin schools. However given the achievements of the program, it is timely for the IATTC members, staff, industry, and the IRP to meet and decide on the best way forward for the program. It should be possible to streamline the meeting process and reduce operating costs while maintaining the integrity of the program.

As with any successful program, there is danger in changing it without fully thinking through the impacts. As such, the Secretariat should be tasked with developing options papers for streamlining the AIDCP process in preparation for a meeting of all the parties, including industry, NGOs, and members who should decide on any appropriate changes.

IATTC

The intent of this section is to look broadly at the IATTC science program, review its strengths and weaknesses, and suggest ways in which the program could be improved. By any measure, the last 60 years has seen the establishment of a renowned science program built by a talented group of well-

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credentialed and committed scientists. However, opportunities exist related to improving the science process, communication between IATTC science staff and members, understanding of how the research program comes together, what the program costs are, and inclusion of members in the process.

17. IATTC Scientific Advice

Finding: The IATTC science program is unique and provides significant value to fisheries management, yet it could provide even more value.

The science program of the IATTC is unique among tuna tRFMOs. Most of the tRFMO programs mainly focus on modeling and assessments supported by data collection from the fishery and some indicator-based research and tagging. Much of this relies on member programs for support. The genesis of the differences in the IATTC approach stems from the original 1949 Agreement, which placed responsibilities on IATTC to undertake a range of scientific functions including “promote, carry out and coordinate scientific research concerning the abundance, biology and biometry in the Convention area of fish stocks covered by the Convention and, as necessary, of associated or dependent species and the effects of natural factors and human activities on the population of these stocks” (Article V11). As such, IATTC has, since the 1950s, had an internal research program that was designed to meet its obligations under the Convention. To do this it built a long-term program to undertake serious biological research, ecosystem (including bycatch), data collection, tagging and stock assessment.

The other significant element of the Antigua Convention is that it instructs the Commission to “maintain staff qualified in matters pertaining to this convention, including administrative, scientific and technical staff” (Article V11 (2)). Therefore IATTC has over the years developed its research program around a group of people permanently recruited to the Commission who have become dedicated to the Convention objectives. The adoption of the Antigua Convention also took the IATTC toward an ecosystems management approach with the challenges that that presents and formalizes responsibilities for bycatch species.

The IATTC science program has three core programs: Stock Assessment, Biology, and Ecosystems; Bycatch and the AIDCP; and the Data Collection and Database Program. These programs are supported by a laboratory at the office in La Jolla, the Achotines laboratory in Panama and field offices in Ecuador, Mexico, Panama and Venezuela. The laboratory in La Jolla is used for studies such as reproductive biology and otolith aging, while the Achotines Laboratory supports culture-based work that provides assessment scientists with early life history information in order to better understand the early life cycles of these fish. The field offices support the IDCP observer program and provide catch, unloading, and cannery information to assist the stock assessment program.

The strength of this program is in its quality, longevity, and depth. It provides a long time series of data and research information on a range of related topics that interrelate in fisheries management and science. The IATTC has probably the best purse seine observer program available, which adds significantly to the work of the Commission, not only to the management of the AIDCP, but also to the work of the other science programs.

18. The Science Process and Interaction with Member Country Scientists and Commissioners

Finding: Member country scientists do not feel adequately connected to or involved in IATTC scientific activities.

As noted previously, some Commissioners and representatives raised concerns both during interviews and through the survey about feeling excluded from the science process. These concerns that impacted the commissioners' ability to understand interact with the science process included:

- Communication gaps between IATTC staff and Commissioners;
- A lack of understanding of how the scientific research program is developed;
- A lack of budget transparency and strategic goals; and
- Uncertainty as to the role of the SAC as advice to the Commission is provided by the SAC and also by the Secretariat.

In contrast, many developing country members who lack the scientific capacity to influence the discussions at the Commission level rely heavily on the IATTC scientists, and feel a sense of ownership over the process. These Commissioners reported that they focused their actions on protecting the interests of scientific staff, as they are independent and free from influence.

