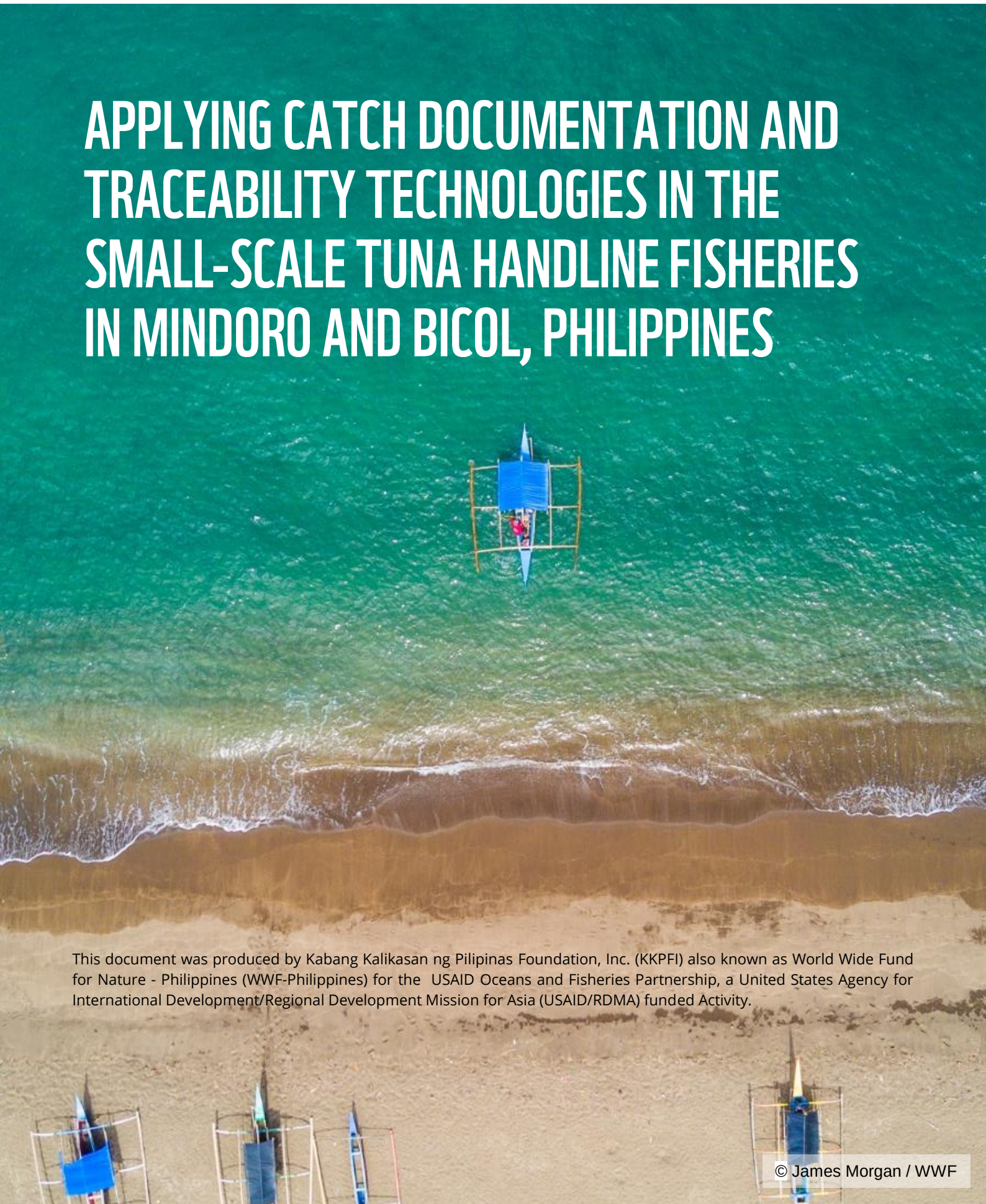
# APPLYING CATCH DOCUMENTATION AND TRACEABILITY TECHNOLOGIES IN THE SMALL-SCALE TUNA HANDLINE FISHERIES IN MINDORO AND BICOL, PHILIPPINES



This document was produced by Kabang Kalikasan ng Pilipinas Foundation, Inc. (KKPFI) also known as World Wide Fund for Nature - Philippines (WWF-Philippines) for the USAID Oceans and Fisheries Partnership, a United States Agency for International Development/Regional Development Mission for Asia (USAID/RDMA) funded Activity.

