PARTNERSHIP APPRAISAL AND PRIORITIZATION REPORT: MALAYSIA

The USAID Oceans and Fisheries Partnership

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ACRONYMS AND ABBREVIATIONS

ACDS	ASEAN Catch Documentation Scheme
ASEAN	Association of Southeast Asian Nations
CDT	Catch Documentation and Traceability
CTI-CFF	Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security
DOF	Department of Fisheries Malaysia (DOF)
eACDS	Electronic ASEAN Catch Documentation Scheme
eCDT	Electronic Catch Documentation and Traceability
EU	European Union
ICT	Information and Communications Technology
IUU	Illegal, Unreported and Unregulated
LKIM	Malaysian Fisheries Development Authorities
MAMPU	The Malaysian Administrative Modernization and Management Planning Unit
MAQIS	Malaysian Quarantine and Inspection Services.
NGO	Non-Governmental Organization
PPP	Public Private Partnership
SEAFDEC	Southeast Asian Fisheries Development Center
SIMP	United States Seafood Import Monitoring Program
USAID	U.S. Agency for International Development
USAID Oceans	U.S. Agency for International Development Oceans and Fisheries Partnership

EXECUTIVE SUMMARY

The U.S. Agency for International Development Oceans and Fisheries Partnership (USAID Oceans) is a five-year activity, working in partnership with the Southeast Asian Fisheries Development Center (SEAFDEC), the Coral Reefs, Fisheries, and Food Security (CTI-CFF), and a wide range of public and private sector partners at regional, national, and local levels. USAID Oceans combats illegal, unreported, and unregulated (IUU) fishing and conserves marine biodiversity in the Asia-Pacific region through support for the design, development, and implementation of electronic catch documentation and traceability (eCDT) systems. The program works across Southeast Asia with ASEAN member countries, with two learning sites in General Santos, Philippines and Bitung, Indonesia. Since the program's launch, USAID Oceans has worked across ASEAN member countries to support enhanced traceability efforts, and in 2017 and 2018 engaged heavily with Expansion Site Countries, including Malaysia, to complete catch documentation and traceability (CDT) analyses and partnership appraisals.

To improve transparency in the seafood supply chain and ensure the successful implementation of eCDT systems, USAID Oceans engages a variety of fisheries stakeholders, including governments, intergovernmental organizations, seafood industry associations, technology companies, fisher groups, and non-governmental organizations (NGOs) as partners in eCDT system design, testing, and implementation. USAID Oceans develops and implements partnerships to enhance industry support and participation, leverage public and private sector resources in support of system implementation and deploy cutting edge innovation to improve connectivity and data collection. USAID Oceans also works with its partners to build their capacity in executing public and private partnerships (PPPs).

Drawing on the program's expertise and experience in developing effective PPPs, in 2018, USAID Oceans engaged with the government of Malaysia to conduct a Partnership Appraisal to identify high-value partnership opportunities, which is linked to a complementary CDT Gap Analysis Report. USAID Oceans' Partnership Appraisals are conducted through a multi-step process, including desk research, field interviews, and participatory work sessions designed to uncover opportunities for public-private collaboration. During the process, USAID Oceans' PPP and CDT teams worked together closely to engage buyers, seafood companies, and organizations working on seafood traceability to identify their interests, challenges, opportunities for collaboration, and to design an eCDT roadmap that supports eCDT system design and implementation. This report summarizes the main findings of the Malaysia Partnership Appraisal, as well as recommendations for next steps to develop partnerships that will support eCDT implementation.

Across its Expansion Site Countries, the program has found that seafood supply chains are commonly complex and fragmented, using paper-based catch documentation and certification systems as the predominate tool for traceability. With the increasing pressure on the fisheries export industry, particularly by EU regulations and the U.S. Seafood Import Monitoring Program (SIMP), fisheries authorities and seafood industries across the Southeast Asia have noted their recognition of the importance of improving CDT protocols by moving from paper-based to digital systems, as well as the value of leveraging partnerships opportunities to facilitate eCDT system design and implementation.

