

Dissecting the Traceability of Fish and Fishery Products in Southeast Asia: strengths, weaknesses, and needs

JTF 6-2 Pillar I.
Strengthening the promotion
of sustainable fisheries
in Southeast Asia

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Seafood traceability is the ability to fully trace a product from the point of sale back to its point of origin. This is required to follow general food law, fisheries control, and fish marketing. As part of the recent reform of the EU Common Fisheries Policy, the requirement to provide the consumer with information on the production of fisheries and aquaculture products was reviewed and extended under a new Common Organization of the Markets Regulation (EU) No 1379/2013 (CMO). This requires additional information that was previously provided to be made available to the consumers and extended to include mass caterers. It generally applies to unprocessed fishery products only and came into force in 2014. Meanwhile, the EU Fisheries Control Regulation (EC) 1224/2009 requires the traceability and availability of production information on unprocessed fishery and aquaculture products throughout the supply chain. This has been amended to account for the additional catch information required. The control regulation only applies to fishery and aquaculture products from EU waters and landed in the EU. Although not included within the scope of this guidance, control measures are also applied to imports from non-EU countries under Regulation (EC) 1005/2008 establishing a community system to prevent, deter, and eliminate IUU fishing, also known as the EU IUU Regulation, which comes with the respective implementing regulations and other legislative tools. The EU IUU Regulation includes a provision on the need for importing countries to develop their respective catch documentation schemes (CDSs) building upon the primary responsibility of the flag States to prevent, deter, and eliminate IUU fishing, and constituting a valuable supplement to port State and other measures.

A traceability system is one of the most recent trade requirements being put into force in response to the pressing needs expressed by the markets to ensure that fish and fishery products in the supply chain are not derived from IUU fishing activities. It is also being used to facilitate the tracking of the flow of products through the production processes or the supply chain to ensure that these are safe for human consumption. A traceability system requires that fisheries companies record the source, volume, form, and certificate numbers of all products received under a CDS. The same type of records must be kept by operators for all products leaving a company, whether these are meant for international export or as business-to-business transfer/sale of products within the national supply chain. Therefore, a trace is created that indicates the complete information of a batch of products flowing through the supply chain, which could be accessed by authorities for inspection purposes, if necessary. Specifically, the benefits of traceability systems could be seen from three main aspects, *i.e.* ensuring food safety, promoting better process controls, and securing better market niches.

Seafood traceability: global level

The Food and Agriculture Organization of the United Nations (FAO) supports and assists in the adoption of business practices among the large array of trading partners, from the farmer or grower to internationally sourced suppliers to effectively manage traceability for the food industry. By drawing on demonstrated best practices, FAO also supports

competent and national authorities to develop, review, and implement effective national food recall systems as a key management tool to prepare for and respond to food safety events or emergencies.

In 2016, design options for the development of tuna catch documentation schemes were developed as a management and monitoring, control, and surveillance tool in tuna fisheries. The aim was to achieve responsible, efficient, and sustainable tuna production and biodiversity conservation in the areas beyond national jurisdiction focusing on three thematic areas, namely; improving management, combatting IUU fishing, and protecting biodiversity.

The Voluntary Guidelines for Catch Documentation Schemes (VGCDS) were developed in 2017 (Figure 1), which include the CDSs for wild fish caught from marine or inland areas for commercial purposes, whether processed or not. The VGCDS had been developed recognizing the relevant international laws and other international instruments, e.g. the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU). The VGCDS, therefore, aimed to provide assistance to States, regional fisheries management organizations, regional economic integration organizations, and other intergovernmental organizations, in their efforts to develop and implement new CDSs or harmonize or review the existing CDSs.

