AGREEMENT ON THE INTERNATIONAL DOLPHIN CONSERVATION PROGRAM
54th MEETING OF THE PARTIES
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PROPOSAL FOR CONSIDERATION

MODERNIZATION OF THE COLLECTION, EDITING, AND QUALITY ASSURANCE OF AIDCP OBSERVER DATA

Proposal document. The Secretariat will assign the official code, if applicable, in accordance with circulation procedures.

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1. BACKGROUND AND JUSTIFICATION

In 2017, document MOP-36 INF-B [R1] examined electronic data recording by observers at sea. At the time, the Secretariat concluded that the expected gains did not justify the costs and did not recommend a pilot. Those conclusions reflected the technology and costs of 2017; conditions have changed significantly since then, and this proposal reassesses the question on that basis.

At that time, a tablet was estimated at about USD 2,600 [R1]; today, the military-grade rugged tablet and harness already tested by the Data group cost about USD 400. Applications that work without an Internet connection are also much easier to build with current tools.

The current process works, but it was built around paper: forms are transcribed into local databases, sent to headquarters, reviewed, corrected and validated. Depending on the route, data can take from days to many months to reach the central database, when the observer can no longer clarify an error. Maintaining local databases and data-entry applications in several offices also means different software versions, validation rules that can drift apart, and time spent on installations and updates. In 2026, data can be captured and checked on board and reach headquarters within days.

Other tuna fisheries are already moving in this direction. In the Western and Central Pacific purse-seine fishery, the Parties to the Nauru Agreement (PNA) use the iFIMS observer application on satellite-linked Android tablets [R7]; 275 observers were reporting this way by 2019, with the goal of reaching all of the region's approximately 800 observers, and Tuvalu set a goal of paperless observer reporting by 2024 [R8]. The IOTC provides an offline electronic data-collection tool for its observers [R9].

The proposal consists of developing and evaluating a phased solution, leveraging existing software, databases, personnel, and institutional infrastructure. A review of current systems and their business rules will be carried out first; paper forms will then be replaced step by step, where regulations allow, as each part is proven.

The ambition is clear: in the coming years, all AIDCP observer data should be captured and checked on board, reach the central database within days of each trip, and be managed on a single platform covering every observer form. This pilot is the first, measured step toward that goal.

The Data group has already developed data-collection applications and has the tools and skills required for this proposal. A first form, built in a few days to show feasibility, was presented at the meeting; the pilot will demonstrate concrete results.

The initiative also addresses the need to strengthen data review and institutional data availability, while maintaining the confidentiality and approval requirements established by the program.

2. OBJECTIVE AND SCOPE OF THE PILOT

Objective. *To evaluate, over a 12-month period, whether an integrated platform can improve the quality, timeliness, traceability, and efficiency of observer data, from on-board collection through review and approval by authorized personnel.*

Scope. An Android app designed to operate without an Internet connection, a web app for editors, secure synchronization services, and a verifiable audit trail will be developed. The pilot will start with five forms. This is a deliberate starting point, not a limit on ambition: they will be chosen among the most

representative and demanding forms, so that the application, validations and workflow are proven on the hardest cases and can then be extended to all observer forms with far less effort. Approved data may be incorporated into DataApp once integration and permissions have been validated.

The initial allocation will consist of up to 20 military-grade rugged tablet kits with harnesses (tested model: Ulefone Armor Pad 2, with a long-lasting battery), intended for testing, as a reserve, and for rotation among users. These do not represent a permanent assignment to each observer. Staff and their current roles remain as they are.

Official documents printed on special paper or requiring a signature will continue to follow current procedures. A photo of each signed form, stored as a PDF with the trip for reference, will be evaluated; the paper original remains the official record.

3. ALTERNATIVES CONSIDERED

Alternative	Description	Consideration
Continue with the current process	Paper-based data capture, transcription, and subsequent review.	Preserves the existing operation but limits the evaluation of improvements.
Proposed hybrid pilot	Selective digital capture, web editing, and authorized copies of signed documents.	Allows for comparison of quality, turnaround times, and costs while complying with current obligations.
Comprehensive digitization	All forms and the potential replacement of physical originals.	This would require regulatory approval, additional evaluation, and subsequent investment.

The hybrid alternative is recommended for evaluation. A broader transition will depend on the results and the corresponding authorizations.

4. PROPOSED SYSTEM AND DATA PROCESSING

The observer application will include local storage on the tablet, data recovery, updated reference lists and catalogs, and data-quality validations. Data will be sent at the end of each trip, during the debrief with the observer coordinator; the receiving service will return acknowledgments and manage retries and duplicates.

The Android application on the tablet will be distributed and updated centrally through Google Play, so every user works with the latest version and reference data. This replaces the local databases and data-entry applications currently maintained in several offices, with simpler and central maintenance.