USAID Oceans' research in Malaysia uncovered many opportunities to leverage current system strengths, as well as identified numerous technical, financial, economic, and psychological barriers that highlight the need to demonstrate the business case and added value of eCDT systems, for both government and the private sector. This Partnership Appraisal Report identifies recommended approaches to identify and engage with a range of key organizations, customized for Malaysia's specific country systems and contexts. USAID Oceans is pleased to continue its role as a technical advisor in order to support effective government-led partnerships, where partner roles and responsibilities are clearly stated under a legal framework that can create the conditions required for a sustainable eCDT system and an improved seafood supply chain.

1. INTRODUCTION

The U.S. Agency for International Development Oceans and Fisheries Partnership (USAID Oceans) is a five-year activity, working in partnership with the Southeast Asian Fisheries Development Center (SEAFDEC), the Coral Reefs, Fisheries, and Food Security (CTI-CFF), and a wide range of public and private sector partners at regional, national, and local levels. USAID Oceans combats illegal, unreported, and unregulated (IUU) fishing and conserves marine biodiversity in the Asia-Pacific region through support for the design, development, and implementation of electronic catch documentation and traceability (eCDT) systems. The program works across Southeast Asia with ASEAN member countries, with two learning sites in General Santos, Philippines and Bitung, Indonesia. Since the program's launch, USAID Oceans has worked across ASEAN member countries to support enhanced traceability efforts, and in 2018 engaged heavily with public and private sector partners in Malaysia to complete a catch documentation and traceability (CDT) analysis and partnership appraisal.

The following report proposes different pathways that can be taken to build dynamic partnerships, as well as identifies some key organizations that could play positive roles in system development. In the context of the fishing industry, government-led partnerships require a step-by-step approach to first engage all internal government agencies, to agree on common objectives, roles and responsibilities, resources allocations, and a timeline. Such engagement can take the form of a dedicated CDT task force with representatives from all relevant agencies, a clearly defined organization, specific capacities, budget, and planning. Then, taking a leading role, the relevant fisheries authority – or CDT task force – may identify and engage external public and private partners based on their contribution and interest to test the usability and scalability of a CDT system. Such engagement may require a government agency to use both its authoritative power and specific incentives to promote CDT and motivate engagement.

In other circumstances, a model where there is a close collaboration and co-investments between the public and private sector could also be a viable option that requires less resources from the public sector. The eCDT system will then be co-financed and managed by private companies while relevant government agencies would be systems users for data collection and the validation process. This option also requires less resources for the government to promote adoption since the industry 'First Movers' will voluntarily adopt the system.

Regardless of the partnership model, throughout the process of developing and implementing an eCDT system, continuous stakeholder engagement is vital. Government and industry association play a key role in marketing and promoting the eCDT system as a way to increase seafood industry competitiveness, products' quality and safety, and ultimately create new market opportunities. The scalability and sustainability of the eCDT relies heavily on continuous support and commitment from both the public and private sector.

1.1   USAID Oceans' Partnership Strategy

To improve transparency in the seafood supply chain and ensure the successful implementation of eCDT systems, USAID Oceans engages a variety of fisheries stakeholders, including governments, intergovernmental organizations, seafood industry associations, technology companies, fisher groups, and non-governmental organizations (NGOs) as partners in eCDT system design, testing, and implementation. USAID Oceans develops and implements partnerships to: enhance industry support and participation, leverage public and private sector resources in support of system implementation and deploy cutting edge innovation to improve connectivity and data collection. USAID Oceans also works with its partners to build their capacity in executing public and private partnerships (PPPs).

USAID Oceans' partnerships have been formed with governments, regional institutions, and the private sector aim to achieve the following objectives, and encourages its partners to develop their own partnerships that meet these criteria:

- **Industry Support and Participation**. USAID Oceans develops strategic, market-driven partnerships that capitalize on industry technical expertise, market position, and capacity to engage national and local government counterparts. Developing partnerships in the seafood industry has anchored USAID Oceans-supported eCDT systems within the seafood industry's regional and international realities, while bolstering system scalability and sustainability. Engaging buyers, industry, and non-governmental organizations (NGOs) is essential to motivating suppliers to adopt and scale eCDT and establishes a forum for common industry dialogue on traceability standards and requirements.