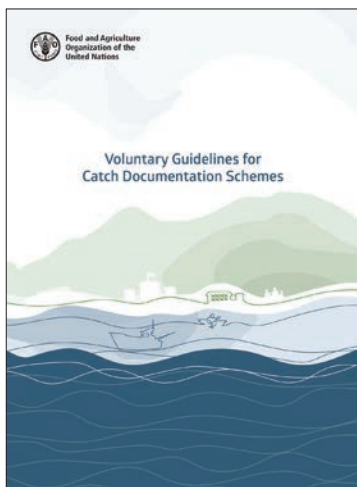


Figure 1. Voluntary Guidelines for Catch Documentation Schemes (VGCDS)

In 2022, “The Guidance Document: Advancing end-to-end traceability: Critical tracking events and key data elements along capture fisheries and aquaculture value chain” was developed in response to a need for consensus towards establishing end-to-end traceability through a globally agreed and standardized understanding of the critical tracking events (CTEs) along the fish value chain, as well as sources of key data elements (KDEs) related to fish production and product identification. In particular, the Guidance aimed at developing insights and addressing gaps in developing and implementing traceability systems for both the private sector and government.

Seafood traceability: regional level

In the Southeast Asian region, the ASEAN-SEAFDEC Member Countries recognized the need to foster cooperation among the countries as well as with international and regional organizations to combat IUU fishing. Resolution No. 20 of the Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030 (RES&POA-2030) (Figure 2) stipulated “Support the competitiveness of the ASEAN fish trade through the development of procedures and programs that would certify, validate, or otherwise indicate the origin of fish and fishery products to improve product traceability, sustainable fishing practices, and food safety, in accordance with international and national requirements.” Moreover, the RES&POA-2030 also specified in Plan of Action No. 30 “Mobilize regional/sub-regional collaboration frameworks and tools for combating IUU fishing, e.g. Regional Plan of Action to Promote Responsible Fishing Practices including Combating Illegal, Unreported and Unregulated Fishing (RPOA-IUU); ASEAN Regional Plan of Action for the Management of Fishing Capacity (RPOA-Capacity); Regional Fishing Vessels Record (RFVR); ASEAN Catch Documentation Scheme (ACDS), and the use of technologies to support monitoring and surveillance of fishing activities, e.g. Vessel Monitoring System (VMS), traceability systems.”

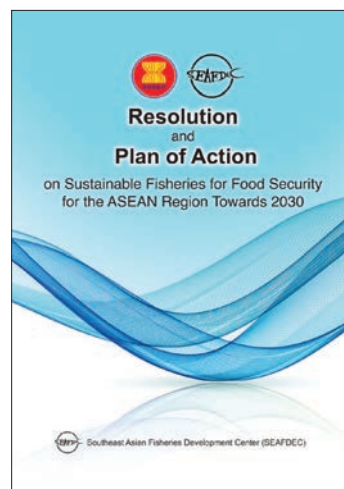


Figure 2. Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030

To fulfill the relevant provisions of the RES&POA-2030, SEAFDEC has been implementing various activities to combat IUU fishing in the region. In 2015, the SEAFDEC Marine Fishery Resources Development and Management Department (MFRDMD) published the “ASEAN Guidelines for Preventing the Entry of Fish and Fishery Products from IUU Fishing Activities into the Supply Chain” (Figure 3) which applies to all marine and inland catch of small-scale, artisanal, and large-scale and commercial fisheries. The ASEAN Guidelines are intended to provide tools for the ASEAN Member States (AMSs) to ensure that fish and fishery products from the region entering the global supply chain do

not come from IUU fishing activities. Thus, these Guidelines aim to enhance the credibility of the region's fish and fishery products. The objectives of the Guidelines are to 1) introduce the strategies and recommend appropriate measures for the AMSs to prevent the entry of IUU fish and fishery products into the supply chain; 2) provide guidance for the AMSs to develop, strengthen, and implement effective fisheries management for responsible and sustainable fisheries; and 3) promote regional collaboration among the AMSs in strengthening monitoring, control and surveillance systems of fish and fishery products entering in the supply chain.

