Atlantic Ocean Tropical Tuna Tagging Programme
Overview of recent regional tropical tuna tagging programs

Lisa Ailloud

ICCAT Secretariat

IATTC Tagging Workshop

La Jolla, California • 28-30 January 2019

ICCAT CICTA CICAA

Atlantic Ocean Tropical Tuna Tagging Programme

- **5 year** project (2016-2020)
- **15 M€**
- **90% EU**, 10% ICCAT contracting parties

AOTTP - Objectives

- Contribute to food security and economic growth of the Atlantic coastal states by ensuring sustainable management of tropical tuna resources in the Atlantic Ocean

- Provide the best science available to developing coastal states, and other Contracting Parties, for them to adopt appropriate Conservation and Management Measures in the framework of ICCAT

AOTTP – Expected results

- Tag-recapture and associated data for tropical tuna species stored in ICCAT database

- Key parameters (e.g. growth, mortality and migration) for stock assessment estimated from AOTTP tag-recapture data

- Scientists from developing Contracting Parties of ICCAT trained in tagging data collection and scientific analyses

AOTTP - Activities

- Implementing Atlantic Ocean wide **tagging** of tropical tuna
- **Training** and **capacity building** in developing CPCs
- Coordinating **tag recovery** and **awareness** teams
- Developing **publicity** campaigns and **incentive** schemes
- **Collecting** and **verifying** all data
- **Analysing**, summarising and making **data available** to SCRS
- Facilitating and **promoting** collaborative **research** and **stock assessments**
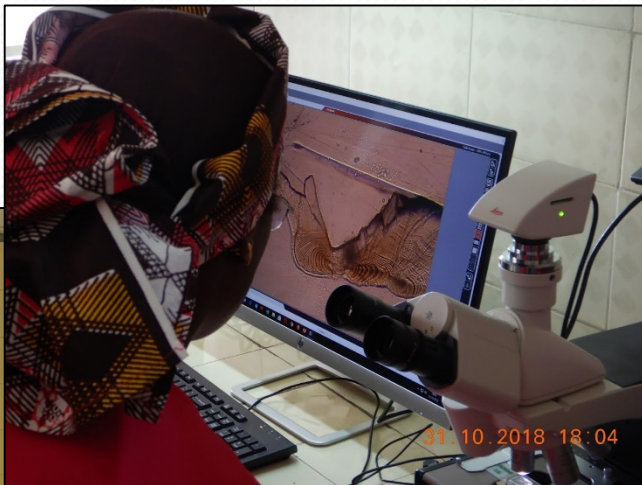
AOTTP – Verifiable targets

