

E-Newsletter

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EQUITY AT SEA: STRIKING A FAIR BALANCE FOR BIGEYE TUNA SUSTAINABILITY

For over four years the International Commission for the Conservation of Atlantic Tunas (ICCAT) has been navigating the complexities of adopting a new management measure for tropical tunas. However, this has posed significant challenges for member countries engaged in the tropical tuna fisheries such as Belize.



One of the key hurdles lies in determining a total allowable catch limit and quota allocation that strikes a balance between fairness and equity while upholding sustainability of the bigeye tuna stock.


Achieving consensus on these critical issues requires careful deliberation and a shared commitment to preserving the health of marine ecosystems and the livelihoods of fishing communities.

Member countries are faced with the daunting tasks of reconciling competing interests and priorities when it comes to setting total allowable catch limits and allocating quotas for bigeye tunas. The inherent tension between economic consideration and conservation imperatives complicates the decision

making process, as countries seek to secure their fishing opportunities while also safeguarding the long-term viability of tuna populations. Striking a balance that satisfies all stakeholders and ensures the sustainable management of bigeye tuna is a formidable challenge that demands collaboration and compromise.

Furthermore, the obligation to maintain the sustainability of the bigeye tuna stock adds another layer of complexity to the adoption of new measures. Member countries must grapple with the urgency of implementing effective conservation strategies, such as robust monitoring systems, science-based decision making, and adaptive management practices. By incorporating these supplementary measures into the overall management framework, ICCAT member countries, including Belize, can enhance their collective efforts to prevent overharvesting and depletion of the bigeye tuna population, ultimately safeguarding the future of this valuable species for generations to come.



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Overcoming Hurdles: The Challenges faced at the 2024 Annual Meeting of the IATTC

By Delice Pinkard: Compliance & Enforcement Manager

At the 102nd Ordinary Meeting of the IATTC Commission held in Panama from 26th August to 5 September 2024, member countries grappled with a myriad of challenges that tested their commitment to sustainable management practices in the Eastern Pacific Ocean. The meeting, which aimed to address critical issues surrounding the conservation of tropical tuna populations, brought to light the complexities of balancing economic interests with the imperative of preserving marine ecosystems. From contentious debates on catch limits to the need for enhanced monitoring and enforcement measures, the challenges encountered underscored the delicate equilibrium that must be maintained to ensure the long-term viability of tuna stocks.

Yellowfin tuna due to data limitations hindering stock structure identification.

To address this knowledge gap, experts proposed a tagging program to supplement existing data and enhance stock status determination. Despite the urgency of this initiative, its high cost strained the Commission's budget, necessitating careful allocation of funds. Without a comprehensive assessment of Yellowfin tuna, crucial management recommendations to ensure sustainable fisheries remained elusive. Member countries found themselves at odds over the appropriate levels of fishing activity necessary to sustain tuna populations while supporting the economic demands of their fishing sectors. Negotiating these divergent viewpoints required a delicate balance between conservation objectives and industry interests, highlighting the intricate dynamics at play in managing marine resources effectively.

Moreover, discussions at the meeting underscored the pressing need to address issues related to monitoring and compliance to combat illegal fishing practices effectively. Strengthening enforcement mechanisms and promoting transparency in reporting emerged as critical components in the fight against illegal, unreported, and unregulated fishing activities. Ultimately, the Commission secured funding for the tagging program and opted for a temporary extension of current management measures until the completion of the pending assessment. This interim solution reflects the Commission's commitment to informed decision-making and sustainable resource management in the face of complex challenges.

By confronting these challenges head-on and fostering greater collaboration among member countries, the 2024 IATTC Annual Meeting laid the groundwork for collective action towards sustainable management practices that will safeguard the delicate balance of tropical tuna populations in the Eastern Pacific Ocean.

Central to the Commission's decision-making process is the input from the Scientific Advisory Committee (SAC), tasked with providing essential guidance on assessing the status of tropical tuna stocks like Yellowfin, Skipjack, and Bigeye Tunas. However, completing assessments posed a formidable challenge, particularly concerning



SCIENCE CORNER

Exploring the overlap between High Seas and Deep-Sea Fisheries

By Charles Coc – Fisheries Scientist & Data Officer

The vast expanses of the world’s oceans are home to two distinct yet occasionally overlapping realms: the high seas and the deep sea. Understanding their differences and their intersections are crucial for the sustainable management of marine resources. This article delves into these domains and highlights their unique characteristics and the challenges they now face.