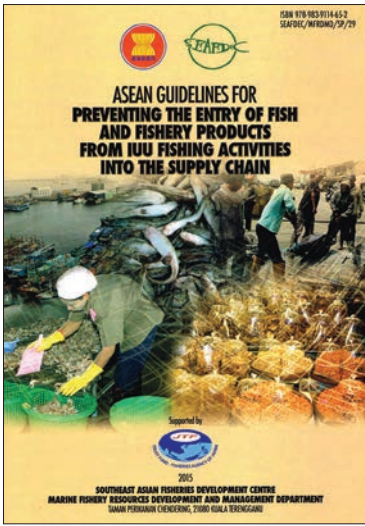


Figure 3. ASEAN Guidelines for Preventing the Entry of Fish and Fishery Products from IUU Fishing Activities into the Supply Chain

In support of the implementation of the ASEAN Guidelines by the AMSs, SEAFDEC developed the ASEAN Catch Documentation Scheme (ACDS) in 2017 (Figure 4) which is a common regional catch documentation scheme taking

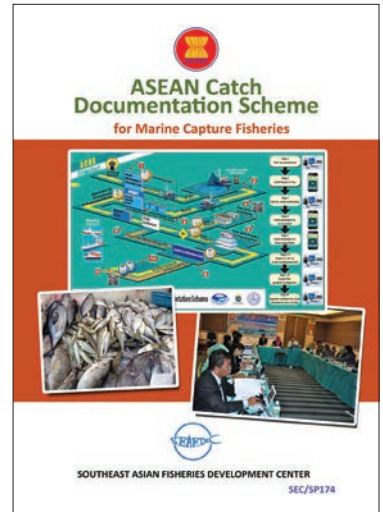


Figure 4. ASEAN Catch Documentation Scheme (ACDS)

into consideration the format, standards, and information requirements for importing countries but simplified to enhance its applicability by the small-scale fisheries in the region. The objectives of the ACDS are to 1) provide a unified framework that will enhance the traceability of fish and fishery products for effective marine fisheries management in the AMSs; 2) enhance the credibility of fish and fishery products for intra-regional and international trade; and 3) prevent the entry of fish and fishery products from IUU fishing activities into the supply chain of AMSs. Upon the adoption of the ACDS, the electronic format of the ACDS (eACDS) was developed and launched by the SEAFDEC Training Department (TD) in 2017 with the main objective of simplifying the processes of the ACDS to ease the burden of the stakeholders. The trial of the eACDS application as a prototype for traceability of fish and fishery products is being carried out in Brunei Darussalam, Cambodia, Malaysia, Myanmar, and Viet Nam (Figure 5).