- 120,000 conventional tags
- 24,000 double tag (20%)
- 10,000 chemical tag (8%)
- Develop awareness and publicity campaigns
- Set up tag recovery incentive and reward schemes
- 80% reporting rate for purse seine
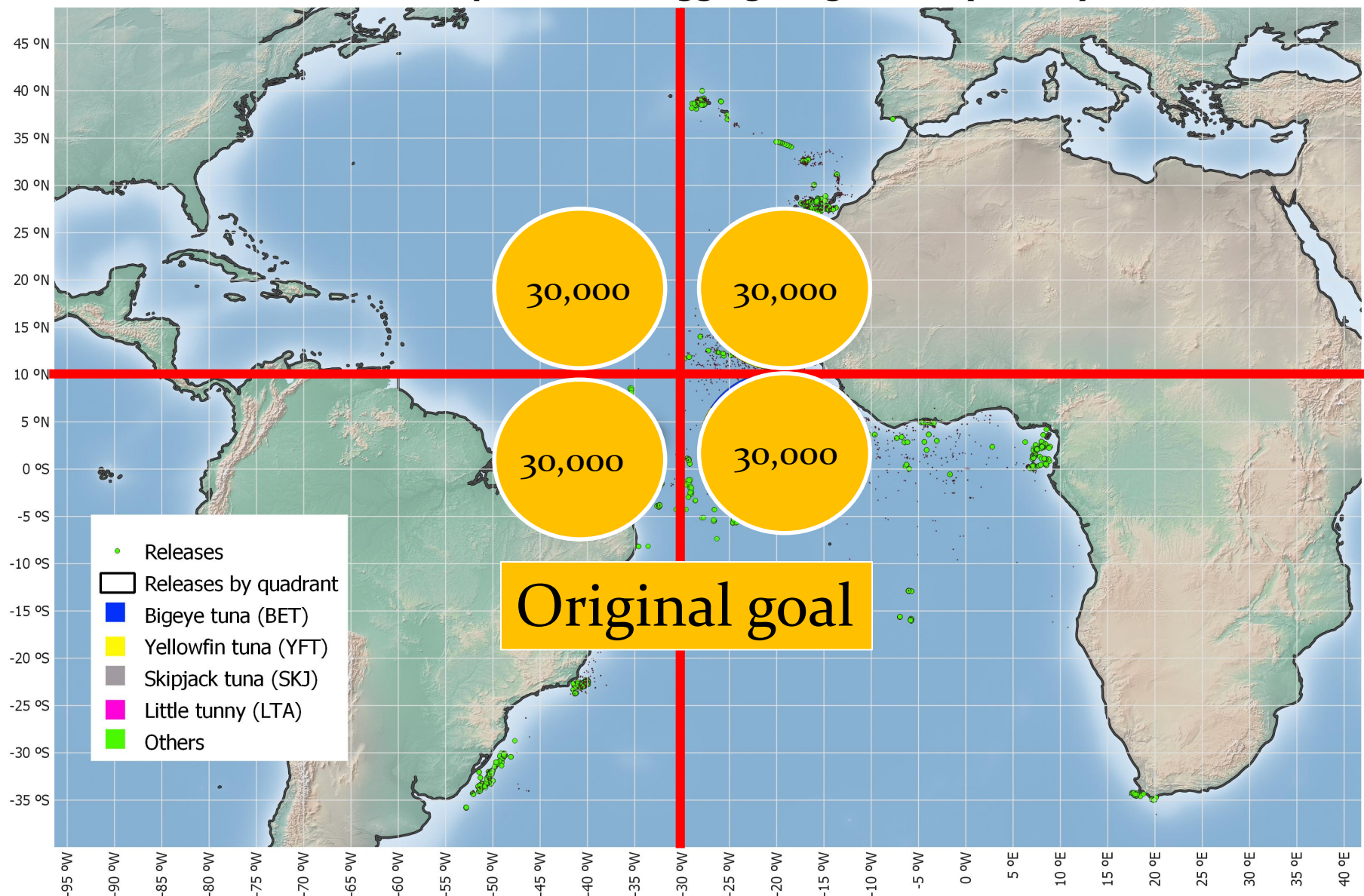- 500 electronic tags (internal and pop-up)