# Introduction

This partnership between The Oceans and Fisheries Partnership Activity, funded by the United States Agency for International Development's Regional Development Mission for Asia (USAID Oceans) with Kabang Kalikasan ng Pilipinas Foundation Inc. (KKPFI) also known as the World Wide Fund Philippines (WWF Philippines) aims to formalize relevant collaborative efforts to expand the use of municipal electronic catch documentation and traceability (eCDT) technologies beyond the USAID Oceans Learning Site of General Santos City, into other regions of the country where WWF-Philippines is currently working closely with municipal fisherfolks who are interested in testing eCDT technologies within their own fishery operations and Local Government Units (LGUs).

WWF-Philippines has been working with tuna fisheries stakeholders to achieve sustainable fisheries through a Fisheries Improvement Project (FIP) on handline tuna fisheries in Mindoro Strait in the province of Occidental Mindoro and in Lagonoy Gulf in the Bicol region. This partnership not only provides a tool to address the lack of fish catch report for the municipal fisheries, but it can also provide a great tool to support compliance in the international market in terms of verifiable traceability to cater to the growing demand for sustainably-sourced fisheries products worldwide and in the local market.

**PARTNERSHIP OBJECTIVES**

This partnership with USAID Oceans was based on the common goals to combat IUU fishing, promote sustainable fisheries, and conserve marine biodiversity through the demonstration and expansion of eCDT technologies during a period of four (4) months, between 03 January 2020 and 05 May 2020, with the following objectives:

- To adapt and apply eCDT technologies piloted with municipal and small-scale fisheries in General Santos City using FAME Technology at WWF sites in Mindoro Strait and Lagonoy Gulf of the Occidental Mindoro Province and the Bicol Region;
- To integrate existing WWF catch documentation efforts with FAME technology and BFAR's national eCDT system;
- To support the finalization of policy guidelines for CDT in small-scale fisheries in Occidental Mindoro Province and the Bicol Region; and
- To develop communication materials and share lessons learned on the development and testing of eCDT technologies with small scale fisheries in Occidental Mindoro Province and the Bicol Region.

# Lessons learned on the eCDT testing in Mindoro Strait and Lagonoy Gulf


*Installation of FAME transponder to a small-scale tuna handline fishing vessel.*
Photo: David N. David / WWF-Philippines

## 60 FAME TRANSPONDER INSTALLED

- **Sablayan, Occidental Mindoro**
- **Province of Albay** (Tabaco City, Municipality of Tiwi, Municipality of Malinao , and Municipality of Bacacay)

WWF-Philippines has been working on the improvement of the catch documentation and traceability system as part of the small-scale tuna handline FIP, with emphasis on vessel registration and licensing, use of tuna tag with a unique identification number and the correct filling-up of the BFAR-prescribed fish catch report. Training on fish catch documentation has been conducted through the project to capacitate the Tuna Fisher's Association (TFA) and the LGUs on how to identify fish species and what key data elements need to be gathered, which can be used as basis for effective fisheries management. Despite the constant encouragement for the compliance to the reportorial requirements on fish catch, still, only a few LGUs and tuna fishers are complying with the policy.

## LESSONS LEARNED:

# Fishers

1. Participants should be a member of the TFA in their respective municipalities and should meet government criteria in conducting fishing operations like being legally registered with valid fishing licenses;
2. Communicating effectively to the small-scale fishermen the benefits of using the technology to them and to the reputation of their fisheries increases their interest to participate; and
3. It is easier to convince the fishers to participate in this kind of project if they know that they will be receiving an incentive by making their fish traceable using the FAME transponder.