Several Commissioners raised questions about the time scientists spent on what was perceived to be non-Commission activities such as science reviews in other RFMOs, and external teaching and research activities. This review assessed the workload of the scientific staff and their external engagement, and it appears that there is nothing out of the ordinary in non-Commission pursuits and indeed a lot of this work could be seen as strengthening their expertise. External scientific work includes reviewing the assessment models in other Commissions such as the assessments the SPC does for the WCPFC, attending and presenting at conferences of scientists involved in tuna and assessment work, and for the IATTC staff specifically chairing the joint IATTC/NOAA workshops on improving assessment techniques. These are all activities that staff in other Commissions perform in different fields and it is consistent with demands placed on national scientific staff. While there is a cost in time and travel, these activities contribute significantly to the scientists' knowledge and research.

While appointed officials' concerns vary, together they affect the IATTC's ability to move forward and better integrate all members into a more integrated science process. While the primary issue appears to be weak external communications, as noted in Finding 3, there are additional influencing factors, including:

- *Past practices:* Historically, the Secretariat has always been in charge of scientific decision-making. Prior to 2010, there was no formal process for interaction by members. In 2010, the Antigua Convention changed the science process in IATTC and instituted a Scientific Advisory Committee similar to the other tRFMOs. However, many members still see the IATTC as dictating the science views for the Commission and the members having limited opportunity to

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input to the process and feel that the SAC lacks the scientific discussion that is the hallmark of science committees in other tRFMOs, as the science discussion is guided by the Secretariat.

Unlike other tRFMOs, in which the scientific committee is chaired by a member, the Convention mandates that the SAC be chaired by the Executive Secretary. As a result, the Commission loses an opportunity to encourage some ownership of the process on the part of Commissioners by having a member chair the SAC.

- *Unique model:* The other tRFMOs have different approaches to science and only the IATTC has the internal science capacity to conduct stock assessments and undertake the other biological and ecosystem and bycatch work. In the other tRFMOs, much of this work is performed by the national programs. Commissioners and scientists who are used to one approach have to adjust their expectations when beginning to work with the IATTC.
- *Budget transparency:* Using the current budget presentation format, it is difficult to determine the cost of proposed research projects and how they fit in with the priorities of the Commission. There is a perception among Commissioners that the Secretariat directs the members without discussion, and the members are expected to return to their countries and request increased budgets without a good understanding of the costs and details. See Finding 4 for additional information.

Recommendation: Take measures to improve communications and build relationships with Scientific Advisory Committee (SAC) members.

The Commission should take measures to allow for greater member interaction while remaining independent and free from political influence. SAC document SAC-06-10a provides a good outline of the current and planned science activities of the IATTC staff. This paper consolidates scientific information including research goals, costs, and priorities. This should be a regular part of Secretariat communications to the SAC, which would better inform members and allow them to meaningfully contribute to SAC discussions.

Soliciting feedback and incorporating it into future operations can significantly improve trust and collaboration. For the next several SAC meetings, the Director should lead a discussion at the end of each meeting to seek feedback from attendees. The discussion should include how they viewed the meeting communication, processes, and results, and whether they have any suggestions to improve the meetings.

The Secretariat should develop a plan for greater collaboration and use of national scientists in the scientific processes in the lead up to the SAC. National scientists could both contribute to the assessment and also benefit from the processes. Instituting collaborative work would help the Secretariat establish better relationships and build trust with Commissioners and national scientists.

In addition to the capacity building and onboarding activities noted previously, the Secretariat should deliver regular presentations to Commissioners that explain the elements of the science program, how they function, and why they are important. Fisheries science is complex, and spending time on this at each annual meeting will help with understanding and developing trust.

Recommendation: Review and improve the process for the chairing of the SAC.