The web application will allow editors to review trips, compare versions, log incidents, request clarifications, and document each correction. Every record is reviewed and validated by headquarters staff before it becomes final.

Record Status	Processing
Local draft	Data saved on the tablet without institutional transmission.
Received / provisional	Data synchronized, available only to authorized users.
Under review	Checks, issues, and modifications recorded.
Approved	Record reviewed and validated by headquarters staff.

Record Status	Processing
Available in DataApp	Institutional access to approved data in accordance with permissions and publication rules.

Artificial intelligence will be available to editors only, in the web environment, to support anomaly detection and verification, with answers linked to verifiable records. The editor always makes the final decision.

5. INSTITUTIONAL PARTICIPATION AND SECURITY

Implementation is proposed as a Commission-wide effort involving the Data group, IT and the AIDCP Observer Program, each responsible for part of the work, with support from the Policy and Science divisions as needed. The final distribution of tasks and authorizations will comply with institutional procedures.

Area	Expected Participation
Data and AI	Applications, data models, validations, integration with DataApp, analytics, and AI tools.
IT	Azure administration, identities, access, cybersecurity, backups, monitoring, and deployment.
APICD Observer Program	Operational requirements, forms, observer and editor participation, training, and field evaluation.
Policy and Science divisions	Support as needed.

Changes will be logged by user, date, version, and reason. IT will validate encryption, business continuity, permissions, backups, and the use of existing services. The project must comply with institutional information protection controls and policies.

6. SIGNED OFFICIAL DOCUMENTS

Some forms, including the Tuna Tracking Form (RSA/TTF), are issued on special paper and require signatures, initials, and specific custody procedures. According to the described operating procedure, the signed copy on that medium constitutes the original; printed or electronic reproductions are copies.

During the pilot, the current procedure remains in effect: the TTF and other official forms stay on paper, with the handwritten signature of an authorized official, and are delivered as today. The observer will take a photo of the signed form on board; the resulting PDF will be stored with the trip in DataApp for reference only, and the paper original remains the official record.

The physical original will continue to follow its current chain of custody and delivery.

Document	Valid original	System Function
RSA/TTF	Special paper, A/B forms, initials, signatures, and delivery in accordance with Instrument [R3].	PDF copy for reference, stored with the trip; the original is unchanged.
Other signed official documents	Support, signatures, and safekeeping in accordance with the specific rules for each document.	PDF copy for reference, stored with the trip.

Document	Valid original	System Function
Forms without a special original	Current procedures until the transition is approved.	Evaluate direct capture on the tablet and review via the web application.

In the initial phase, an inventory will be prepared of the documents that require a signature and of the authorities responsible for them, so that each form follows its own rules. Images of real documents will only be shared through authorized institutional channels.

7. IMPLEMENTATION AND MONITORING PLAN (12 MONTHS)

The timeline begins with the authorization of the pilot program. The phases will be reviewed based on verifiable deliverables; access to trips and observers may require documented adjustments.

Phase / Activity	1	2	3	4	5	6	7	8	9	10	11	12	Main Deliverable
1. Analysis and Requirements	■	■											Inventory, Rules, and Protocol
2. Design and Prototypes			■	■									Offline tablet and web editor
3. Development and integration					■	■	■						5 forms and synchronization
4. Operational evaluation							■	■	■				Field tests and PDF copies
5. Analysis and adjustments										■	■		Statistical and economic report
6. Report and decision												■	Results and Recommendations
Management, Safety, and Quality	■	■	■	■	■	■	■	■	■	■	■	■	Year-Round Monitoring

ACCEPTANCE MILESTONES

Period	Review Result	Priority enrollment
Months 1–2	Requirements, documentation procedures, and scientific protocol reviewed.	Data, IT and Observer Program, with Policy and Science support
Months 3–4	Offline prototype and editing experience tested.	Data, IT, and pilot users
Months 5–7	Capture–reception–editing workflow and integrity checks validated.	Data, IT, and Observer Program
Months 7–9	Authorized testing with observers and editors, including signed documents.	Observer, Data, and IT Program
Months 10–11	Reproducible results and economic analysis; prioritized corrections.	Data and program specialists
Month 12	Final report and recommendation for institutional consideration.	Participating units and Secretariat

Regular meetings, version control via GitHub, task tracking in Jira, and monthly technical and financial reports are planned. Acceptance of each phase will depend on its results and not solely on the schedule.

8. SCIENTIFIC, OPERATIONAL, AND ECONOMIC EVALUATION

The evaluation will analyze the entire process: data capture, transcription, editorial review, corrections, approval, and availability in DataApp. Quality, time and cost indicators will be defined from the start.

