

COMISION INTERAMERICANA DEL ATUN TROPICAL (CIAT) INTER-AMERICAN TROPICAL TUNA COMMISSION (IATTC)

INTER-AMERICAN TROPICAL TUNA COMMISSION

2nd WORKSHOP ON METHODS FOR MONITORING THE STATUS OF EASTERN TROPICAL PACIFIC OCEAN DOLPHIN POPULATIONS

Mexico City, Mexico

09-10 May 2024 (*participation by teleconferencing optional*)

ANNOUNCEMENT

The Antigua Convention of the Inter-American Tropical Tuna Commission (IATTC) requires that the status of all species potentially impacted by the purse-seine fishery in the eastern tropical Pacific Ocean (ETP) be monitored. As a result of a hiatus in fishery-independent surveys since 2006, there are currently no reliable indicators with which to monitor the status of ETP dolphin populations. This lack of information is problematic because, in spite of the current low levels of reported mortalities achieved through the Agreement of the International Dolphin Conservation Program (AIDCP), high levels of historical mortality and low estimated population rates of increase have resulted in ambiguous population status.

In 2016, the IATTC held a [1st Workshop](#) on Methods for Monitoring the status of ETP Dolphin Populations. The workshop focused on the following three methods for estimating abundance: 1) ship-based line-transect surveys, 2) Mark-Recapture studies, and 3) aerial-based survey approaches. Among the three methods, ship-based line-transect survey represented established methods that were used up until 2006, while research and development was needed to implement the other methods. In 2018, a [research proposal](#) for several options of ship-based line-transect survey designs for ETP dolphin stocks was put forward, updating analogous methods from 2006. Unfortunately, both the complex operational logistics and high costs associated with a ship-based survey are currently deemed prohibitive. As such, exploring alternative approaches has become necessary.

The IATTC is hosting a second workshop to discuss alternative methods for estimating abundance and monitoring dolphin stock status. This workshop will concentrate on three approaches identified by the staff as the most promising for further research and development. The first is [close kin mark-recapture \(CKMR\)](#), an approach currently under investigation for stocks managed by the IATTC. The second approach involves aerial-based surveying, particularly manned aerial surveys with the collection of high-resolution imagery. The feasibility of this approach was initially considered in first workshop, and its practical aspects warrant further discussion for the ETP. Finally, the emergence of very high-resolution (VHR) satellite imagery is opening up new opportunities for surveying whale populations. This approach was also amongst the options examined in the first workshop and has yet to be used on dolphins, but may provide the benefit of basin-wide coverage that currently challenge vessel and flight-based methods. While the VHR satellite imagery products currently available on the market may not offer sufficient information to estimate dolphin status, they could be combined with other platforms in the future (e.g., tuna vessel observer data, helicopter dolphin search data) to provide more accurate estimates of their status. This could be achieved through spatial-temporal modeling approaches such as the Vector Autoregressive

Spatio-Temporal Model (VAST), which is already routinely used in the staff's research. In addition, higher resolution images may be available in the future.

Funding is available from the [Marine Stewardship Council](#) (MSC) via the [Pacific Alliance for Sustainable Tuna](#) (PAST) to support an IATTC workshop to finding optimal methods for monitoring the status of ETP dolphin populations. The workshop aims to gather technical and operational experts specializing in population modeling, abundance estimation, close kin mark-recapture, aerial surveying, satellite imagery, cetacean tissue sampling methods and vessel operations. Its purpose is to explore strategies for establishing indices to monitor dolphin populations, exploring aspects of both scientific approach and operational feasibility, including sampling design, field sampling considerations, timing and budget. Ultimately, the workshop seeks to formulate preliminary concept notes for research proposals focused on the most promising approaches identified during the discussions. The participation of invited members of the fishing industry as well as IATTC staff members involved in the AIDCP fishery observer program will help make sure that the protocols discussed are feasible within the context of the operation of the tuna purse seine fishery in the EPO.