*The orientation of handline tune fishers in Sablayan, Occ. Mindoro on the use of FAME transponder.*
Photo: Ana Chavez / WWF-Philippines

# Local Government Units (LGUs)

1. One of the factors that contributes to why the majority of the LGUs have a weak capacity to produce reliable fisheries-related data is the absence of policy guidelines on the standard key data elements. This can result in the inconsistency of fish production data between government agencies that gather and manage fisheries-related data;
2. It is important that the Department of Agriculture (DA) through the Bureau of Fisheries and Aquatic Resources (BFAR) should be able to formulate a working CDTS that can be easily adopted by LGUs for fisheries management purposes; and
3. The eCDT technology can lead to the establishment of a database for the municipal fish catch report that can be used by the LGUs to inform policies and plans for coastal and fisheries resource management.
4. The eCDT can help LGUs generate revenues by having robust traceability data of landed and transported fish that will be the basis of issuing auxiliary invoices because the current practice is just simply voluntary reporting by traders since most LGUs don't have inspectors.

*Courtesy meeting with Sablayan Mayor Andres D. Dangeros*
Photo: Ana Chavez / WWF-Philippines

# Bureau of Fisheries and Aquatic Resources (BFAR)

1. It is important that the ongoing work on eCDT for small-scale fisheries is in line with the Bureau's effort to develop eCDT to catch up and keep up with the global trends of digitizing monitoring, control and surveillance platforms to curb IUU Fishing and promote more sustainable management of the fisheries resources in the coastal communities;
2. It has been explained that the eCDT platform is equipped with security access, wherein the only person or group of people who can view the information being inputted by the fishers are only those who belong in a single supply chain including LGUs and also BFAR as a national fisheries regulatory agency; and
3. The development of eCDT is still ongoing and there are existing collaboration works with other organizations who are finding ways to directly incentivize small-scale fishers using the eCDT technology the key here is the interoperability of the system.

*Coordination meeting with BFAR-MIMAROPA on the application of eCDT in the small-scale tuna handline fisheries.*
Photo: Jemuel Cueto / WWF-Philippines

## LESSONS LEARNED:

# Fish Buyer, Processor/Exporter

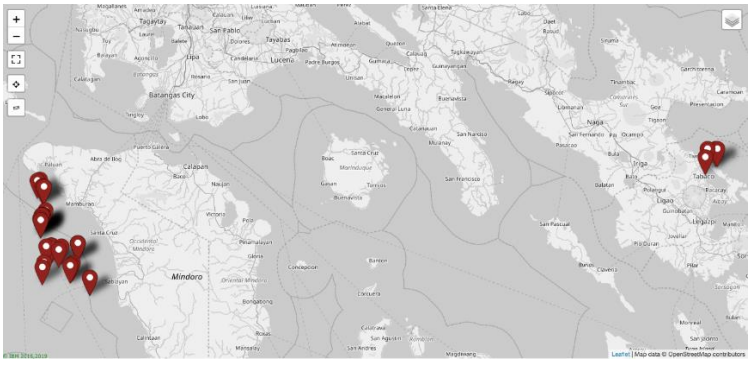
1. Based on our observation, fishers are not comfortable in filling up the BFAR-prescribed fish catch report. Most of the time, the buying stations are the ones assisting in filling up the BFAR fish catch report. This practice will only record traceability from the point of landing to the processor which does not meet the full traceability standard that the project wants to meet, which is from the point of catch to the consumer level;
2. The support and pressure from the processors/exporters are vital in achieving the full seafood traceability to promote sustainable fisheries to address issues on IUU Fishing and seafood fraud;
3. The involvement of JAM Seafoods in the application of eCDT with the small-scale tuna handline fisheries makes the process of establishing traceability from the point of catch using FAME transponder and eCDT platform a lot easier. Giving incentives to the fishers in making their catch traceable by using electronic devices makes it more enticing for the fishermen to comply with the reportorial requirement which is vital in traceability.


*Site visit to the partner fish buyer in Sablayan, Occidental Mindoro*
Photo: Ana Chavez / WWF-Philippines

# eCDT Technology

1. Given all the challenges and situations in the adoption of eCDT technology for small-scale fisheries from a developing country, technology providers need to consider several things: (1) affordability and effectiveness of the technology, (2) should be able to compensate for the inconsistent digital communication structure of the area without additional costs, and (3) should be customizable.