- **Long-Term Sustainability**. USAID Oceans engages development organizations, foundations, and other partners to leverage public and private sector funding that can further investments into traceability initiatives. Banks, impact investors, and other financial institutions are ideal candidates for providing sustainable investment and financing mechanisms to address cost barriers and support wider system adoption.

- **Deployment of Cutting-Edge Technology**. USAID Oceans partners with technology providers to harness the latest communication technologies and traceability innovations to ensure the eCDT systems is supports are developed and implemented with the best available connectivity, data capture, and transmission capabilities.

- **Capacity Building**. USAID Oceans strongly believes that robust partnerships are a critical foundation for any eCDT project and thus engages national fisheries agencies to build their capacities in developing partnership strategies, identifying high-value partnerships, and executing partnership agreements to further national and local objectives.

USAID Oceans has focused on identifying partners to support eCDT system design and architectural development; developing market-driven partnerships in its learning sites and along the value chains to key markets; and developing partnerships with key 'Information and Communications Technology' (ICT) companies with proven technology and applications that enable cost-effective "first mile" data collection at-sea and in landing sites. USAID Oceans continues to expand its market/buyer partnerships and ICT partnerships to establish end-to-end digital traceability in its learning sites in Indonesia and the Philippines.
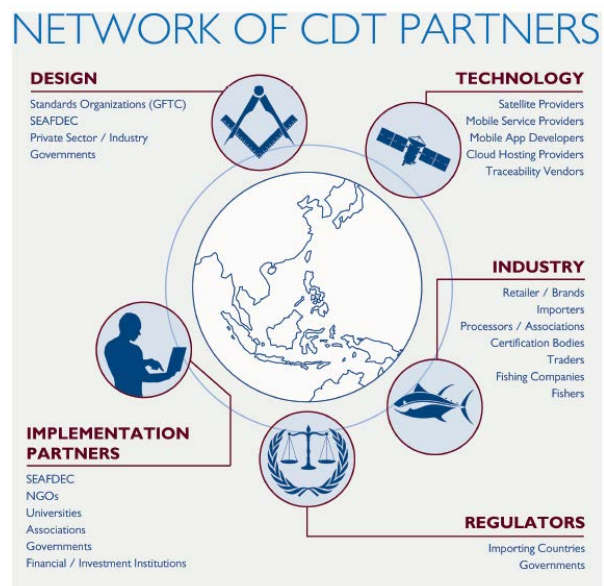
Figure 1. Diagram of USAID Oceans' partnership approach

1.2   Methodology and Approach

Partnership Appraisals identify high-value partnership opportunities and provide recommendations to support a government-led implementation of eCDT systems in a specified country. To complete this Partnership Appraisal, close coordination was required between USAID Oceans' PPP and CDT teams, under the authority of the Malaysia Department of Fisheries.

The Appraisal was implemented in the following three key stages:

1. **Desk research and stakeholder mapping** to create a list of relevant companies and organizations;
2. **Fieldwork** to interview priority companies and organizations; and
3. **Validation workshop** to refine and finalize the initial findings and partnership concepts from the Partnership Appraisal and CDT Gap Assessment and secure commitments from relevant ministries.

USAID Oceans' Partnership Appraisals focus on the identification of key stakeholders to participate in eCDT system design and testing, and as such engaged the following key stakeholder groups:

- **Governmental agencies** involved in the seafood supply chain, including fisheries, rural development, trade and industry, customs, and coast guard agencies to facilitate interoperability between current and existing systems and validation processes;

- **Industry stakeholders** with interests in exporting to the EU and US markets, including fishermen, vessel owners, processing companies, buyers, exporters, and industry associations;

- **Information and communication technology companies**, such as mobile and satellite telecommunication service providers, smart devices suppliers, and data analytics services, to provide the technical foundation for digital data collection and validation; and

- **Conservation and non-profit organizations**, including NGOs and international aid agencies, who are already involved in fisheries management and transparency programs, to build on their connection and valuable experience in engaging diverse stakeholders around traceability.