AOTTP – Verifiable targets

- Train 20 ppl tagging at sea
- Train 30 ppl bio sampling
- Train 80 ppl in data analysis
- Build accurate age-length data sets
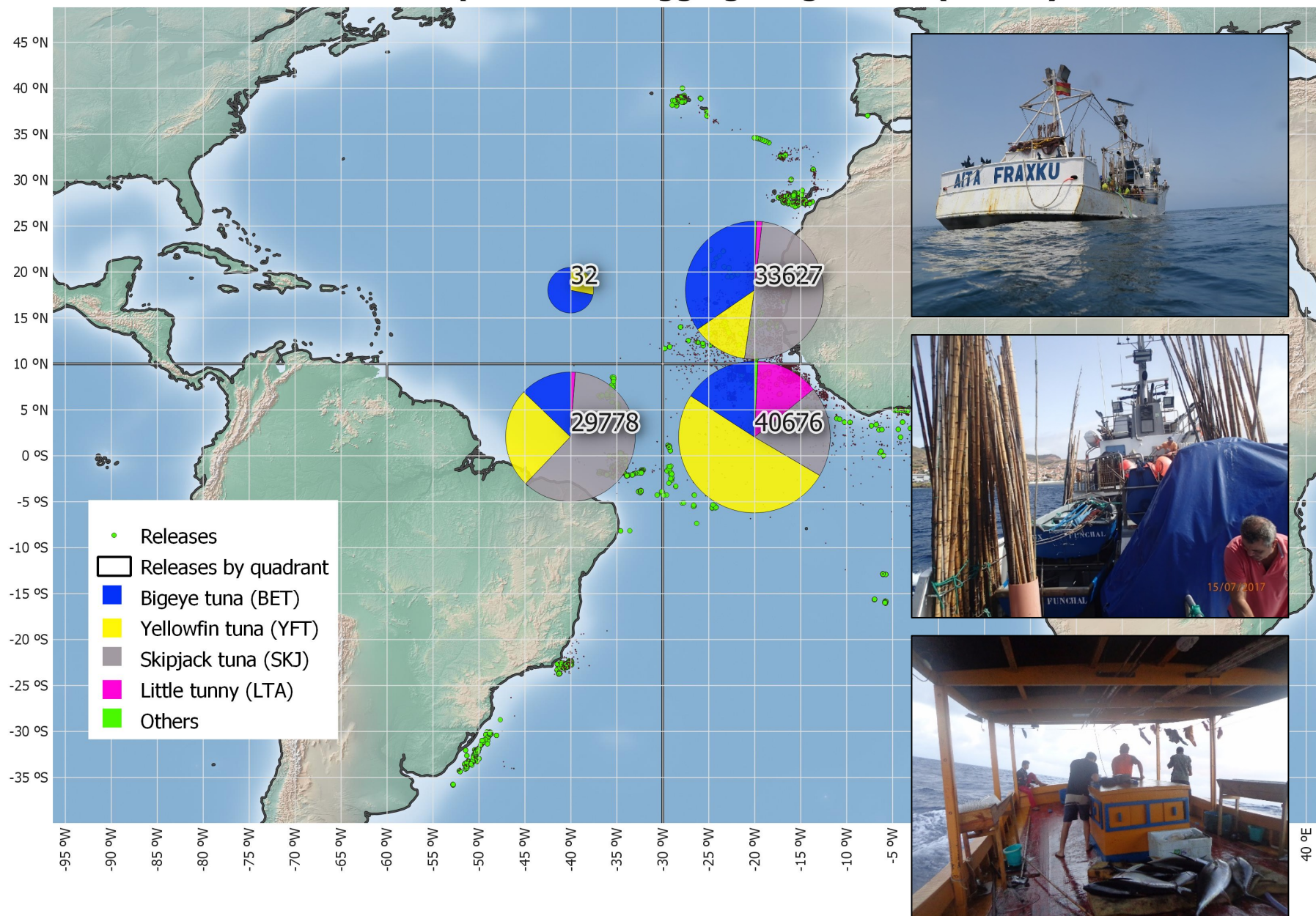- Contribute improving assessments