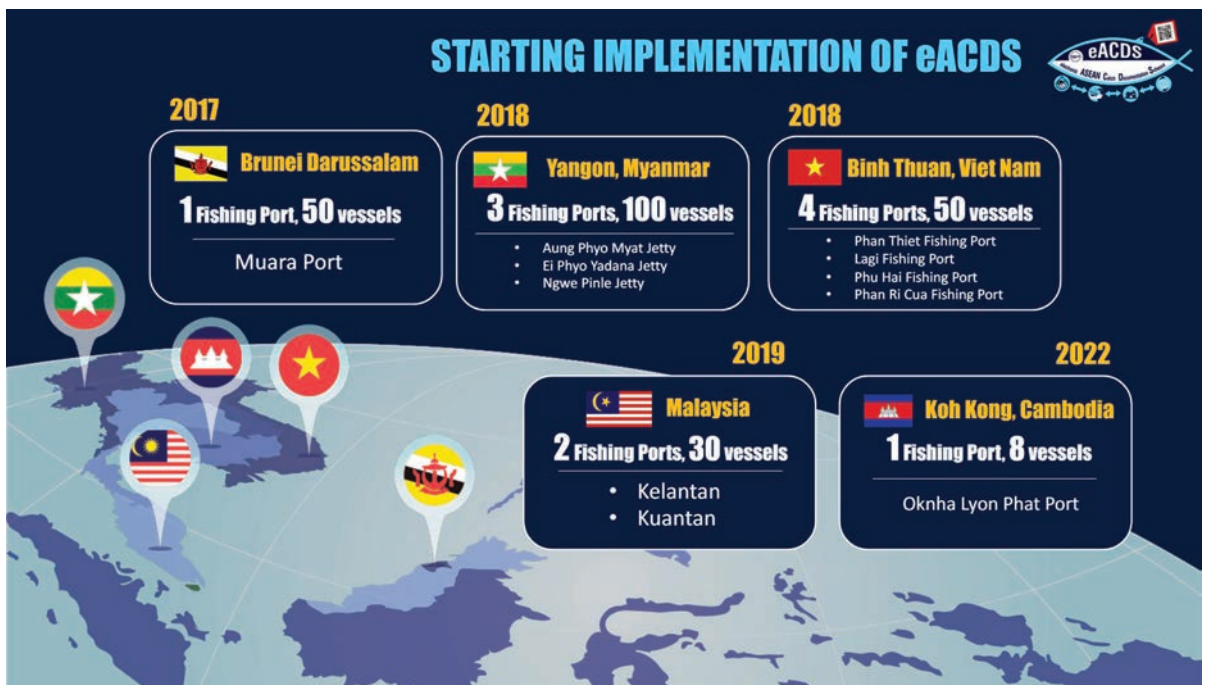


Figure 5. Trial of eACDS application in Brunei Darussalam, Cambodia, Malaysia, Myanmar, and Viet Nam

In terms of seafood safety and quality, the SEAFDEC Marine Fisheries Research Department (MFRD) implemented the project “Traceability Systems for Aquaculture Products in the ASEAN Region” from 2010 to 2014 with support from the Japanese Trust Fund. The aim of the Project was to enhance the competitiveness of the region’s aquaculture products by implementing a traceability system in the aquaculture production and supply chain. Throughout its duration, the Project was able to collate and compile information that was used as inputs to the “Technical Compilation on Traceability Systems for Aquaculture Products in the ASEAN Region” and the “Regional Guidelines on Traceability Systems for Aquaculture Products in Southeast Asia” which were published in 2016 (Figure 6).

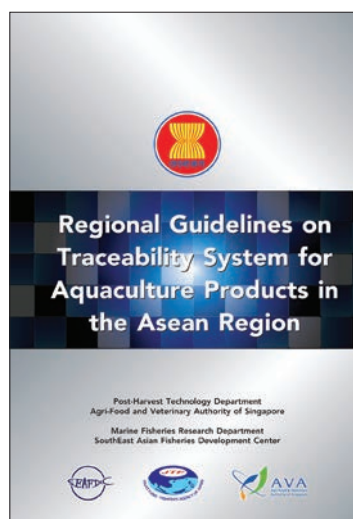


Figure 6. Regional Guidelines on Traceability Systems for Aquaculture Products in Southeast Asia

Seafood traceability: national level

The information on the existing catch documentation schemes of the respective AMSs (Box) was obtained during the “Regional Workshop to Exchange Information on Catch Documentation Scheme and Traceability of Fish and Fisheries Products” which was organized by SEAFDEC/TD in 2022 under the project “Strengthening Regional Cooperation and

Enhancing National Capacities to Eliminate IUU Fishing in Southeast Asia” supported by the Japanese Trust Fund.

In terms of strength in implementing traceability schemes among the AMSs, 90 percent of them possess the legal frameworks and regulations that support the activities of

Box. Catch documentation schemes in the ASEAN Member States as of 2023

Brunei Darussalam

- In 2017, the eACDS application was implemented with technical support from SEAFDEC, and stakeholders, especially fishing vessel and fish processing plant operators were trained
- Through the eACDS application, only up to Catch Documentation (CD) and Movement Documentation (MD) were carried out as most of the importing countries do not require Catch Certificate (CC)
- All fish processing plants are required to implement a food safety program prior to exporting fish and fishery products such as compliance with the Manual of Brunei Darussalam on Hygiene Requirements for Fish Processing Establishments where processing plants should perform record-keeping as one of the requirements

Cambodia

- In 2022, the eACDS application was implemented with technical support from SEAFDEC/TD and trained the Fisheries Administrative (FIA) officers on the use of the eACDS application in the part of Catch Declaration (CD)
- Fishers requested FIA to provide them with smartphones to utilize the eACDS-Catch Report application; but due to budgetary constraints, the implementation of the eACDS program remains stalled

