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**TUNA TAGGING PROJECT STRATEGIES 2026–2028**

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This document was produced to support the implementation described in paragraphs 40 and 41 of Resolution [C-25-01](#) concerning the Regional Tuna Tagging Program. It outlines the key elements expected for a productive and successful tagging program, including planning considerations, operational strategies, and logistical requirements associated with the preparation and execution of tagging activities. The document is intended to guide the design and implementation of tagging efforts to maximize scientific value and program effectiveness.

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## **SUMMARY**

The Inter-American Tropical Tuna Commission (IATTC) adopted a proposal to continue tuna tagging efforts during the period of 2026–2028. The overall aim of this program is to improve the stock assessments of tropical tuna in the eastern Pacific Ocean (EPO). The specific objectives are to generate data to 1) estimate absolute abundance of skipjack tuna (SKJ); and 2) to reduce uncertainty in SKJ, yellowfin (YFT), and bigeye tuna (BET) stock assessments in the EPO. Funding for the program was established under Resolution [C-25-01](#) (paragraphs 40 and 41) through an assessment on active purse-seine vessels in 2026, generating approximately US \$1.8 million.

The core scientific activity will be a 90–120 day tagging cruise departing from San Diego, California, utilizing a chartered pole-and-line vessel to conduct widespread conventional and archival tagging throughout the EPO. This document summarizes the intended cruise strategy, the framework for industry cooperation, tag recovery program, and the experimental tag seeding component.

### **1. INTRODUCTION**

Tropical tuna fisheries in the EPO are among the most economically valuable tuna resources globally. Despite extensive fishery data, uncertainties remain in tuna stock assessments, particularly for skipjack tuna (SKJ), due to limited abundance indices and incomplete knowledge of key ecological processes such as movement, growth, and natural mortality. The IATTC Regional Tuna Tagging Project (RTTP) is designed to address these knowledge gaps by generating large volumes of tagging data to estimate abundance using the recently developed spatio-temporal tagging model (Mildenberger et al., 2025), improve estimates of key biological parameters, and strengthen the scientific basis for stock assessments and management advice.

During 2026–2028, the program will focus on conducting a comprehensive tagging cruise with broad spatial coverage across multiple regions of the EPO, combined with structured collaboration with the purse-seine industry to maximize operational efficiency and tag recoveries.

### **2. FUNDING**

Resolution [C-25-01](#) (paragraphs 40–41) established a funding mechanism to support tagging efforts for the period 2026 - 2028. Total program funding is approximately US \$1.8 million generated through an assessment of US \$6.16 per cubic meter of well capacity applied to all purse-seine vessels listed as active on the IATTC Regional Vessel Register (RVR) during the calendar year 2026. Payments are due by 30 June 2026. Should voluntary contributions be secured, vessel assessments will be recalculated.

### **3. TAGGING CRUISE STRATEGY**

While the primary objective of the cruise is to tag and release as many tunas as possible, it remains a fishing endeavor, meaning that *in-situ* decisions will be made based on weather, oceanographic conditions, and reported productive fishing areas. Adaptability to real-time conditions will be essential to achieving mission success.

The project will consist of a single extended tagging cruise of approximately 90 - 120 days, departing from San Diego, California, and operating throughout the EPO. A commercial pole-and-line vessel will be chartered and modified for tagging operations (Fuller et al., 2023). The primary target species will be SKJ, with additional tagging of YFT and BET across the broadest practicable size range. Both conventional plastic dart tags (PDT) and electronic archival tags (AT) will be deployed to generate complementary data on movement, growth, survival, and habitat use. The cruise is tentatively planned for late 2026 or early 2027, depending on vessel availability and live bait prospects.

### **3.1. Spatial coverage**

The proposed cruise track (Figure 1) is designed to provide representative coverage of major ecological and fishing areas throughout the EPO. Operations are planned for a northern area offshore of the Mexican coast (Figure 1, Area 1), including the Revillagigedo Islands, specifically Roca Partida, a historically productive fishing area for SKJ. Additionally, efforts will focus on the equatorial region between approximately 5°N and 5°S (Figure 1, Areas 2 and 3), where the majority of SKJ fishing effort occurs on schools associated with drifting fish-aggregating devices (dFADs). To the extent feasible, tagging efforts will also extend to the offshore regions of Central and South America (Figure 1, Area 4), likely while transiting to or from the main dFAD fishing areas west of the Galápagos Islands and the central Pacific. All school types will be targeted, including those associated with dFADs, natural floating objects, seamounts, islands, dolphins, and unassociated surface schools to ensure ecological representativeness across fishery types and habitats.