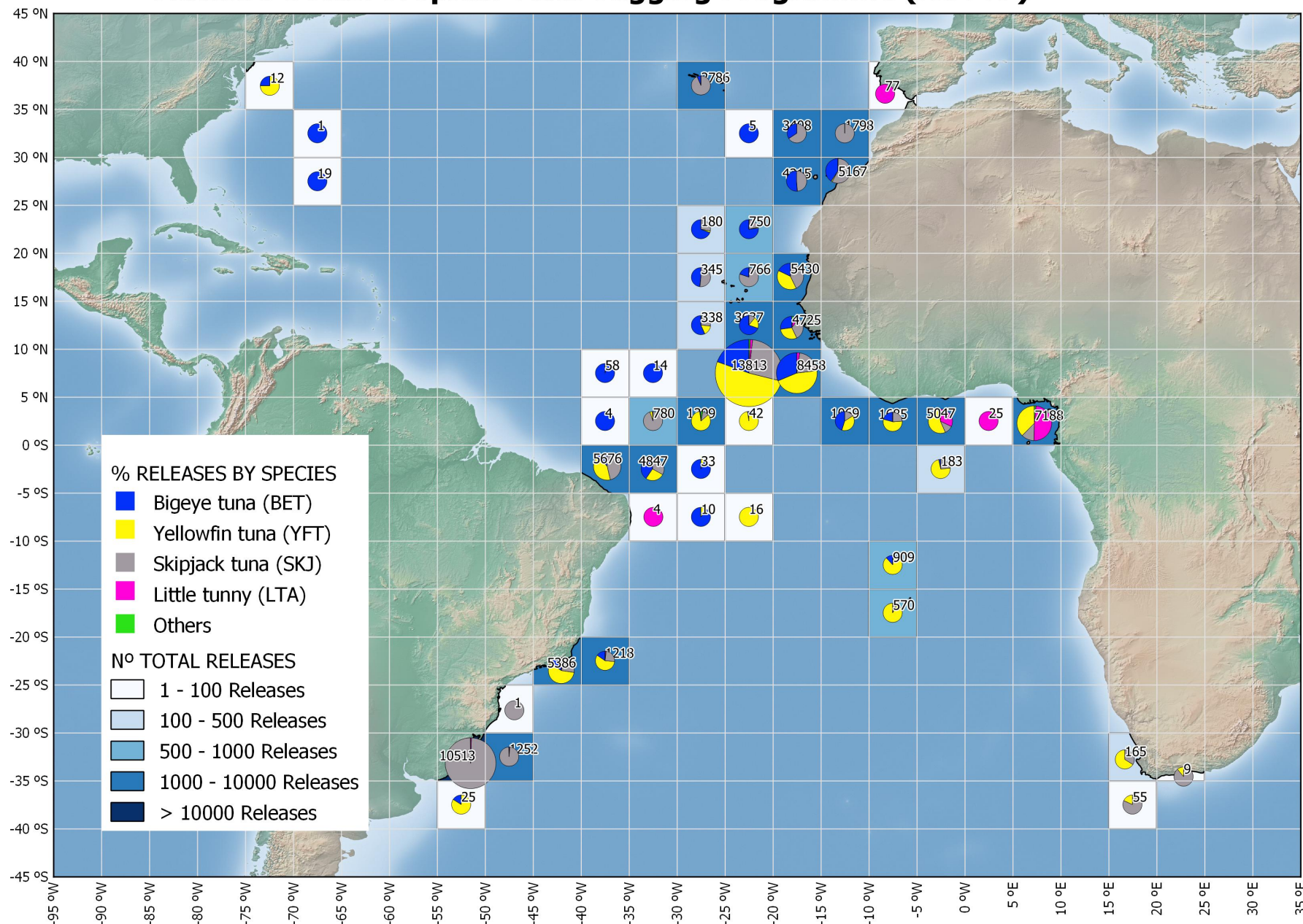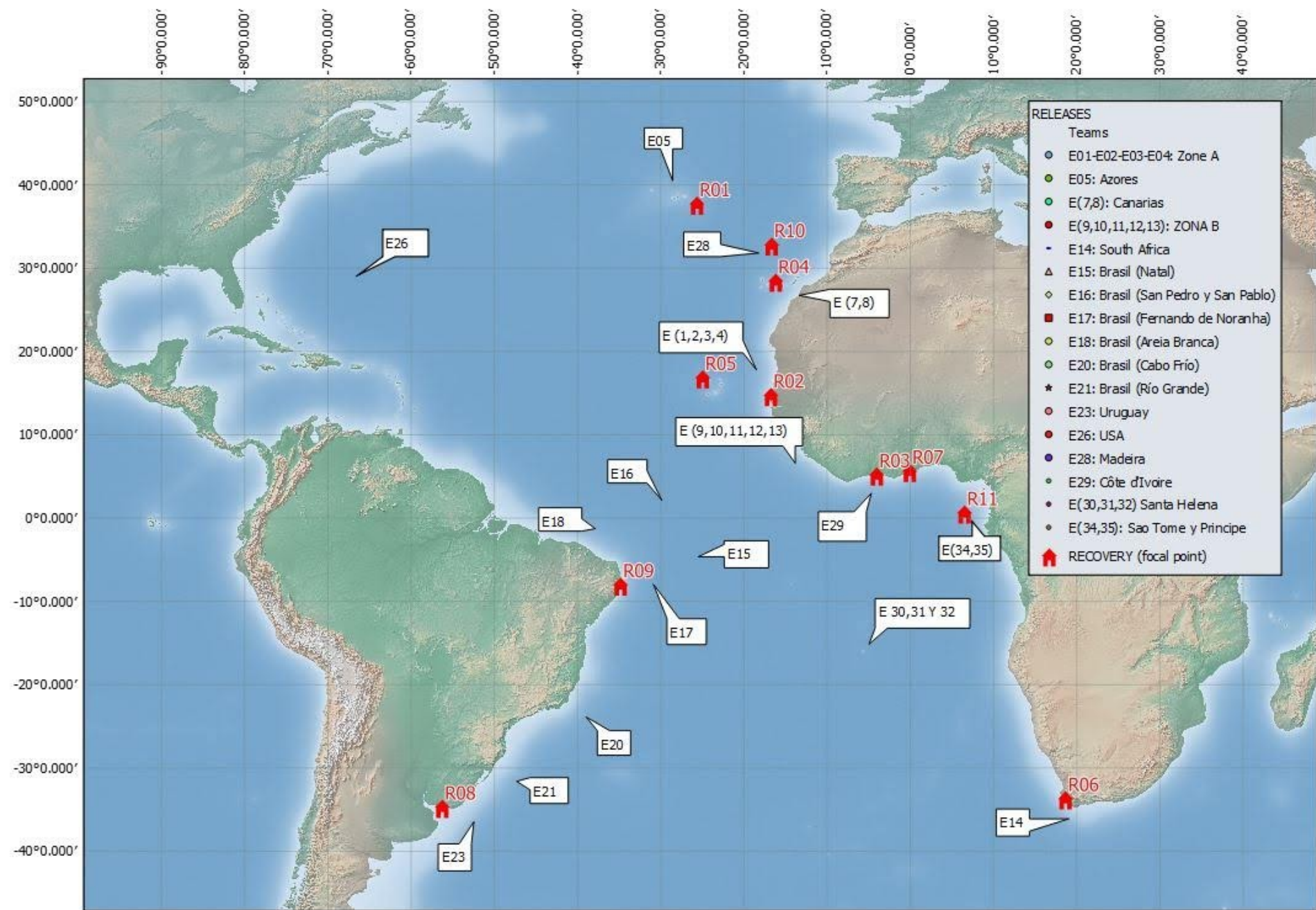# Atlantic Ocean Tropical Tuna Tagging Programme (AOTTP)