Indonesia

- For capture fisheries, traceability is implemented through a catch certification scheme
- For aquaculture, the implementation of traceability is still carried out by paper-based method
- Middlepersons and fish processors are implementing their internal traceability system
- Minister Regulation No. 10 Year 2021 on standards for business activities and products in implementing risk-based business licensing marine and fisheries sector
- The Regulation and application of Sistem Ketertelusuran dan Logistik Ikan Nasional (STELINA) or National Fish Logistics and Traceability System still needs further development and stakeholders consultation

Lao PDR

- Currently, no activities on traceability for fish and fishery products are being conducted

Malaysia

- Under Regulation 14(A), Fisheries (Maritime) (Licensing of Local Fishing Vessel) Regulation 1985, a Catch Certificate is issued after consideration of DG Director General of Department of Fisheries with all declarations
- The Act on Ensuring the Proper Domestic Distribution and Importation of Specified Aquatic Animals and Plants established traceability for all fish and fishery products for EU and Japanese markets
- The use of a logbook is required for all fishing vessels operating in the deep sea and high seas
- The eACDS application was transferred to the Malaysia server and on the trial process with technical support from SEAFDEC/TD including training on the use of the eACDS application organized by DOF, Malaysia in 2023

Box. Catch documentation schemes in the ASEAN Member States as of 2023 (Cont'd)

Myanmar

- The activities of traceability of fish and fisheries products have been implemented such as Catch Document (CD), Product Movement Document (PMD) to transport the fish and fisheries products to processing plants and local and international markets, and issuing of Catch Certificate (CC) for exporting fisheries products to foreign countries
- In 2018, the eACDS application was implemented with technical support from SEAFDEC including the training for fisheries officers on the use of eACDS application through installation to the server. The trial of eACDS application as a prototype for the traceability of fish and fisheries products has been implemented.
- The MOU with the Department of Fisheries of Thailand stipulates the acceptance of fish and fishery products from Myanmar based on the PMD issued by the Department of Fisheries of Myanmar

Philippines

- The BFAR Administrative Circular No. 251 and Fisheries Administrative Order No. 238 authorizes BFAR to deploy fish inspectors/validators to inspect and monitor the landing and unloading of fishery products from catching to exporting

Singapore

- Licenses are issued to traders who trade in fish and fishery products, while a permit must accompany every import and export of such products. In applying for a permit, traders are required to utilize prescribed product codes that would facilitate traceability of the fish and fishery products
- Fishery products of higher risk *e.g.* oysters will need to be accompanied by relevant documents that demonstrate their food safety such as a health certificate
- In addition, for importing and exporting countries participating in CDS for specific species of fish and fishery products, Singapore will require valid documents to be submitted

Thailand

- Established comprehensive traceability systems covering the whole supply chain to combat IUU fishing, in line with international standards
- The electronic traceability systems, namely: “Thai Flagged Catch Certification System (TFCS)” and “PSM Linked and Processing Statement System (PPS)” enable the stakeholders to trace fish caught by Thai flagged vessels and imported fish, respectively

Viet Nam

- Completed legal framework relevant to the traceability of fish and fishery products
- SEAFDEC/TD implemented the pilot project eACDS on traceability of fish and fishery products in 2018
- Developed the electronic catch documentation and traceability (eCDT) for traceability of fish and fishery products in 2024

traceability for fish and fishery products. Moreover, the current system of 80 percent of the AMSs provides and implements traceability of fish and fishery products. Other strengths of the AMSs include the provision of capacity building for the implementation of traceability schemes in commercial and/or small-scale fisheries and cooperation among government agencies, other countries, and RFMOs is enhanced (Figure 7A).