Paper and tablet will be compared on the same trips, during authorized operational tests. Editors' use of AI assistance will also be assessed.

Dimension	Key Indicators	Evaluation Objective
Data Quality	Fewer errors and missing data in critical fields.	Determine whether quality is maintained or improved.
Speed	Days from end of trip to validated data.	Measure how quickly data becomes available.
Effort	Editing time per trip.	Measure the time saved for editors.
Cost	Cost per trip, paper vs. tablet.	Compare proven benefits with annual cost.

The evaluation protocol, including indicators, sample and analysis methods, will be set before results are reviewed, and the results will be reported to all Parties.

The report will separately identify actual cash savings, the value of reallocated hours, quality improvements, and costs that remain mandatory, such as special paper and the delivery of originals.

9. BUDGET, EXPANSION, AND SUSTAINABILITY

We request that an initial budget ceiling of up to USD 50,000 be considered for the 12-month pilot. Following the evaluation, an additional investment of up to USD 50,000 may be submitted for approval, specifically dedicated to expanding the availability of tablets. The eventual cumulative investment would be up to USD 100,000; this does not constitute automatic approval of the second phase.

9.1. Pilot Budget: Initial Disbursements and Expenditures

Item	Nature	USD
20 rugged tablet kits and harnesses; USD 410 per kit, reference price	One-time	8,200
Offline application: tools and incremental support	One-time	6,500
Web-based application for editors: tools and incremental support	One-time	6,500
Synchronization and integration with DataApp	One-time	3,500
PDF Capture and Traceability of Signed Documents	One-time	2,500
Specialized security and quality testing with IT	One-time	4,000
Incremental consumption of existing Azure: first year	Annual (Year 1)	1,200
Enterprise AI Proof of Concept for Editors	One-time	1,500
Development tools, Jira, and other services: first year	Annual (Year 1)	3,500
Logistics and operational testing	One-time	3,000
Initial assessment, training, and documentation	One-time	4,600
Contingency (10% of the pilot program's budget cap)	Reserve	5,000
TOTAL PILOT		50,000

Breakdown: initial activities and investment USD 40,300; first-year services and consumables USD 4,700; contingency USD 5,000. These amounts are estimates and do not constitute quotes or committed

expenses. The contingency may only be used for justified and authorized needs; if not used, it does not represent an actual disbursement.

In addition, Data and IT staff contribute their time in kind; this contribution is not included in the USD 50,000.

Azure will be used as shared capacity from the IATTC; the budgeted cost refers solely to verifiable additional usage. IT and Administration will review existing licenses, security, purchases, and accounting allocations to avoid duplication.

9.2. Provision and Expansion of Tablets

The program has approximately 200 observers, according to the available work estimate, but not all are on board at the same time. The pilot will begin with up to 20 kits, which may be circulated among trips and observers, subject to delivery, return, and maintenance procedures.

If the pilot yields satisfactory results and the second allocation of USD 50,000 is authorized, it is proposed to allocate these funds primarily to expand the equipment, while maintaining the services and applications already developed.

Expansion Component	Estimate
100 additional kits × $410	$41,000
Preparation, distribution, accessories, logistics, and procurement margin	USD 9,000
TOTAL SECOND INVESTMENT (subject to approval)	USD 50,000
Reference fleet: 20 initial units + 100 additional units	Approximately 120 kits

The availability of 120 kits does not imply permanent equipment for 120 observers nor does it guarantee specific Trip coverage. The final quantity to be purchased will be determined based on the number of observers onboard simultaneously, campaign duration, ports, rotation, operational reserve, and contract prices.

9.3. Annual Operation and Periodic Renewal

Following the expansion, the proposal calls for incorporating a baseline allocation of USD 25,000 annually into the AIDCP's regular budget for the operation, support, and renewal of equipment. This is an estimate and must be validated with IT, Administration, and the Observer Program based on actual fleet size and consumption.

Projected annual expenditure	USD/year
Incremental Azure, storage, and backups	1,800
Licenses, tools, and complementary services	2,000
Controlled AI usage for editors	1,200
Security reviews and ad hoc external technical support	1,400
Training, kit rotation, and logistics	2,200
Annual allocation for repair and replacement of 120 kits	16,400
ESTIMATED ANNUAL TOTAL	25,000

The allocation of USD 16,400 corresponds to the reference cost of 120 kits (120 × USD 410 = USD 49,200) spread over three years. The purpose is to plan for gradual replacement, rather than purchasing

all equipment annually or requiring its replacement while it is still functional. If budgetary rules do not allow for the accumulation of reserves, purchases will be scheduled in stages based on age and condition.