The IATTC should review the SAC chairing process and consider methods for improvement. Several chairing models could be considered:

- Institute a rule that a member chairs the SAC. However, as noted previously, the scientific knowledge of member nations ranges widely.
- Establish co-chairs, with the Secretariat sharing the chairing process with a member. This could better integrate the parties in the process.
- Utilize the CCSBT model, which has independent chairs appointed to some of their Committees. This has the advantage of appointing a chair with considerable knowledge and skills who can move the SAC process forward in a professional and inclusive manner without the perception of undue influence.

Recommendation: Ensure the integrity of the SAC report presentation to the Commission.

The IATTC should take measure to preserve the independence of the SAC. In other Commissions, the Chief Scientist presents a “Status of the Stocks” report to the Commission annual meeting. This covers the assessment of the stock status and includes commentary on what the Chief Scientist feels should occur in terms of management decisions. Once this is completed, the recommendations that go to the Commission must be those formulated and agreed by the SAC following robust discussion. The Commission then considers these SAC recommendations and either accepts them or provides feedback and guidance to the SAC on further work to be undertaken.

Recommendation: Increase collaboration between internal research units.

As noted in Finding 12, many staff indicated that there could be better collaboration and information sharing between the science program areas within the Secretariat of IATTC. They indicated that programs could better understand and utilize information from other programs, and that the overall science would benefit if linkages between programs were strengthened. It appears that, at a senior level, there is a strong understanding of the activities of the other groups, but, at a junior level, more effort may be needed to communicate research and activities to share knowledge and understanding.

The program heads in the IATTC should ensure that all staff are aware of the work programs and directions of research and how this work contributes to the broader goals of IATTC. Efforts should be made to involve staff during the planning stage for projects and research work. See Finding 12 for additional recommendations to improve internal communications.

19. Early Life History Program and the Achotines Laboratory**Finding: The Achotines Laboratory provides significant value to the Commission at a relatively low cost.**

The Early Life History Program supported by the Achotines Laboratory is unique among tRFMOs, and several Commissioners have raised questions as to their ongoing importance. The Achotines Laboratory

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was established in 1985 and is fully owned by IATTC. It is the only facility of its kind in the world. The work accomplished by the Laboratory is consistent with the requirements of the Antigua Convention. The focus of the research, which is to better understand the egg/larval and early-juvenile life stages of each of the species, has made valuable contributions to the stock assessment functions of the IATTC. In addition to providing facilities for the egg and juvenile life stage work, it is used to test new technology such as non-entangling FADs to help reduce by-catch.

The cost of operating Achotines is relatively low, with a core budget of around \$200,000 per year. Much of the ongoing funding comes from external sources for projects, such as aquaculture of tuna (Japan), non-entangling FADs (EU) and Ocean Acidification (U.S.). The Laboratory may provide significant value in coming years, through current research to better understand the potential impacts of global warming on tuna species in the Pacific. Ocean acidification research is also underway, and understanding the impact of ocean warming and acidification on the food webs in the Pacific will be critical to many scientific disciplines.

This laboratory is the only facility of its kind in the world and its early life history work contributes to the management decisions taken on the tuna at both a national and international level. The work undertaken in the Achotines Laboratory should be of ongoing interest to the scientists and managers in the other tRFMOs as the growth and early life stage survival of juveniles is important in all assessments. Work on ocean warming and acidification will be of critical importance to all of the tuna RFMOs as such opportunities should open up for collaboration with the WCPFC and the IOTC in particularly for jointly funded research in these areas.

Recommendation: Continue to support and strengthen research at the Achotines Laboratory.

The Early Life History program and the Achotines Laboratory should be maintained and the program strengthened. The program and the facility will be essential for work regarding climate change in the future. The Secretariat should continue to pursue alternate and innovative sources of funding, including grants from philanthropic organizations and contributions from other tRFMOs.

20. Longline and Artisanal Fleets

Finding: There is limited observer data from longline, small purse seine, and artisanal fishing vessels.