Following eCDT system design, development, implementation, and testing, USAID Oceans encourages its partners to scale eCDT systems at a national level—and beyond. As such, in consideration of longer term goals to bring eCDT systems to scale, strategic approaches need to be developed to both extend the number of stakeholders involved with the eCDT system and to develop new engagement opportunities. As such, USAID Oceans' held discussions with Appraisal participants to develop a strategy for:

- **Engaging additional associated stakeholders related to the seafood industry**, such as financial institutions and insurance companies, who can provide the significant incentives for an eCDT system implementation and scale;

- **Developing specific incentives for companies using the eCDT system with specific rewards** (i.e., easier licensing and certificate approval and renewal, subsidies for small scale, etc.) to ensure industry commitments and embed eCDT system in their day-to-day process; and

- **Developing a marketing strategy** in concert with other departments and industry associations to promote the eCDT systems in terms of seafood industry competitiveness, product quality, and safety that could create new market opportunities.

1.3 Organization of the Report

This report presents USAID Oceans' Partnership Appraisals findings through four key sections: (i) an introduction to the country's partnership with USAID Oceans; (ii) background on Malaysia's fisheries sector and context for the partnership appraisal; (iii) appraisal findings; and (iv) partnership recommendations. Partnership Appraisal studies were done in parallel with CDT Gap Analyses, which can be accessed online at www.seafdec-oceanspartnership.org/resources.

2. MALAYSIA PARTNERSHIP APPRAISAL FINDINGS

USAID Oceans worked closely the Malaysia Department of Fisheries (DOF) to assess the readiness of Malaysia's tuna fisheries for eCDT through a CDT Gap Analysis and completed this corresponding Partnership Appraisal to identify potential partnership opportunities to support eCDT system design and implementation. The following section presents Partnership Appraisal findings and recommendations. Findings from the CDT Gap Analysis can be found online at www.seafdec-oceanspartnership.org/resource/malaysia-cdt-gap-analysis-and-partnership-appraisal/.

2.1   Introduction

Under their partnership with USAID Oceans, the Malaysia DOF expressed interest in collaborating to assess its current CDT system implementation, develop a road map for implementing an eCDT system that will support the country's compliance with international market requirements, and identify strategic partnerships to support system design and implementation.

USAID Oceans completed its Malaysia Partnership Appraisal from February to November 2018, engaging over 60 stakeholders from government, civil society, and industry. From February to April, and October to November 2018, USAID Oceans visited Malaysia to conduct research for the CDT Gap Analysis and Partnership Appraisal. Under this study USAID Oceans conducted 60 interviews with industry associations, fisheries, processors, government, and port authorities to understand the specificities of the local context and gather key information and feedback on their interest/capacities to develop and implement an eCDT system. To validate and finalize the team's findings, in October 2018, USAID Oceans and DOF Malaysia organized a stakeholder validation workshop in Malaysia to consult with relevant stakeholders, refine key findings, and provide concrete input for the final assessment.

2.2   Country Context

As of 2016, the DOF estimated the value of Malaysia's capture fisheries at 10.2 billion Malaysian Ringgits (RM), or USD 2.6 billion. This includes fishing activities representing 132,305 fishermen and 53,190 vessels landing close to 1.6 million metric tons of fish. Trawlers and purse seiners contribute to 75% of all capture fishing efforts in the country, with the remaining 15% from traditional fishing methods. According to the DOF, tuna represents merely 5% of the total marine catch in Malaysian waters, highlighting a multi-species industry.[1] The Malacca Straits and the South China Sea are the two main fishing grounds contributing to the sector, with the remainder emanating from the Sulu and Sulawesi region, east of Sabah, Borneo.