The USD 25,000 includes this renewal provision, which should not be added a second time at the end of the third year. The projection excludes regular salaries, new hires, major redesigns, and current costs for printing and storing official documents. It requires adjustment for inflation, extraordinary damage, prices, and the actual level of service.

9.4. Five-Year Plan

The following table illustrates the anticipated sequence if, following a successful pilot, the Parties authorize the expansion at the start of the second year. The investment is distinct from the annual operating costs.

Year	Investment for Pilot or Expansion (USD)	Annual Operation and Renewal (USD)	Total (USD)
1. Pilot	50,000	Included in the pilot	50,000
2. Expansion	50,000	25,000	75,000
3. Operation	—	25,000	25,000
4. Operation	—	25,000	25,000
5. Operation	—	25,000	25,000
5-YEAR TOTAL	100,000	100,000	200,000

The illustrative total of USD 200,000 over five years is equivalent to USD 100,000 in eventual cumulative investment and USD 100,000 in operations and renewal costs in years 2–5. It is presented in constant dollars, without adjusting for inflation, and does not constitute approved financing. Each annual budget will be revised based on actual prices and needs.

9.5. Verifiable Savings and Optimization

The pilot evaluation will quantify the time spent on transcription, review, correction, and approval, the volume of incidents, and the direct costs of the current process. A distinction will be made between the monetary costs actually avoided and the value of the hours that could be reallocated to quality control and support for observers. Staff remain in place.

Sustainability should be evaluated based on the cost per trip or approved record, avoided expenditures, and benefits in terms of quality and timeliness. Official documents that continue to require special paper will not generate printing savings simply by being digitized.

10. SWOT ANALYSIS

SWOT	Points and planned response
Strengths	In-house team experienced in data-collection applications; Existing infrastructure (Azure and DataApp); Military-grade tablets already tested, at about USD 400 per kit.
Opportunities	One central system with simpler maintenance and no local databases; Data in days, with quality checked at the source; A reusable platform for other forms and programs.

SWOT	Points and planned response
Weaknesses	Double entry (paper and tablet) during the pilot, with observer workload monitored; Development capacity to strengthen for scale-up, supported by shared code, documentation and an adjustable scope; 5 forms in this first phase, chosen to prove the approach before extending it to all forms.
Threats	Damage at sea (military-grade tablet, long-lasting battery, data saved on the device, paper backup on board); Adoption by observers and national programs (training, voluntary participation, application designed with the Observer Program); Funding beyond the pilot (expansion only after satisfactory results and a separate decision by the Parties).

Expansion will only be proposed if the pilot results are satisfactory.

11. RECOMMENDATIONS FOR THE PARTIES

The Parties are invited to consider the following measures, subject to applicable authorization procedures:

1. Authorize the evaluation of a 12-month institutional pilot and consider an initial allocation of up to USD 50,000.
2. Direct the Secretariat to coordinate requirements and controls with the Data group, IT and the Observer Program, with support from the Policy and Science divisions and in consultation with national programs.
3. Maintain signatures, originals on special paper, and custody procedures, authorizing the use of digital copies for evaluation purposes only when appropriate.
4. Request follow-up reports and a reproducible scientific and economic evaluation before considering expansion.
5. Consider, only in light of satisfactory results, a second allocation of up to USD 50,000 for new tablet kits.
6. Provide, if the expanded operation is approved, for an indicative annual allocation of USD 25,000, subject to validation, updating, and budget approval.

APPENDIX A. EVALUATION CRITERIA

The protocol will define in advance the indicators (quality, speed, effort and cost), the critical fields, the comparison of paper and tablet on the same trips, and the sample. Missing data and uncertainty will be documented.

Editors' use of AI will be assessed on the usefulness of its alerts and the time saved. AI does not replace scientific judgment or editorial approval.

APPENDIX B. DOCUMENTARY CONTROLS

The system will keep the PDF copy separate from the delivery of the physical original. Each copy will be legible, complete and identified by official number, trip and date, with a version history.

The inventory of requirements for forms other than the RSA/TTF will be conducted during the assessment in collaboration with operational and legal managers, prior to carrying out testing with actual documents.

REFERENCES

[R1] MOP-36 INF-B (2017), Electronic Recording of Data by Observers at Sea.

[R2] APICD-53-01 (2026), APICD Budget.

[R3] AIDCP, Tuna Tracking and Verification System (amended June 23, 2015).

[R4] IATTC, 54th Meeting of the Parties to the AIDCP, October 27–28, 2026.

[R5] NIST, AI Risk Management Framework.

[R6] Microsoft, Azure Cost Management.

[R7] PNA, iFIMS: the backbone of PNA fisheries management (2018).

[R8] WCPFC, Special Requirements Fund Project Report, Tuvalu (2023).

[R9] IOTC-2024-SC27-07Rev2, Regional Observer Scheme status (2024).