The IATTC has a well-developed observer and data collection program for purse seine fisheries. However, there is no IATTC longline observer program in place or an observer program for small purse seine vessels or artisanal fishing vessels. The expectation established by Resolution C-11-08 is that the countries who fish longline vessels in the IATTC Convention area will ensure their national programs provide 5% coverage. However, at the 2015 SAC meeting, only 3 parties commented; one party was able to demonstrate 4.3% coverage, another “some activity,” and another party noted it had exceeded 5% without any clarification. IATTC staff report that additional data from these fleets would add to the understanding of interactions between smaller fleets and dolphins and between the longline fleets and bycatch and non-target species.

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As noted above, IATTC staff have expressed concerns about the activities of the small purse seine fleet and its interaction with dolphin herds and with bycatch species. The artisanal fleet also includes targeted coastal shark fisheries and this fleet also has the ability to interact with other bycatch species (turtles and seabirds).

Recommendation: Develop strategies to increase observer coverage of longline and artisanal fleets.

More investigation into longline, small purse seine and artisanal fleets should be undertaken to see if the data collection from these fleets can be improved. If the national longline observer programs do not achieve the mandated 5% coverage then a more formal approach under an IATTC funded observer program may need to be taken. A review should be conducted of the performance of the national programs in genuinely achieving 5% coverage in the longline fleets in the IATTC to improve the level of observer coverage on these vessels.

Consideration should be given to improve the observer coverage and understanding of the smaller purse seine and artisanal fleets. It will be necessary to determine exactly what data and information is required and the extent and current operating practices of these fleets. This will determine what type of observer or port inspection program is required to collect the necessary data and information.

21. Transshipment

Finding: The IATTC outsources observers for high seas transshipment vessels.

The practice of high seas transshipment in the IATTC area of competence is limited to large scale long line vessels. The purse seine fleet is required to transship all products in port (Resolution C-12-07). Transshipment is only allowed to occur for vessels which have observers on board that have been placed by an independent company contracted to IATTC for this outsourced service. This outsourcing practice is also followed for observers on transshipment vessels in the WCPFC convention area. The loss of an observer contracted to an IATTC transshipment vessel this year brings into question whether this program should be allowed to continue or whether the vessels should be forced to transship in port. While the outsourcing of the transshipment observer program is a decision for the Commission, the existing IATTC/AIDCP observer program is an excellent program and is well run by the IATTC and the member countries.

Recommendation: Review the at sea observer program to ensure the safety of observers.

If transshipment is to be continued to be allowed in the IATTC area then it must only be allowed with observers in place. The IATTC must review this practice and the outsourcing contract provisions to ensure that it has in place practices that guarantee a safe working environment for observers at sea. Any vessel involved in an incidence of the loss of life of an observer should never be allowed to operate again in any global fishery.

In light of the loss and death of an observer on a transshipment vessel, the IATTC should review the at sea observer program to ensure that all observers have a safe working environment. The IATTC

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implements penalty provisions into the Transshipment Resolution that will exclude the vessel, crew and captains of any fishing or transshipment vessel involved in the loss of life of an observer at sea from ever fishing again in any RFMO based fishery.

22. IATTC Stock Outcomes

Finding: Stock outcomes vary for species under IATTC management.

Fisheries under the governance of the IATTC are primarily purse seine fisheries for yellowfin and skipjack tuna. The purse seine fishery also catches bigeye and associated bycatch species (sharks, rays, billfish, Dorado, turtles). There is a dedicated longline fishery for yellowfin, bigeye and billfish, a pole and line fishery for skipjack and black tuna and an artisanal purse seine and longline fleet and active game fishing fleets from the U.S. and Mexico. The Pacific tuna stocks are shared with the WCPFC fishery and therefore there is increasing importance being placed on aligning the science of the two commissions to ensure that the assessments can be compared and the outcomes compatible. Regular Pacific-wide assessments may improve understanding of these stocks and highlight any potential problems occurring because of fishing practices or management decisions taken in the other commission. Major fish stocks are discussed below.