### **3.2. Permission to operate within territorial waters**

The capture of live bait is a critical component of the cruise strategy and planning. Permits will be sought to allow the capture of sardine (*Sardinops sagax*) and/or anchovy (*Engraulis mordax*) along the coast of southern Baja California, Mexico for fishing/tagging in the northern region (Figure 1). Permits will also be pursued for catching anchoveta (*Cetengraulis mysticetus*) in the Gulf of Panama. In addition, it will likely be advantageous to work with any existing pole-and-line vessels in Ecuador to coordinate catching live bait along the coast; this will avoid the long transit to the Gulf of Panama.

Authorization to fish and tag within territorial waters of numerous countries will be sought. While much of the effort will be focused on international waters, access to waters within national jurisdictions can provide necessary opportunities to fish and tag when transiting or as productive fishing conditions develop. To facilitate these potential opportunities and increase success of the tagging program, permits will be requested from the countries listed in Table 1.

### **3.3. Industry collaboration**

Collaboration with the purse-seine industry is essential for maximizing tagging efficiency and spatial coverage. Cooperation may include the voluntary sharing of dFAD locations to fish and tag associated schools. Communication protocols will be designed to ensure that tagging operations do not interfere with fishing activities. All proprietary operational information will be handled with strict confidentiality as the goal is to tag tunas associated with dFADs without impacting the fishing vessels and owners of the dFADs. Where appropriate, memoranda of understanding (MOUs) may be developed to formalize collaboration frameworks and data safeguards. The tagging team will not modify, remove, or service dFADs and will operate in a manner intended to minimize disturbance to fishing activities.

### **3.4. Tag recovery**

Successful tag recovery and accurate recovery information are critical for deriving robust movement and mortality estimates. A structured recovery program, maintained continuously since 2019, will continue operating in major landing ports throughout the EPO. The recovery framework includes direct outreach to vessel operators, crew members, and processing facilities. Program success is largely driven by a reward-based reporting system for returned tags and is predicated on coordination with port samplers, canneries, and unloading facilities (Fuller et al., 2023). Electronic reporting mechanisms have been developed to streamline data reporting, documentation, and feedback. These efforts are designed to maximize reporting rates and ensure accurate tracking of recapture information.

### 3.5. Tag seeding experiments

Tag seeding will be conducted to estimate reporting rates, reporting accuracy, and to correct for incomplete tag returns. These efforts rely on adding a known number of conventional tags into the recovery pathway; for example, tags are placed in landed fish or processing streams without prior observer knowledge, crew, or processors responsible for reporting. By comparing the number of seeded tags recovered and reported with the number originally placed, researchers can estimate the reporting probability. These reporting rate estimates are then incorporated into tagging models to adjust abundance, survival, and movement estimates, ensuring that stock assessment inputs properly account for under-reporting bias.

## 4. EXPECTED OUTCOMES

The collection of new SKJ tagging data, utilizing both PDT's and AT's, will provide the foundation for a benchmark SKJ stock assessment. The foundation of this assessment will be from abundance estimates derived within the spatiotemporal tagging model (Mildenberger et al., 2025), which relies heavily on PDT recaptures. Continuation of the tagging program is also expected to significantly reduce uncertainty in tuna stock assessments by providing improved estimates of movement, growth, natural mortality, and informing assumptions on mixing and spatial structure. Together, these will strengthen the scientific basis for management advice and supporting the long-term sustainability of tuna fisheries in the EPO.