PRODUCTS OF THE SECOND WORKSHOP: The workshop is anticipated to produce two key outcomes:

- 1- A workshop report summarizing the primary points and recommendations derived from the discussions.
- 2- Draft research proposal concept notes (examples [here](#)), including preliminary budgets, for the approaches deemed worthy of further investigation. In addition, each concept note will aim to present a) the key opportunities and challenges associated with each method b) timeline considerations (proposed project staging) and c) relevance to fishing operations, if affected. These proposals will be submitted by the IATTC staff for consideration of potential future funding by the IATTC/AIDCP or external sources such as the fishing industry, NGOs, or IGOs.

PARTICIPATION: In-person involvement in the workshop is by invitation only. For transparency, the workshop will be open to the public and there will be public comment periods to allow workshop observers to comment on the material presented and on discussions.

A **registration form** is posted on the meeting website to allow for observers to register individually.

ARRANGEMENTS: The workshop will be held in person in Mexico City where a team of IATTC staff members will be meeting with invited participants. A virtual option will also be available for observers via videoconference, utilizing the Zoom platform. An invitation to join will be sent individually to each registered observer participant.

The Workshop will be held on **9 and 10 May 2024**.

For the convenience of the participants, a document will be posted on the website providing further operational details for the meeting, taking into account the special requirements and limitations of videoconferencing, using as a model the similar documents that were used for previous IATTC meetings by videoconference. A **preliminary agenda** is also posted in the meeting website.

Languages: English, simultaneous interpretation will not be available.

Annex 1

INTER-AMERICAN TROPICAL TUNA COMMISSION 2nd WORKSHOP ON METHODS FOR MONITORING THE STATUS OF EASTERN TROPICAL PACIFIC OCEAN DOLPHIN POPULATIONS

Mexico City, Mexico
09-10 May 2024 (*participation by teleconferencing optional*)

AGENDA

Thursday 9 May

09:00 Welcome remarks from workshop sponsors (*Mariana Ramos, PAST*)

09:10 Opening address (Andre Punt, Chair)

09:20 Background talk: Outcomes and recommendations of the 1st Workshop (Andre Punt, Chair)

09:40 Background talk: Overview of purse seine tuna fishery in the EPO and update on dolphin abundance research since 1st Workshop (Alex da Silva, IATTC Coordinator of Scientific Research)

10:00 Background talk: Description of the operation of a purse seine set on dolphins in the EPO (Enrique Urena, IATTC Observer Program Supervisor and Manager)

10:30-10:45: Coffee break

10:45 Background talk: A review of invasive and non-invasive methods for collecting tissue samples from free-swimming cetaceans (*Heidi Pearson, University of Alaska Southeast*)

11:15 A review of auxiliary fishery-dependent dolphin data sources available at IATTC (Alex da Silva, IATTC)

12:00-13:00: Lunch

13:00 Background talk: Close kin mark recapture (CKMR) (*John Swenson, U. Mass Amherst*)

13:30 Discussion session: CKMR

14:30-14:45: Coffee break

14:45 Discussion session (cont.): CKMR

16:30-17:00 Public comment

17:00-18:00 Outlining report and research proposal concept notes (Chair/IATTC staff/small groups)

19:00: Group dinner

Friday 10 May

09:00 Update from IATTC staff/small groups on research proposal concept notes (IATTC staff/small groups)

09:30 Background talk: Digital aerial surveys (*Kelly McLeod, HiDef*)

10:00 Research proposal: Digital aerial surveys for dolphins in ETP (Zack Johnson, HiDef)

10:30-10:45: Coffee break

10:45 Discussion session: Digital aerial surveys (cont.)

12:00-13:00: Lunch

13:00 Background talk: The potential for surveying whales using satellite imagery (*Caroline Höschle, SpaceWhale*)

13:30 Discussion session: Satellite imagery

14:30-14:45: Coffee break

14:45 Discussion session: Satellite imagery (cont.)

16:30:17:00 Public comment

17:00:18:00 Outlining report and research proposal concept notes (Chair/IATTC staff/small groups)

19:00: Group dinner