31-December-2018

- Releases
- Releases by quadrant
- Bigeye tuna (BET)
- Yellowfin tuna (YFT)
- Skipjack tuna (SKJ)
- Little tunny (LTA)
- Others

Atlantic Ocean Tropical Tuna Tagging Programme (AOTTP) 31-December-2018

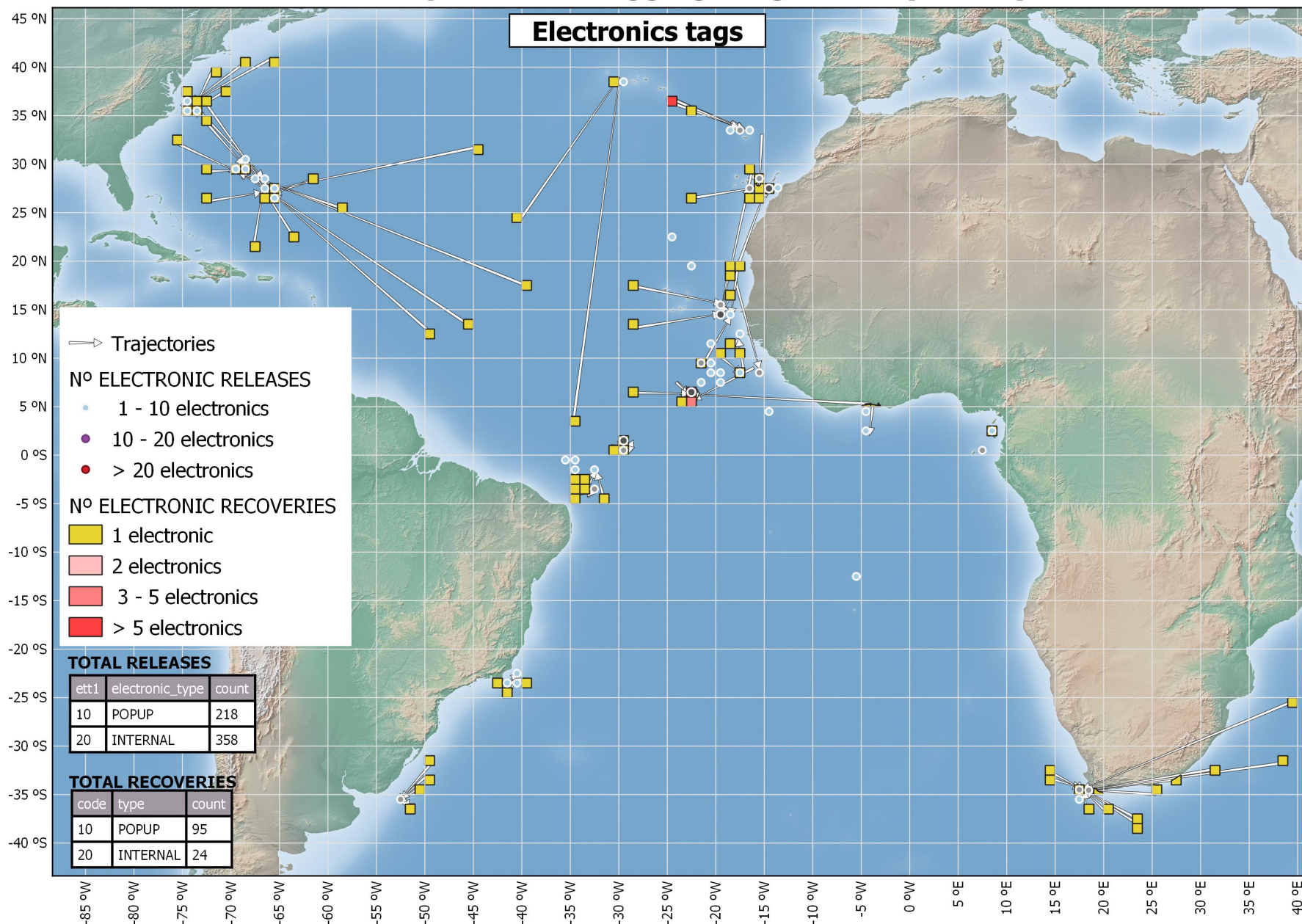# Atlantic Ocean Tropical Tuna Tagging Programme (AOTTP)

31-December-2018

Electronics tags

Legend

→ Trajectories

Nº ELECTRONIC RELEASES
- 1 - 10 electronics
- 10 - 20 electronics
- > 20 electronics

Nº ELECTRONIC RECOVERIES
- 1 electronic
- 2 electronics
- 3 - 5 electronics
- > 5 electronics

TOTAL RELEASES

ett1	electronic_type	count
10	POPUP	218
20	INTERNAL	358

TOTAL RECOVERIES

code	type	count
10	POPUP	95
20	INTERNAL	24

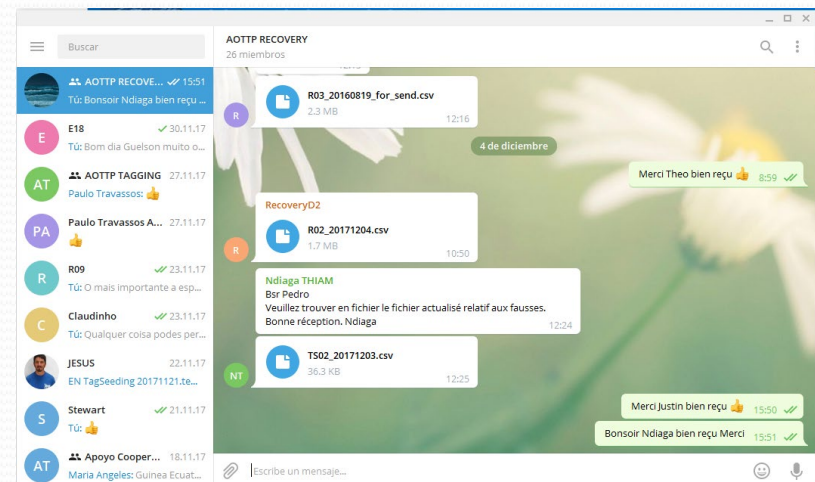# AOTTP – Data collection
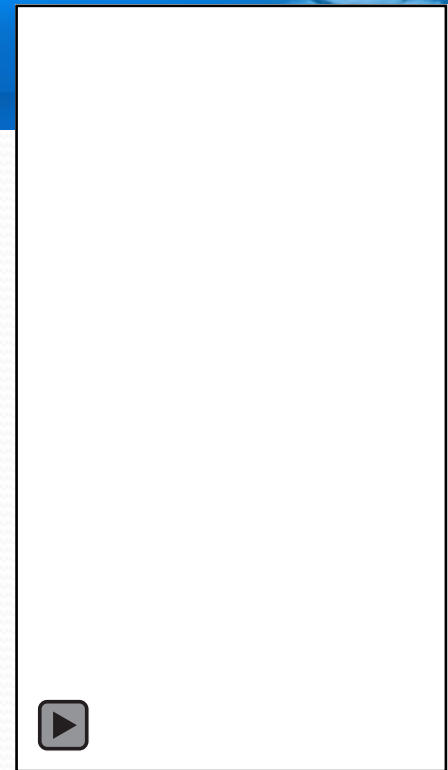
Telegram app