Over the last decade, the GDP contribution of Malaysia's fisheries sector has largely stayed within the 1-2% range[2], largely owing to the nation being a net importer of fish, both from a capture fisheries and aquaculture standpoint. The sector is consistently cited as a good source of foreign exchange; however, it continues to be challenged in terms of keeping up with the growing demand for seafood in-country. Per capita consumption of fish continues to rise with growing population trends and increasing affluence. This is further compounded by a significant amount of high-value fish species such as shrimp and tuna being exported—this shortfall traditionally being addressed through the import of cheaper fish from neighboring countries like India and China.

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[1] DOF (2014). Malaysia National Report to the Scientific Committee of the Indian Ocean Tuna Commission for 2014
[2] FAO (2008). Contributions of fisheries and aquaculture in the Asia and the Pacific Region

Based on FAO Reports[3], Malaysia's import-export regime for its fisheries sector could be described as diverse, and unlike its neighbors in the region, not necessarily catered to the EU market. What this regime indicates, however, is Malaysia's significant dependence on several Asian countries for its seafood supply—trading partners which may or may not have robust control mechanisms for catch documentation—potentially affecting Malaysia's competitiveness and compliance to regulations set or soon to be set by its top export destinations. This includes the US and Korea, which has received special mention from DOF. From a trade perspective, eCDT therefore becomes relevant as it facilitates a smoother flow of traceable seafood from its importing partners to its export destinations.

2.3   Appraisal Findings

Partnership Appraisal research provided an opportunity to test private sector interest and potential engagement in eCDT initiatives to identify opportunities for high-value partnerships in Kelantan, a site identified in 2016 as a site of interest for eCDT piloting. Kelantan was identified as an area of interest following program consultations with the Malaysia DOF, local stakeholders, and program partner, SEAFDEC in 2016, wherein, Kelantan's intraregional trade relationship with Thailand was identified as a key benefit of the site over other locations—among others.

Through the Partnership Appraisal, USAID Oceans interviewed a number of companies from the capture, processing, and export industries. Several key themes emerged from those interviews, as follows.

2.3.1   Industry

Assessment interactions with the private sector indicated that industry expects government to lead partnerships with them to help navigate their participation in a CDT system and, eventually, a robust eCDT system. The prospect of implementing a fully digitized system was a cause of some excitement among some companies interviewed as it gave them the impression that something similar to the very popular dagang.net could be developed for fisheries catch documentation and could also complement their internal efforts to improve operations and IT processes. The Malaysian government is encouraged to take advantage of this window of opportunity to channel industry's enthusiasm for partnerships towards a streamlined government approach to eCDT. Partnership recommendations are included in Section 3.4.

Opportunities

As noted previously, industry generally seemed very willing to support government programs for eCDT and has already been supportive to related programs, such as ongoing compliance to the e-licensing program. In the example of Kelantan, DOF shared that it is now embarking on a technology pilot to embed QR codes onto 10 vessels operating in the C2 zones to facilitate easier validation and inspection of landing documents. This coincides with 20 other vessels DOF is piloting with the technology for Pahang and Johor. In this case, the boat owners of these pilot vessels have been very supportive and willing to participate in the said pilot, partially to show good faith to DOF, but also to "pioneer" new ways of doing CDT. Industry members expressed interest in a more streamlined CDT system, with one particular exporter sharing her hope that one day a true "one-stop-shop" for fisheries related requirements can be realized so as to reduce the time expended in filling up forms, hiring agents, and to reduce the current number of individual systems. Nevertheless, channeling industry willingness towards a streamlined approach to CDT within government is a complex and ongoing process.

During its field visits, the assessment team noted how private jetties in adjacent areas to the port serve a very particular purpose for commercial fishing vessels, its crew, and the broader supply chain. It was revealed by

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[3] FAO (2007). Fishery and Aquaculture Country Profiles.