To start, the high seas are exclusively international waters that begins 200 nautical miles from a coastal country’s baseline. These waters are not under the jurisdiction of any single nation and are governed cooperatively through Regional Fisheries Management Organizations (RFMO’s) (Carmine, 2020). Within these areas large and small pelagic fisheries thrive, targeting species such as tunas, mackerel and squid. The careful management of these fisheries is crucial due to their economic and ecological significance.

country’s Exclusive Economic Zone (EEZ) but can extend into areas beyond national jurisdiction (ABNJ), such as the high seas. Interestingly, the deep-sea is home to species with slow growth rates, long lifespan, and low natural mortality – this makes them more

vulnerable to overfishing. While the deep sea and the



Figure 1: Tuna school. Image by NOAA Fisheries West Coast via Flickr

high seas can overlap, particularly in ABNJ, they are distinct in their ecological characteristics and management needs (FAO, 2020).

Furthermore, like the high seas, deep-sea fisheries in the high seas are often subject to international guidelines and conventions, such as the 1982 Law of the Sea Convention (LOSC), which provides the legal framework for ocean governance. Additionally, the International Guidelines for the Management of Deep-sea fisheries in the High Seas, developed in 2008, offer voluntary measures to regulate these fisheries and mitigate their impacts on marine biodiversity.


Species	Habitat
Orange roughy (<i>Hoplostethus atlanticus</i>) 	Seamounts and banks; Atlantic, parts of the Pacific; 180–1800 m

Figure 2: Orange roughy fish found in the deep sea. Image by World Ocean Review

On the other hand, deep-sea fisheries (DSF) normally operate at depths ranging from 200 to 2000 meters and target demersal species like cod, flatfish and orange roughy. These fisheries often occur within a

Finally, one of the main challenges in managing DSF stock is the lack of comprehensive data, with an estimated 50% of stocks having an unknown status. This uncertainty complicates the establishment of catch limits and sustainable practices. Additionally, 25% of known DSF stock are overfished, necessitating reduced fishing efforts to allow for stock recovery. While in the high seas, RFMOs are trying to improve monitoring and management of these areas however, IUU fishing coupled with ongoing innovations in fishing gears and techniques continue to pose challenges to these efforts.

To conclude, the overlap between the high seas and deep-sea fisheries presents both opportunities and challenges. While these areas are pivotal for expanding marine fisheries, they require careful management and international cooperation to protect vulnerable species and ecosystems. Thus, a balance must be met between exploitation and conservation to ensure the long-term health of our marine ecosystems.

Reference

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The Deep-sea and High Seas

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HIGH SEAS
CONSERVATION



Implementing Electronic Monitoring Systems in RFMOs: Opportunities and Challenges for Sustainable Fisheries Management

By: Ian Constantino – Monitoring Officer

Electronic monitoring (EM) has emerged as a promising tool to not only enhance fishery sustainability and compliance within Regional Fisheries Management Organizations (RFMOs) but also to address the specific challenges faced in these efforts. By improving data collection and monitoring compliance, EM has the potential to make a significant impact on the conservation of tuna stocks and the overall sustainability of fisheries in key ocean regions such as the Atlantic and Pacific.



Discussions within various RFMOs are currently underway with member countries to explore the implementation of EM systems. These discussions provide a platform for sharing experiences, addressing concerns, and making recommendations to establish minimum standards and operational protocols for EM deployment at sea.

The International Commission for the Conservation of Atlantic Tunas (ICCAT) is at the forefront of exploring different technologies for EM, including closed-circuit television (CCTV) cameras, onboard sensors, and data loggers. These technologies play a crucial role in monitoring fishing activities, tracking catch and bycatch, and ensuring compliance with regulations on quota limits and size restrictions.