- *Yellowfin Tuna:* IATTC data indicates that the catches from the yellowfin fishery have been reasonably consistent over time in size and volume. The spawning biomass ratio (SBR) for yellowfin is .26, which is around the estimated MSY level of .27. It appears that overfishing is not occurring. However, there are some concerns about the uncertainty of current and future levels of recruitment and biomass. This stock will undergo a full assessment in 2016 following a recent external review of the yellowfin assessment process.
- *Bigeye Tuna:* SAC reports showed that bigeye in the EPO reached a historical low of .19 SBR in 2013 but recent indications are that the stock is rebuilding and was estimated to be .22 SBR at the beginning of 2015. This stock remains under pressure; with the continued increase in FAD usage, preventing it from becoming overfished or being subject to overfishing may well prove difficult. The stock last underwent a full assessment in 2010 and is due for a full assessment in 2016.
- *Skipjack Tuna:* Skipjack was last assessed in 2004. Indicators-based assessments will be presented in 2015, 2016 and 2017. Indications are that overfishing is not occurring and the stock is above MSY. While there is uncertainty about the status of skipjack in the EPO, there is no evidence of a credible risk to the stock. The catches of the key tuna stocks have been reasonably stable over the last 10 years.

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- *Pacific Bluefin Tuna:* By any measure, this stock is in serious trouble. Under the Antigua and WCPFC Conventions, the mandate for the management and scientific assessment of this important stock is given to the IATTC and the WCPFC. However, assessments for these stocks are being conducted by the International Scientific Committee (ISC), which has no mandate, no Convention, and no responsibility for this stock.
- *Billfish:* The SAC has a program in place to consider the main billfish stocks with a number of them due for indicator-based assessments in 2016. The outcome of these assessments will not drive future IATTC management activity for the stocks.

Recommendation: Review the status of these key stocks and take immediate action to address Pacific Bluefin stock.

Pacific Bluefin has been fished to a very low level and needs urgent joint WCPFC and IATTC management action. The mandate for the assessment of the Pacific Bluefin stock is with the WCPFC and IATTC. The ISC has no formal mandate to assess this or any other migratory stock in the Pacific Ocean.

While yellowfin, bigeye, and skipjack stock have been fished down to around estimated MSY levels, there does not seem to be undue concern as to their position. The strong El Niño in 2015-16 may have had some impact on recruitment, but only time will tell. The IATTC has structured an effective assessment regime for these three stocks which should be adequate to provide early indications of any problems that might arise. Future areas of research should include:

- The increased use of FADs and the potential impact these could have on juvenile bigeye tuna.
- The adoption of new technology, such as the new generation of satellite FADs and the potential they may have to influence CPUE.
- The continued growth in catch from the WCPO fishery and its potential to influence future EPO management strategies.

Critical action needs to be taken to address Bluefin stock. The IATTC and the WCPFC need to urgently regain the management and assessment of this stock and work together to develop and implement an urgent recovery plan. Evidence from the CCSBT and ICCAT for the southern Bluefin and Mediterranean Bluefin indicates that once fishing pressure is reduced these stocks will begin to show early recovery.

The Commissions should organize a workshop facilitated by an independent chair or panel to start developing a recovery plan for Pacific Bluefin. A formal arrangement should be established between the WCPFC and the IATTC for the shared management and decision-making for recovery of Pacific Bluefin stock. The science for Pacific Bluefin should be the purview of the IATTC and WCPFC as described under the relevant conventions and no longer be conducted by the ISC.

Recommendation: Collaborate with the WCPFC to review stock assessment models used for the major tuna stocks in the Pacific to ensure the parameters are consistent.