*FAME maritime transponder*
Photo: Ana Chavez / WWF-Philippines





*Data flow and interface of eCDT technology using FAME eCDT platform for small-scale handline tuna fisheries from WWF FIP site.*
Photo: FAME

The Futuristic Aviation and Maritime Enterprise, Inc. (FAME), offers a maritime transponder that can track and monitor maritime vessels in real-time using a PC or a mobile device. The transponder can be installed in different types of maritime vessels including small-scale fishing vessels. FAME uses radio frequency to send and receive information through gateways that receive information from the transponder attached to the handline tuna fishing vessels. Fish catch data were sent through the FAME transponder to a cloud server that can be accessed through fame ECDT platform up to the processor/exporter level. FAME technology is interoperable with other systems which is key in achieving full traceability to the small-scale handline tuna fisheries of the Philippines.

## OTHER INSIGHTS:

- Real-time eCDT data is useful for improved fisheries management decision-making and strengthened fish stock assessments;
- Fishers believe that the vessel tracking would be a useful tool to ensure their safety at sea and facilitate search and rescue in case of emergency while in the fishing area; and
- Incentivizing the application of traceability to small-scale fisheries can help improve their livelihood. It is clear that traceability connects the key elements of environmental sustainability and social responsibility.

# Next steps in achieving full traceability for small-scale fisheries in the Philippines

Transparency within the seafood supply chain demands a huge amount of data and information sharing which cannot be met through a manual paper-based system. The technology for the implementation of a traceability system in seafood does exist; what is needed is the collaboration between seafood industry and government stakeholders to adopt and implement a traceability system applicable for small-scale fisheries and find a way to discourage bad practices or noncompliance to government criteria, like vessel registration and licensing, and incentivize those who are compliant to the sustainable fisheries regulations.


*Small-scale handline tuna fisheries full traceability from Hook to Cook*
Photo: WWF-Philippines

Here are some next step recommendations that need to be considered for the improvement of the application of eCDT for small-scale fisheries to promote full traceability along with the small-scale handline tuna fisheries in the Philippines. This is what we call the "From Hook to Cook" traceability concept:

1. Integration with BFAR eCDT system and application of data analytics and visualization tools (for example: https://www.seafdec-oceanspartnership.org/resource/innovative-digital-solution-supporting-fisheries-management-and-catch-documentation-data-analysis-msu-naawan-foundation/).
2. Integration with a seafood traceability mobile application to help customers make more informed decisions in buying fully traceable seafood.
3. Test alignment with the GDST v1.0 Interoperability guidelines, covering key data elements and formats to ensure interoperability, full-chain traceability. Test traceability on several supply chains from first mile to retailer, prior to full adoption across all products in both FIP sites and future sites.
4. Establish data verification protocols based on best practice, i.e. FAO, include traceability software interoperability with authorized data sources, i.e. municipal licensing records/database.
5. Test and scale traceability and trade data for access to capital – ensure interoperability of other technology solution to FAME, for example.
6. Level-up the pilot testing up to the distributor level to establish full chain traceability.
7. Application of eCDT to local markets and link to municipal CDT policy.
8. Conduct of study to quantify the cost and benefits of eCDT system investment.
9. Application to other small-scale fisheries (e.g., blue swimming crab, squid, mahi-mahi, etc.).
10. Linking eCDT data with fish catch monitoring (e.g., National Stock Assessment Program) for improved fisheries management decision-making and strengthened fish stock assessments.
11. Explore how real time fisheries data from eCDT can provide information to support logistics and transportation of seafood products in the supply chain (i.e., from fish landing to retail markets and urban centers) to ensure fish supply, availability, and food security, in case of emergency situations (i.e., COVID-19 situation).
12. Establish crisis contingency plans in the event of supply chain disruption.
13. Establish feasibility plans for investment in pre and post-harvest facilities and other services, including alternative livelihood in aquaculture facilities to secure value added services within the community where economies of scale justify these investments.
14. Develop a database for LGUs to have a publicly available database on fisheries profiling to help in management and enforcement.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