ICCAT has initiated pilot projects, conducted in two phases, to test the effectiveness of EM in various fisheries. These projects aim to evaluate the feasibility of EM implementation, gather cost data, and develop best practices for broader application. Satlink, a specialized technology company in electronic monitoring solutions for the fishing industry, was selected to supply the EM systems following a competitive tender process.

Within the context of ICCAT, Satlink has been actively involved in the development and deployment of electronic monitoring systems to support sustainable fisheries management. In a specific pilot project involving two Panamanian vessels, the data collected through EM is being compared with traditional logbook data to assess its reliability and accuracy.

It is important to highlight that the experiences and standards set by ICCAT in electronic monitoring are serving as a valuable reference for other tuna RFMOs like the Inter-American Tropical Tuna Commission (IATTC) as they work towards establishing their own minimum standards for EM systems.



Enhancing Expertise in the BHSFU: Capacity Building Workshop on Tropical Tuna Stock Assessment Methods

The BHSFU's Fisheries Scientist and Data Officer, Mr. Charles Coc recently participated in a capacity building workshop held at the Achotines Lab in Panama which was focused on the introduction of advanced methods for assessing tropical tuna stocks. The workshop delved into various key areas including fitting models to data, age-structured population models, analysis of components such as natural mortality, fishing mortality, and selectivity, as well as growth and recruitment patterns. Additionally, participants gained insights into data on catches, abundance indices, and the composition of catches, along with a demonstration of the Stock Synthesis 3.0 software.



Furthermore, gaining expertise in areas such as natural mortality, fishing mortality, and selectivity will enable Charles to provide valuable insights into the factors influencing tropical tuna stocks. Understanding growth and recruitment patterns is essential for predicting future stock dynamics, while proficiency in analysing data on catches and abundance indices will enhance the Unit's ability to monitor and manage tuna populations effectively.

In conclusion, participation in the capacity building workshop on tropical tuna stock assessment methods represents a significant investment in enhancing the expertise and capabilities of the BHSFU staff. The knowledge and skills acquired at the workshop will contribute to the Unit's overall effectiveness in conducting research, analysis, and management of tropical tuna stocks.

Charles' attendance at this workshop is poised to bring substantial benefits to the Unit. By acquiring knowledge and skills in these sophisticated assessment methods, Charles can contribute significantly to the Unit's research and analysis capabilities related to tropical tuna stocks. The workshop's focus on fitting models to data and age-structured population models equips him to conduct more in-depth and accurate assessments, leading to enhanced decision-making processes within the Unit.



FROM THE EDITOR

In this edition of our newsletter, we have explored vital themes related to sustainable fisheries management, offering insights into topics such as equity in bigeye tuna sustainability, the challenges faced at the 2024 Annual Meeting of the IATTC, the convergence of high seas and deep-sea fisheries, and the adoption of electronic monitoring systems in RFMOs. Additionally, we have spotlighted the recent capacity building workshop attended by BHSFU, focusing on enhancing expertise in tropical tuna stock assessment methods.

I trust that you have found this issue to be both informative and engaging. Your feedback is crucial in shaping the content of our future editions, and I invite you to suggest topics for further exploration. Together, we can drive impactful conversations and advance sustainable fisheries management practices. Your ongoing support and dedication to our shared mission are sincerely appreciated.

Additionally, I am pleased to inform you that we have unveiled a fresh new look for our newsletter. We hope that our readers enjoy this updated format and find it visually appealing.

Moreover, as we commemorate Breast Awareness Month, it is essential to highlight the significance of empowering women in the fisheries and maritime sector. This month presents an opportunity to raise awareness about breast health, promote education on early detection of breast cancer, and emphasize the importance of regular screenings for women working in these industries. By focusing on empowering women in the fisheries and maritime sector to prioritize their health and well-being, we contribute to creating a supportive and proactive community that values and supports the health of all its members.



Additionally, I am pleased to share that the BHSFU is preparing to participate in the Panel 1 Meeting of ICCAT to engage in discussions on tropical tuna conservation and management measures in November. Subsequently, the Annual Meeting of ICCAT and its subsidiary bodies will convene. We remain optimistic about achieving positive outcomes regarding tropical tunas and commit to keeping you informed of any developments.

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