DOF that over 222 registered private jetties operate across Malaysia under government oversight. These continue to grow as a result of the demand for serviced docking areas able to cater to vessels which have completed activities on government ports, and for vessels needing to conduct restocking, repairs, or provide resting facilities for its crew in anticipation of their next fishing expeditions. The latter is particularly important as these jetties serve as pseudo-halfway homes for foreign crew (e.g. usually of Vietnamese or Thai origins for Kelantan), overseeing their welfare while they are still employed as foreign crew under Malaysian vessels. At least for the jetty visited in Kelantan, which at the time was servicing close to 100 vessels, there were provisions for sleeping quarters. That said, and mindful therefore of their diverse role along the supply chain, jetties can conversely be positioned as hubs for capacitating and engaging vessels around eCDT, complementing government efforts. While such an arrangement should be explored further, the Kelantan site visit raised the possibility of having jetty owners and operators provide guidance and trainings on compliance to eCDT, hosting a "help desk" manned by a relevant government representative to address queries on eCDT and assist foreign workers, or for government to leverage these jetties as an opportunity to cluster specific vessels and address their needs and concerns around CDT and beyond.

USAID Oceans' team also noted the role of small-scale fisheries in the potential eCDT system and observed how they can be harnessed to support implementation. At least during the site visit to Kelantan, while there are established community-based fisheries organizations present supervised under the myKP program, it is very unclear as to how these connect to commercial operations so much more to export activities, if at all. The closest documentation government has on such activities may be found in the e-declarations that are voluntary supplied by small scale fishers to the Malaysian Fisheries Development Authorities (LKIM) if they wish to avail of cash incentives. But beyond this, it is not clear as to how supply flows out of this segment and intermingles with its commercial counterparts—a phenomenon that is not unusual to Southeast Asian capture fisheries. In terms of technologies, mobile phones are widely used, as well as CB radios to correspond between the community-based fisheries organizations and the local government. The strong organizational capacity of these groups, complemented by a solid experience of harnessing basic technologies, can be easily harnessed for capturing basic information around supply flows from the small scale/informal markets to the large-scale/formal markets relevant to CDT. Additionally, such information can be treated as input towards designing more comprehensive and inclusive fisheries management policies that can form part of an eCDT scheme.

Challenges

Many of the companies interviewed relayed that the concept of CDT is still largely "foreign" to them. The only exposure these companies have had with eCDT, according to them, has been largely limited to the e-license program under DOF; the upkeep of automatic identification systems (AIS) or VMS for commercial vessels; manual but very basic traceability efforts such as stock tracking as required by their buyers for the processing sector; and the completion of export and import permits through MAQIS-operated dagang.net. It is worth noting that companies interviewed consistently emphasized that eCDT, beyond those examples mentioned, has so far only been relevant to "big companies that export tuna to the EU"—which at least for Kelantan and the majority of other fish ports in Malaysia is not a major market. When asked whether or not they see value in digitizing their CDT to improve the way these companies transact with government, there was a sense of openness that was tempered with questions on cost implications and the availability of internet connectivity. Some companies responded to the same question by saying this is something they have "outsourced to third party agents already," highlight their perception that digitization will only have a limited impact on them.

Additionally, during an interview with a processing company in Kelantan who supplies fish (e.g. re-packed mackerel from India) to a chain of local hospitals, it noted that in the event of a possible food safety incident within its supply, their manual traceability efforts would likely not be able to trace the stock in question to facilitate a recall. While alarming, this is somewhat representative of the "minimum compliance" attitude that several companies interviewed exhibited, highlighting the need to demonstrate a clear business case and value add of eCDT for companies that goes beyond compliance to basic requirements.

Over the course of the field visits, it was apparent that agencies like MAQIS and the Malaysian Fisheries Development Authorities (LKIM) provide exemplary guidance to companies on managing the requirements stipulated under the law and regulations on port entry and landings. This was validated through some conversations with the commercial fishing companies, processing companies and private jetty owners. However, when asked about the prospect of engaging said companies to implement eCDT with DOF, LKIM and MAQIS, the key infrastructure issue was raised: internet and mobile phone connectivity.

This may largely have to do with the question of who shoulders the cost of such connections, which DOF presumes should be covered by companies if eCDT system become a requirement. Additionally, as DOF had previously already commissioned an IT firm to develop an online Catch Certification Module for exporters to the EU, it was revealed by both DOF and the IT firm that the project has been shelved due to infrastructure issues such as poor internet connectivity along selected pilot ports as well as the lack of demand for such a service due to low export volumes to the EU.