In all Commissions, Commissioners regularly express concerns about scientific advice; some of it is justified and some is not. Much of the criticism is based on lack of understanding of the assessment

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process and the models utilized, but there are legitimate concerns about the parameters and conditioning used in the models that concern them. There is a number of stock assessment models used internationally and scientists tend to use those they are comfortable with or best fit the stocks they are assessing and there is no universal model. What is important that the models and parameters used are peer reviewed regularly to ensure that they are appropriate as properly assess the input data and information. In looking at the Pacific-wide nature of these stocks, the following issues may be worthy of further discussion:

- Steepness relates to the productivity of the stock, the yield that can be obtained from that stock, and the management approaches that should be applied. This is one area of uncertainty in tuna fisheries assessment and if the productivity is estimated to be too high then the fishery is thought to be more productive and can support higher levels of fishing that it actually can. As these are Pacific wide stocks it would be useful if both the WCPFC (SPC) and the IATTC used the same estimates of steepness in their models.
- As these are Pacific-wide stocks, it would be very helpful if the two Commissions were to adopt compatible harvest strategies, including harvest control rules and target and limit reference points to ensure that the stock were harvested under the same management regimes in both fisheries. This approach should prevent overfishing in one fishery by utilizing more generous assessments or harvest strategies.

Recommendation: Adopt a system of regular external peer review of stock assessment models.

The IATTC should establish a process to regularly conduct independent peer reviews of stock assessment processes. At a minimum, the stock assessment models should be independently evaluated every five years. As a result, the Commission should consider adjusting assessment methods for maximum accuracy.

23. Actions to Manage Effort and Capacity

Finding: Capacity limits are not adjusted for effort creep in the fleet.

The IATTC has capacity measures and establishes capacity limits for each party, some based on the limits established for the fleet in 2002, and some taking into consideration the special circumstances of the party as developing states. It also controls the transfer of capacity between countries, permanent or temporary, including capacity loan and temporary chartering of vessels. While this method of capacity management appears to effectively control capacity and efforts of the fleet, it is an input management measure and should be adjusted regularly to account for effort creep in the fleet. If these adjustments have occurred, then capacity will have increased even if vessel space has not.

Recently there has been an increase in the use of FADs in the IATTC purse seine fishery and improvements in FAD technologies. There are also continuing improvements in gear and vessels. The fleet capacity limits have remained the same for the last 14 years. Members have expressed concerns that some countries seem to be increasing capacity, in part by increasing vessel capacity, which has increased the overall capacity in the fishery. As the Director noted at the 2015 SAC, "*the measure is now*

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13 years old and the system of trading, management, splitting, well sealing and vessel replacement has become extremely complex.” As a result, there is the potential for taking advantage of the system.

Recommendation: Review the capacity measure and application.

Although there have been regular workshops and meetings to discuss this issue and members have agreed to reduce the capacity of the fleet over time this does not appear to have occurred. The capacity measure in the IATTC capacity model should be reviewed to ensure that countries are staying within their allocated limits and fleets are not working around the system to increase capacities. The system should also be reviewed, and, if necessary, the capacity limits should be reevaluated and reduced to account for effort creep over the last 13 years in the fishery.

24. IATTC Research Program and Costs

Finding: Annual research budgets and programs presented to the Commission lack specificity and clarity.

Under its convention, the IATTC has an obligation to fund research into the biology and assessment for fisheries. Each year, the Secretariat presents to the SAC a paper: *“Current and Planned activities of IATTC Staff.”* This paper is discussed at the SAC and proposals for future work are then presented in a report from the SAC to the Commission under the heading *“Review of the Commission Staffs Research.”* There is discussion by the Commission members, but the presentation seems to be accepted without any direction or course of action. However, it should be noted that both the paper to the SAC and the presentation to the Commission do not indicate the budget required for these tasks, identify tasks in priority order, or define how completion of the tasks link to overall achievement.

The IATTC has been successful in developing collaborations with other research bodies in order to reduce costs and attract outside funding for individual projects. This outside funding assists in offsetting budget shortfalls.

In the WCPFC, the entire science program is presented in detail and approved based on the cost for each program. If there are any new projects, then these projects are discussed and the budget for each is approved as well.