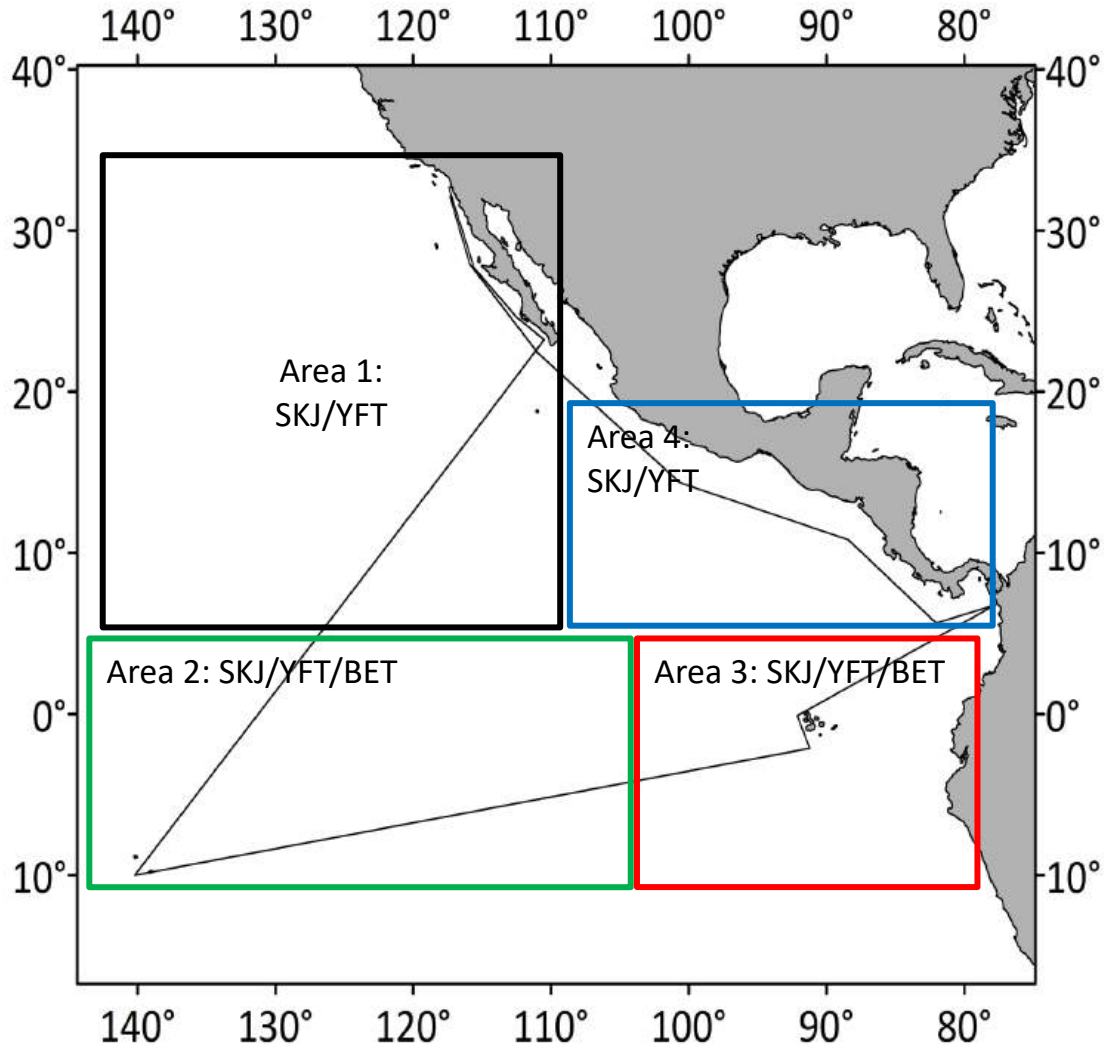
## 5. TABLES

**TABLE 1.** List of countries and permit types to be pursued for the proposed tagging cruise.

**TABLA 1.** Lista de países y tipos de permisos que se solicitarán para el crucero de mercado propuesto.

Country	Permit Type	
	Bait	Fishing/Tagging
Mexico	Y	Y
Costa Rica	N	Y
Panama	Y	Y
Ecuador	Y	Y
Colombia	N	Y
French Polynesia/Clipperton Island	Y	Y

6. FIGURES



**FIGURE 1.** Theoretical cruise track indicating probable target areas for tagging operations and species expected in each region. After departing from San Diego, California, USA, and catching bait along the Baja California coast, tagging effort will likely focus on Areas 1 and 2. Once onboard live bait has been depleted, tagging efforts will continue using frozen anchovy (*Engraulis mordax*) while transiting through Areas 2 and 3 en route to bait grounds in the Gulf of Panama or along the coast of Ecuador. After resupplying with bait and provisions, additional effort will be dedicated to Area 4 while transiting towards the main dFAD area west of the 95°W. If charter days remain, the vessel would likely return to the bait grounds to resupply before completing the voyage.

**FIGURA 1.** Trayectoria teórica del crucero en la que se indican las probables áreas objetivo de las operaciones de marcado y las especies previstas en cada región. Tras zarpar de San Diego (California, EE.UU.) y capturar cebo a lo largo de la costa de Baja California, las operaciones de marcado se centrarán probablemente en las Áreas 1 y 2. Una vez agotado el cebo vivo a bordo, el marcado continuará con anchoa (*Engraulis mordax*) congelada durante el tránsito por las Áreas 2 y 3 en camino a las zonas de cebo en el Golfo de Panamá o a lo largo de la costa de Ecuador. Tras el reabastecimiento con cebo y provisiones, se dedicarán esfuerzos adicionales al Área 4 mientras se transita hacia el área principal de plantados a la deriva al oeste de 95°O. Si quedan días de fletamento, es probable que el buque regrese a las zonas de cebo para reabastecerse antes de completar el viaje.

## 7. REFERENCES

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Mildenberger, T.K., Nielsen, A. and Maunder, M. (2025) Ongoing development of the spatiotemporal tagging model. Document SAC-16 INF-D. La Jolla, California: Inter-American Tropical Tuna Commission (IATTC), Scientific Advisory Committee, 16th Meeting, 2–6 June 2025. Available at: [https://www.iattc.org/GetAttachment/5cec6092-ef3e-498d-96a4-1e4d5c572897/SAC-16-INF-D\\_SKJ-Spatiotemporal-model.pdf](https://www.iattc.org/GetAttachment/5cec6092-ef3e-498d-96a4-1e4d5c572897/SAC-16-INF-D_SKJ-Spatiotemporal-model.pdf)