Due to the seafood supply chain's numerous transactional requirements, many companies hire third party agents. In some cases, these agents have official accounts within the aforementioned technology platforms to transact on behalf of their client companies. This dependency on agents is particularly salient for processors with the intent of exporting, where in the agents complete requirements and manage the company's relationship with government on the company's behalf. This presents both a challenge and opportunity for government to work with both companies and third-party agents to develop a responsive eCDT system as a means to optimize the transaction process while meaningfully engaging and learning from industry towards improved compliance that provides value for businesses.

A recurring item of discussion during both visits to Kuala Lumpur and Kelantan was how Thailand significantly influences market decisions within Malaysia's seafood supply chain, likely due to ongoing trade relations, proximity, and access via land. It was shared to the assessment team by a number of operators and processors that almost all of its processed neritic tuna and mackerel are exported to Thailand. In Kelantan, there is a well-known Thai company that was mentioned as the exclusive buyer of a specific species of catch. During discussions with stakeholders in Kuala Lumpur, they shared that for a majority of ports in Malaysia, raw catch is immediately sold to Thai buyers with very minimal processing, if at all, in Malaysia due to pre-arranged transactions that would have Thailand serve as the processor and packager of the finished product. This is somewhat challenging for both government and industry who wish to capture more of this value before the supply is shipped out of Malaysia.

2.3.2   Information and Communication Technology Providers

USAID Oceans believes that by harnessing the electronic ASEAN Catch Documentation Scheme (eACDS), the Government of Malaysia will be able to jump start the country's eCDT efforts. The eACDS can serve as a "plug-and-play" system eCDT system which provides a learning tool or platform that can help capacitate government stakeholders on CDT as well as build a business case for both government and industry to consider around the role an eCDT system can play in facilitating more efficient transactions between

government and industry and improving trade with the ASEAN more generally. Adopting the eACDS also presents a relatively low-cost investment on the part of Malaysia as the back-end and front-end support for the eACDS is already in place with a simultaneous live case study in Brunei to learn from. Having the eACDS as the baseline for Malaysia's eCDT system will facilitate seamlessly data exchange with other countries in ASEAN that are increasingly starting to request Catch Certificates for any fish imported from other ASEAN Member States. To maximize its value for Malaysia's journey towards an eCDT system, the eACDS can also be positioned as the initial platform that is piloted in a representative port, where in this case, the eACDS would be "de-risking" Malaysia's future investment into the sector by explicitly addressing the unknowns inherent to such an intervention, testing various approaches, and validating market interest within a live environment, all the while limiting government exposure to financial and political risk.

The DOF can take advantage of USAID Oceans' ongoing efforts by deploying technologies currently being supported by the program. USAID Oceans' on-going relationships with various technology providers can help to accelerate eCDT implementation in Malaysia. The list of USAID Oceans-supported Technology Solutions can be found online at www.seafdec-oceanspartnership.org/traceability-tools/.

2.3.3   Labor and Welfare

As previously mentioned, this assessment had limited exposure to labor and welfare issues except to observe that a majority of purse seine vessels employ Thai nationals, and trawlers Vietnamese nationals. During the visit to the private jetty, Thai workers could be seen doing recreational activities in the port area as they waited for their next departure. The owner of the jetty mentioned that Malaysian vessel owners have been generally good when it comes to complying with government rules on the hiring and treatment of foreign workers. He also shared that nearby shops within the port area allow foreign workers to purchase basic necessities, without necessarily violating the limitations of their work visas.

