ICCAT Tender 04856
Stereo camera Trial 2024-2025

Matt Dell

Manager AQ1 Blue Fin Tuna Program

AI Trial Results

Co-funded by the European Union

Length Error: Fork length difference between AI and manual measurement ranged from **0.1%** to **2.8%** averaging **1.29%**

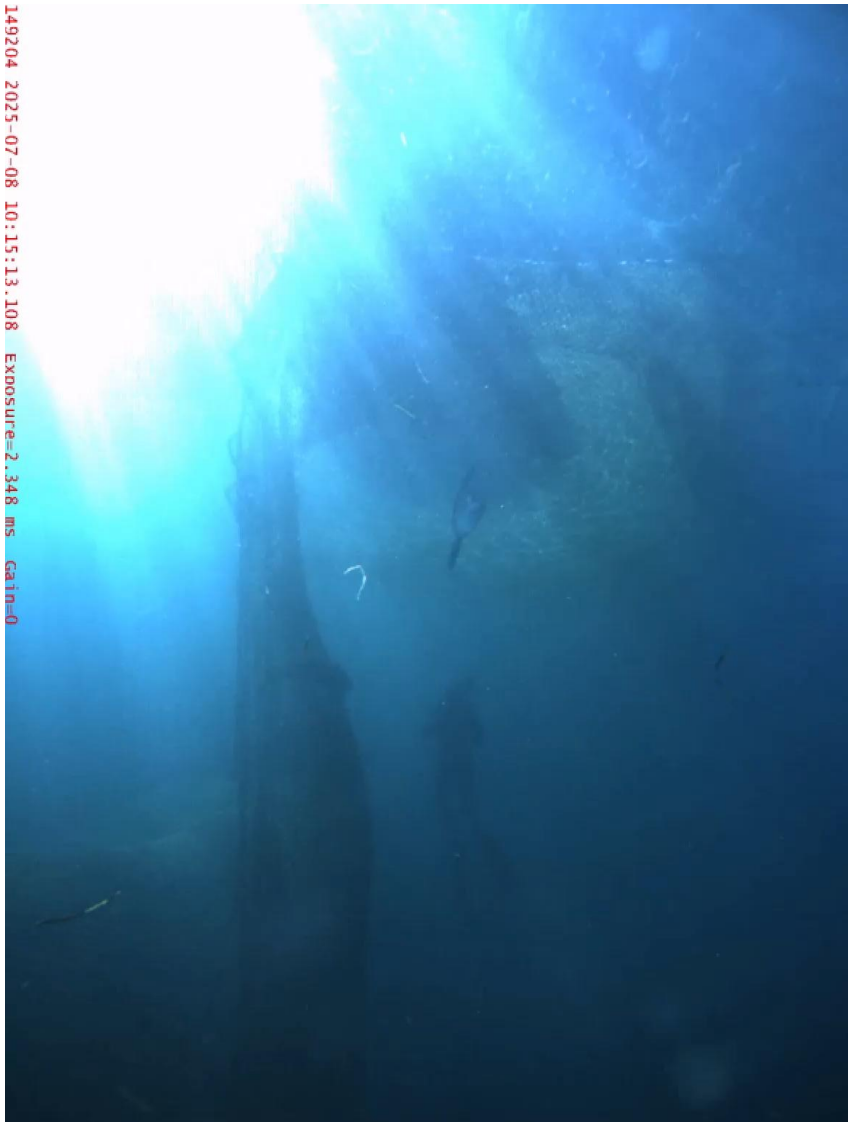
Sampling rate: AI measured an average of **57.63%** of the total fish count, compared to **20.52%** individuals achieved through manual 5th fish measurement

Statistical Validation: The combined result shows the AI system demonstrated **statistical equivalence** (p=0.1487)

* per transfer with the caudal fork length distribution

ICCAT AI Trial Videos 2024-2025

- Only videos provided by member states met all ICCAT recording guidelines
- AI still extracted accurate measurements from very poor-quality videos
- All AI derived fork lengths from transfers within the initial target of 5% of manual measurement
- Average fork length difference AI vs Manual was 1.15% across 19 transfers
- Manual count is still generally more accurate than AI



Comparing Apples with Apples

- Manual FL extraction practice currently used is not optimised for accurate results
- Incorrectly manually measured fish in trial affecting true FL comparisons
- Need to revisit error thresholds to utilize the integrity of the stereo camera geometry and its derived fork lengths
- Excluding fish at distance (> 8m) will generally increase measured mean FL due to small fish stratification

Validation of trial results

- Recommend at harvest or research quota trial validation
- Ribbon tagging of fish in situ an option
- Conduct multiple transfers of a variety of fish sizes, at a range of distances.
- Transfer gate would be the best platform however in cage sampling would also work