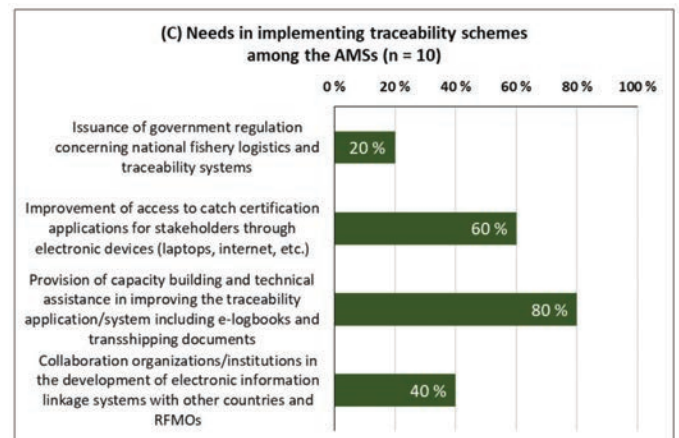
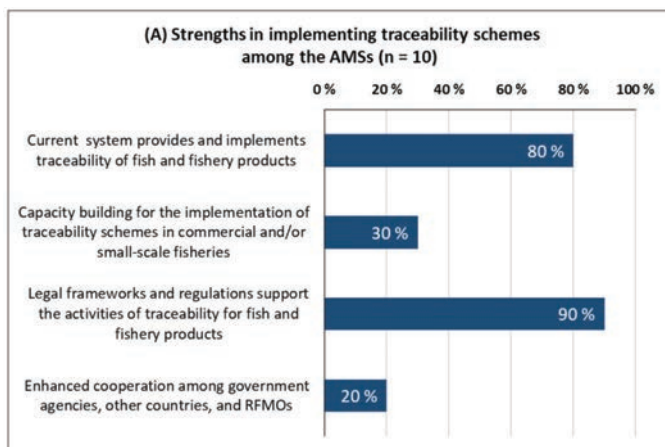
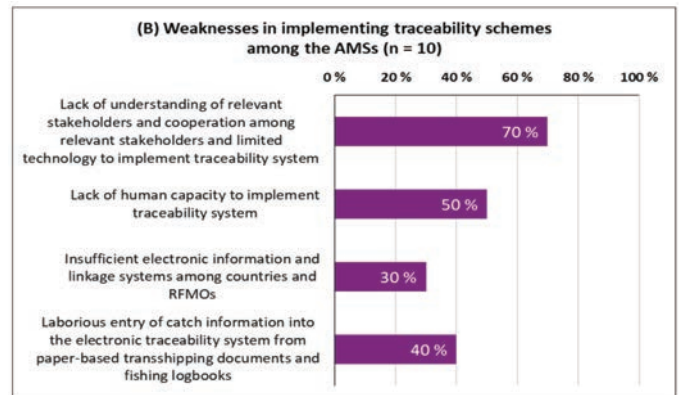


Figure 7. Implementation of traceability schemes among the 10 ASEAN Member States (A: strengths, B: weaknesses, and C: needs)

However, 70 percent of the AMSs lack an understanding of relevant stakeholders and cooperation among relevant stakeholders and have limited technology to implement a traceability system, while half of the AMSs lack of human capacity to implement a traceability system. Besides, the AMSs also have insufficient electronic information and linkage systems among countries and RFMOs and the entry of catch information into the electronic traceability system from paper-based transshipping documents and fishing logbooks is laborious (Figure 7B).

In order to effectively implement traceability schemes, 80 percent of the AMSs need the provision of capacity building and technical assistance in improving the traceability application/system including e-logbooks and transshipping



documents. Other needs of the AMSs include the issuance of government regulation concerning national fishery logistics and traceability systems, improvement of access to catch certification applications for stakeholders through electronic devices (laptops, internet, etc.), and collaboration organizations/institutions in the development of electronic information linkage systems with other countries and RFMOs (Figure 7C).

Way Forward

The Regional Workshop to Exchange Information and Catch Documentation Scheme and Traceability of Fish and Fishery Products organized by SEAFDEC/TD in 2022 came up with the way forward for the traceability of fish and fishery at the national and regional levels as follows:

National level

- The policies on the objectives and type of fish and fishery products that require traceability should first be drawn up; besides, there is also potential to leverage existing CDS that already allow for achieving some of these objectives
- Socialization to gain stakeholder awareness by the national fisheries agency
- Capacity building and concerned stakeholder awareness raising on traceability for fish and fishery products
- National fisheries agency should develop and improve the traceability system through relevant applications
- Integration of existing traceability system with other traceability and relevant systems
- Monitoring and evaluation of the implementation of traceability of fish and fishery products

