



Comisión Interamericana del Atún Tropical
Inter-American Tropical Tuna Commission



“Best Assessment Approach” vs. “Evaluated Management Procedures”

Based on material from Victor Restrepo (ISSF)

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Topics

- Current IATTC approach
- Management Strategy Approach
 - What advantages it could have?
- Management strategies in the IATTC context

Current approach: based on “Best assessments”

1. Scientific Staff compile and analyze data
2. Scientific Staff conduct stock assessments [BET, YFT] and decide on a best model (“base case”) for each species (SAC reviews it)
3. Scientific Staff make conservation recommendations (e.g. days of closure) based on the F_{mult} of the species that requires the strictest management, and the active fishing capacity
4. The Commission negotiates and adopts (or not) conservation measures.
Article IX of Antigua requires consensus. Just 1 of the 21 members that is not in agreement is enough to halt a decision.

Current approach: some uncertainties

- Uncertainty affects assessment results (growth, data-weighting, natural mortality...). The base case model does not include those uncertainties in a quantitative way. Commissioners and their advisors consider them (or not) qualitatively.
- Negotiations about management decisions creates management uncertainty. If objectives are not clear and stable over time, the decisions are not part of a proper strategy.
- The need to decide by consensus can create political/industrial uncertainty. No guarantee appropriate management will continue once a Resolution expires.

Current approach: Summary

- IATTC has many years of experience following this approach. It has worked

Things that could be improved:

- Perception of stock can change rapidly: changes in methodology and data.
- Management inconsistencies could occur if rules and objectives not completely specified.
- Difficult to evaluate long term consequences of alternative decisions.
- Uncertainty is not rigorously incorporated (*Art. IV of Antigua and Precautionary Approach*)
- Difficult to evaluate how alternative strategies achieve management objectives.
- By default there is a tendency to a system of minimal management changes.
- The process can be contentious at times.
- Costly in the long-term: many assessments and many meetings.

Management Strategies

Is the combination of **pre-agreed data**, **specific analyses** applied to those data and the **harvest control rule** used to determine **management measures** based on the results of those analyses (*Punt et al 2016*)

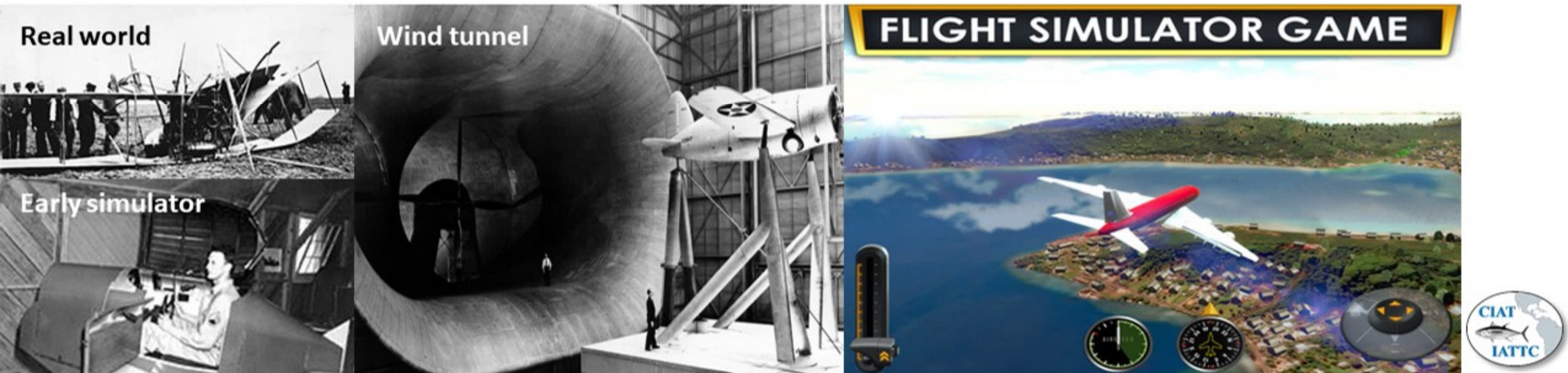
Also known as *management procedure*

Management Strategies: elements

1. Pre-agreed strategy

- Objectives
- Monitoring (stock indicators/fisheries)
- Methodology for data analyses
- Harvest Control Rule
- Implementation of management

2. Strategy is evaluated using computer simulation (MSE)



Management Strategy Evaluation (MSE)

- Simulation
- Strategic tool to evaluate risk
- Prospective evaluation of alternative management strategies
- Selection of the management strategy more probable to achieve management objectives while being robust to the main uncertainties
- Two components:
 - Consultative/dialogue process
 - Technical implementation

Elements of management strategies in IATTC

RESOLUTION C-16-02

HARVEST CONTROL RULES FOR TROPICAL TUNAS (YELLOWFIN, BIGEYE, AND SKIPJACK)

- C-16-02 has a harvest control rule (HCR) with target, limit reference points. **But:**
- HCR has not been fully evaluated using simulation
 - No alternative HCR which could be better (e.g., more robust to uncertainty) has been considered yet
 - HCR does not specify what management actions are to be implemented
 - HCR does not have a mechanism calculating magnitude of management actions
 - Including a consultative process is desirable

**C-16-02 has elements of a management strategy,
but it is not a complete management strategy**

Expected benefits of Management Strategies

- Basis for pre-agreed and transparent decision making. Stability
- More time for scientists and managers to investigate and decide on other important issues. Stock assessments are still important, possibly less frequent
- Better understanding of cumulative impacts of management decisions and uncertainty
- Helps with planning, providing an evaluation of performance via MSE
- Based on the experience of other fisheries, improved results for fish populations, fisheries and communities

Expected issues/challenges

- The consultative and evaluation parts can last several years, initially costly
- Challenges given multi-species fisheries (YFT, BET and SKJ):
 - More difficult to simulate
 - Different objectives by fishing strategy?
 - Manage based on the species needing the strictest management ? The three? or two?

IATTC today, in relation to Management Strategies

Advantageous position:

- Modern Convention including the Precautionary Principle
- Highly qualified Scientific Staff
- One of the most comprehensive databases and data collection programs
- A fishery composed of mainly one gear (86% purse-seine)
- Already adopted (C-16-02) limit and target reference points and a harvest control rule

Expected issues/challenges

- The terminology... but there is progress across RFMOs
- It requires additional resources and funding, at least at the onset
- It is not going to solve issues like allocation, fishing capacity, etc.
- Expectations about chronogram of evaluation/adoption
- The pace of Commission meetings can lead to discontinuity in dialogue

How to do it? Choose and test different components one by one to build the perfect “airplane” or try “different airplanes”? There are several ways to do it and all require dialogue, work and patience.

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¿Preguntas?