Recommendation: Develop a long-term research plan and detailed annual budgets.

The IATTC should develop a long-term science research plan to convey to its members what investments in research are intended to accomplish, the cost for each component of the research program, and, in easily understandable terms, the expected and actual outcomes of research activities. This information will improve the Commission members’ understanding of what the IATTC scientists are trying to accomplish and foster a closer working relationship between members and staff. The plan should include:

- Long-term research strategies for fisheries and related species;

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- Prioritized programs with budgets and timeframes;
- Initiatives to obtain external funding and collaborations to offset the cost of research; and
- Performance reporting to demonstrate progress in achieving targeted outcomes.

25. Efficiency in Bycatch Species Conservation and Management

Finding: Shark, seabird, and turtle mortalities have been negatively impacted by industrial purse seine and longline fishing.

The IATTC has well-developed resolutions addressing bycatch species, including seabirds, sharks, turtles, and Dorado. The IATTC collaborates with the WCPFC on shark assessments and data collection. In addition, the IATTC and AIDCP work together to protect the dolphin populations in the EPO from the impacts of tuna purse seining. The IATTC has a Working Group on Bycatch that meets and reviews data and information collected on bycatch interactions.

Shark, seabird, and turtle mortalities have suffered from the impacts of industrial purse seine and longline fishing. The IATTC fishery is also home to small scale, targeted shark and longline fisheries, which will also interact with these species. The emergence of the shark carcass trade in trunks provides a market for sharks that some will exploit.

There are 2 main issues of concern with by-catch species and management and they are the inability of the IATTC to take a decision to protect silky sharks (IATTC 89), and concerns about the accuracy of the interaction data recorded from the longline fleets and from the artisanal fleets with respect to sharks, seabirds and turtle interactions.

- *Turtles and Seabirds:* The IATTC has adopted Resolutions C-07-03 and C-04-07 for sea turtles which set procedures for the safe release of turtles and the collection of information that is reported in log books by skippers and by observers in reports. However, there remains an information gap in turtle interactions from the longline and artisanal fleets, which have no formal observer programs. Information is provided to the Working Group on Bycatch for review and recommendations are submitted for the Annual meeting.
- *Sharks and Rays:* The IATTC has adopted Resolution C-05-03, resulting in a ban on fining, encouraging full utilization, releasing live sharks, and collecting and contributing data on catches and interactions annually. Resolution C-05-03 encourages all members to implement the FAO IPOA Sharks. Resolution C-11-10 prohibits the retention of white tip sharks, and Resolution C-15-04 prohibits the catch and retention of rays in commercial, but not in artisanal, fisheries. Sharks in the Pacific suffer from a lack of data on which to base credible assessments. Some work has been done in the WCPFC and the Secretariat of the Pacific Community (SPC) on trying to find ways to assess these stocks even with limited data. The WCPFC also produced a paper “*Bycatch in the fisheries for tuna and tuna like species: A Global review of Status of Mitigation Measures.*” This paper provides information on research, observer coverage, and mitigation measures across the tRFMOs. This innovative research is a good starting point, and, when coupled with the ABNJ GEF program on

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sharks, the information, shark data collection, and management of these species may begin to improve.

The SAC discusses shark information at its annual meeting and in 2015 discussion was held on silky sharks, hammerhead sharks, and developments under the Global Environment Facility/Areas Beyond Natural Jurisdiction (GEF/ABNJ) shark project. However, what is not clear is what action was taken. The IATTC considered a resolution with respect to silky sharks but no action was taken due to different opinions on the approaches to protecting this species. The IATTC continues to be active with respect to sharks through a workshop on shark data held in May 2015, appointment of a GEF/ABNJ coordinator, and capacity building with respect to improving countries' understanding of the requirements for shark data collection. The IATTC also undertakes work with ISSF to look at back-down and release of sharks and other bycatch species from purse seine nets.