3.   PARTNERSHIP RECOMMENDATIONS

This section presents possible pathways for consideration by the Government of Malaysia, as well as its partners, to "bridge the gap" in terms of establishing an eCDT system in the country

3.1   Form partnerships to develop an eCDT system roadmap

USAID Oceans recommends an intra-government collaboration/partnership to develop an eCDT system study paper and "roadmap" for Malaysia, led by MOA-DOF, with the support of The Malaysian Administrative Modernization and Management Planning Unit (MAMPU), to establish clear technical and operational steps towards consolidating the various relevant electronic platforms and initiatives within government. It should also outline the requirements, ownership, and roles and responsibilities of government and industry associated with the system, as well as possible technology partnerships. In the immediate/near-term, to unlock resources and technical expertise of MAMPU, it is recommended that DOF kick-off a process within its IT Committee to submit a motion to the MOA for the DOF to develop a joint study paper with MAMPU to outline the proposed scope, functions, features, and architecture for the proposed eCDT system. Additional details on the recommended study paper, including a proposed outline can be found in the Malaysia CDT Gap Analysis report.

3.2   Develop public-private partnerships to pilot eACDS

While developing the study paper referenced in Section 2.4.1, both DOF and MAMPU can also consider scoping and formalizing public-private partnerships (PPPs) with potential technology partners who may be willing to provide resources in-kind that align with the government's objectives. Such resources could include, for example, the provision of free or lower cost bandwidth for small-scale fisherfolk wishing to use eCDT system, incentive schemes for airtime/SMS credit for pilot participants, or the government entering into an arrangement with telecommunication firms to support data exchange and transfer under eCDT, particularly for last-mile or remote areas.

To ensure industry uptake of the eACDS pilot, USAID Oceans recommends setting up a PPP between DOF or LKIM and industry players such as large commercial operators with vertically integrated or non-vertically integrated operations. This PPP could establish a safe test environment for government and industry to trial different eCDT approaches, with industry providing regular input and offering their fleets and supply chains as case-studies. Private jetties can also be considered as potential partners. USAID Oceans can help provide advice and broker this PPP by presenting use-cases, live demonstrations among other learning sites, pathways for implementation, visibility on possible technology providers and solutions, policy innovations and ultimately lessons learned and best practices.

3.3   Develop partnership platform to support eCDT and fisheries management

In the medium term, as Malaysia strives to make its seafood supply chain 100% traceable through an eCDT system, the massive amounts of data and information collected under this initiative should be harnessed towards improving fisheries management, including for instance ramping up efforts to introduce tailored policies at a Fisheries Management Area (FMA) level. Such an ambitious program would certainly represent market leadership on the part of Malaysia and could easily be packaged to the country's advantage as such trailblazing is sorely needed within the ASEAN seafood sector and is in high demand within the global investment spaces. Similar to the US, a "trusted trader program" could be set up under regulation that incentivizes industry to participate in eCDT system (beyond just mere compliance), where upon demonstration by an operator of a good record of compliance, government can streamline or "fast-track" transactions for such operators or provide other value-added services (such as eligibility to global market linkage programs). Such a program could be designed and communicated as a direct invitation for industry to partner with government on eCDT.

APPENDIX 1: MALAYSIA STAKEHOLDER MAPPING – KEY GOVERNMENT AGENCIES

Regulatory Theme	Responsible Agencies
Combatting IUU / Enforcement	Malaysian Maritime Enforcement Agency (MMEA) Department of Fisheries Malaysia (DOF) Marine Police, Royal Malaysia Police (RMP)
CDT / Industry Engagement	Department of Fisheries Malaysia (DOF) Malaysian Fisheries Development Authorities (LKIM) Malaysian Quarantine and Inspection Services (MAQIS) Ministry of Health Malaysia (MOH) Royal Malaysian Customs Department (RMC) Marine Department Malaysia
EAFM / Fisheries Management Planning	Department of Fisheries Malaysia (DOF)
Fisheries Information Systems	Department of Fisheries Malaysia (DOF) Malaysian Fisheries Development Authorities (LKIM) Marine Police, Royal Malaysia Police (RMP) Malaysian Maritime Enforcement Agency (MMEA) Royal Malaysian Customs Department (RMC)
Social Welfare	Department of Fisheries Malaysia (DOF) Malaysian Fisheries Development Authorities (LKIM)
Gender	Ministry of Women Family and Community Development
Labor	Ministry of Human Resources