- *Single transmission platform*
- *Positive team involvement*
- *Level of detail*

Memento app

- *Single data format*
- *Reduces mistakes*
- *Requires training*
- *Mixed reception*

PostgreSQL database server

- *Free relational database*
- *Tables, triggers, views…*

General process
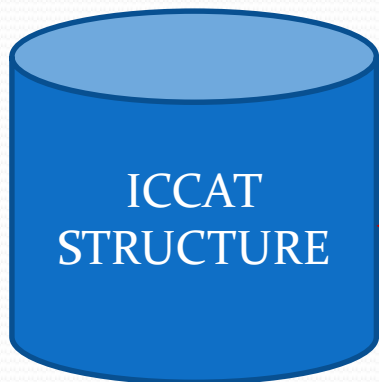
CONTROL 1
Data collection

CONTROL 2

.CSV

**Java
program**

**Export and
Transformation**

CONTROL 3

PostgreSQL

PostGIS
Spatial PostgreSQL

ICCAT
STRUCTURE

CONTROL 5

CONTROL 4

Recommendations

- Same boat/gear for entire campaign or different ones?
  - *Think about the impact of confounded vessel/gear combinations*
- Pay by fish vs. charter boat
  - *Chartering: more control but what if fishing is disastrous?*
  - *Pay by fish: restricted to fishing grounds*
  - *Implication on data output*
- EEZs: request authorizations as early as possible

Recommendations

- Training: conventional, internal and pop up
  - *Specialized crews (skill and equipment/boat)*

Recommendations

- Conventional tagging is easy…

…Data recording is not
  - *Keep track of who has what tag sequence*
  - *Keep track of start/end of each tagging cruise*
  - *Make double tagging sequential/logical*
  - *Record data quality on species ID*
  - *Voice, picture and/or paper recordings*
  - *Bar codes? Weight?*
  - *QAQC & provide data summaries*
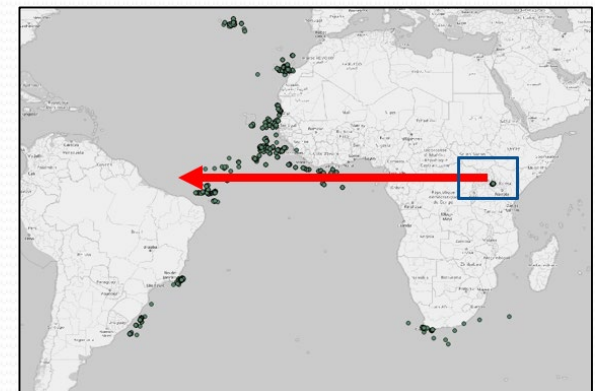
Recommendations

- Beware of fraud
  - *Put in place as many safeguards as possible*
  - *Difficult to invent data that looks real*
  - *Plot, plot, plot !*
    - *length frequencies*
    - *species composition*
    - *...*

Thank you!

...questions?

(Work in progress: movement animations
http://aottp.iccat.int/maps/migration/)

Photos courtesy of our tagging and recovery teams.

2016/10/28