- *Seabirds*: IATTC Resolution C-11-02 applies to seabirds and encourages the implementation by members of the IPOA Seabirds, the use of mitigation measures to prevent seabird interaction in its fleet, and reporting of data to the IATTC for scrutiny by the Working Group on Bycatch. Given the limited observer coverage in the IATTC longline fleets, the actual implementation of this measure is also limited.
- *Dorado*: The first technical meeting on Dorado in the IATTC was held in Manta Ecuador in October 2014. The purpose of this meeting was to promote an understanding of the Dorado program, review the current knowledge and data sets, and plan future collaboration on Dorado. Providing a focus on data collection for this species can be maintained at subsequent meetings and timeframes for the development of indicators should be determined.

Recommendation: Explore opportunities for supporting the improvement in data collection of shark, seabird, and turtle mortalities particularly from the longline and artisanal fleets.

The IATTC should review Resolution C-05-03 and identify opportunities for improving requirements for data collection and observer coverage for longline, small scale longline, and artisanal and targeted small scale shark fisheries to improve information on the implementation of measures relating to sharks, rays, seabirds, and sea turtles. The IATTC should also develop an assessment and management plan/strategy for the main shark species taken in the IATTC fishery.

The IATTC should determine a course of action on sharks prior to the end of the current GEF/ABNJ project so that gains that have been made under the funding and direction of that program are not lost. The GEF/ABNJ project has approximately two years left, so it will be important at the end of that project to prioritize and mainstream future work related to sharks in the IATTC budget.

26. The Compliance Committee

Finding: The IATTC has established a Compliance Committee, but it is unclear what action the Commission has directed based on information provided by the Committee.

The IATTC includes 26 resolutions in the questionnaire it sends out to members asking them to report on compliance with these measures. The Secretariat is responsible for compiling a report to the

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Compliance Committee based on the responses and other information available to the Commission. The Committee then meets in closed session to discuss the outcomes of the review by the Secretariat. The Committee makes recommendation to the Commission on changes that should be made to either the compliance questionnaire or existing measures in order to achieve compliance improvements.

The latest Compliance Committee report was presented at the annual meeting in June 2015. In its report, the Committee made 15 recommendations on a number of resolutions, considered vessels to be included on the IUU list, and reviewed applications from cooperating nonmembers. Although it is difficult to comment fully on this process without observing the meetings, it is encouraging that the IATTC has adopted a Compliance Committee approach. However, there still appears to be limited compliance with a number of the data collection, bycatch and observer obligations and limited action on potential infractions and capacity management. The report of the Compliance Committee to the annual meeting in 2015 recommends action on 15 separate issues. The minutes of the annual meeting record that the Commission NOTED these recommendations and approved the continuance of the cooperating non-members. There is no indication in the annual meeting minutes that the Commission made any decisions in relation to the suggested actions from the Compliance Committee. If discussion and action had been taken and agreed a number of important changes and improvements could have been adopted.

Recommendation: Utilize annual meetings to make well-documented decisions to improve compliance with Commission resolutions.

The Annual meeting should be used to consider each of the suggested actions from the Compliance Committee and provide direction to the Secretariat and the members as to the required follow-up action. Progress on this follow-up action should be monitored and reported, so it leads to improvements in compliance with the Commission resolutions.

APPENDIX: ACRONYMS AND ABBREVIATIONS

AIDCP	Agreement on the International Dolphin Conservation Program
CAF	Committee on Administration and Finance
DML	Dolphin Mortality Limit
FAD	Fish Aggregating Device
GEF/ABNJ	Global Environment Facility/Areas Beyond Natural Jurisdiction
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
IOTC	Indian Ocean Tuna Commission
ISSF	International Seafood Sustainability Foundation
IUU	Illegal, Unreported, and Unregulated
SAC	Scientific Advisory Committee
SPC	Secretariat for the Pacific Community
tRFMO	Tuna Regional Fisheries Management Organization
WCPFC	Western and Central Pacific Fisheries Commission



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