Regional level

- Promote the implementation of fisheries traceability in the Southeast Asian region
- Promotion of traceability of fish and fishery products to the global market
- Strengthen cooperation and information exchange between Southeast Asian countries, RFMOs, and other market States to encourage/facilitate importing countries on the acceptance of applicable traceability systems

Figure 8. Regional Workshop to Exchange Information and Catch Documentation Scheme and Traceability of Fish and Fisheries Products in 2022, Thailand

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Bibliography

- Abdul Razak, L., Mazalina, A., Masaya, K., Siriraksophon, S., & Chokesanguan B. (2014). *The ASEAN Guidelines for Preventing the Entry of Fish and Fishery Products from IUU Fishing Activities into the Supply Chain*. SEAFDEC Newsletter, 37(4), 8-9.
- Bhaha, F., Vincent, A. & Piedrahita, Y. (2023). *Guidance document: Advancing end-to-end traceability – Critical tracking events and key data elements along capture, fisheries and aquaculture value chains*. Rome, FAO. <https://doi.org/10.4060/cc5484en>
- Bougouss, N. (2018). *FAO Work on Traceability*. International Seminar on Sustainable Seafood Value Chain: Traceability. <https://www.fao.org/3/CA2753EN/ca2753en.pdf>
- Food and Agriculture Organization of the United Nations. (2017). *Voluntary Guidelines for Catch Documentation Scheme*. Rome. 20 pages.
- Food and Agriculture Organization of the United Nations. (n.d.). *Food Safety and Quality*. <https://www.fao.org/food-safety/food-control-systems/supply-chains-and-consumers/traceability-and-recalls/en/>
- Hosch, G. (2016). *Design options for the development of tuna catch documentation schemes*. Food and Agriculture Organization of the United Nations. <https://www.fao.org/3/i5684e/i5684e.pdf>
- Marine Fisheries Research Department, Southeast Asian Fisheries Development Center. (2016) *Regional Guidelines on Traceability System for Aquaculture Products in the Asian Region*. <https://repository.seafdec.org/handle/20.500.12066/1277>
- Mazalina, A., Katoh, M. & Saraphaivanich, K. (2020). Towards Guaranteed Traceability of Fish and Fishery Products from Southeast Asia: the ASEAN Catch Documentation Scheme. *Fish for the People*, 18(3), 13-18. <https://repository.seafdec.org/handle/20.500.12066/6609>
- Mazalina, A., Mahyam, M.I., Katoh, M., Abdul Razak, L., Mohd Tamimi, A.A., Kawamura, H., & Siriraksophon, S. (Editors). (2015). *ASEAN Guidelines for Preventing the Entry of Fish and Fishery Products from IUU Fishing Activities into the Supply Chain*. Kuala Terengganu: SEAFDEC/MFRDMD. <https://repository.seafdec.org.my/handle/20.500.12561/291>
- Saraphaivanich, K., Suthipol, Y., & Imsamrarn, N. (2021). The Development of Traceability Systems for Capture Fisheries in Southeast Asia: the eACDS in focus. *Fish for the People*, 19(3), 11-19
- SEAFDEC. 2020. *Resolution and Plan of Action on Sustainable Fisheries for Food and Security for the ASEAN Region Towards 2030*. Southeast Asian Fisheries Development Center. Bangkok. Thailand. 23 pp.
- SEAFISH. (2016). Traceability and Consumer Information under EU Fisheries Control Measures and Fish Marketing Requirements. 16 pages.
- SEAFISH. (n.d.). Seafood traceability and labelling regulations. <https://www.seafish.org/trade-and-regulation/seafood-traceability-and-labelling-regulations/#:~:text=Seafood%20traceability%20is%20the%20ability,the%20seafood%20clearly%20and%20accurately.>
- Siriraksophon, S., Rukjai, P., Konphet, P. & Imsamrarn, N. (2017). Automating Marine Fisheries Catch Documentation Schemes: the eACDS. *Fish for the People*, 15(3), 49-55. <https://repository.seafdec.org/handle/20.500.12066/1283>
- Training Department, Southeast Asian Fisheries Development Center. (2022). *Report of the Regional Workshop to Exchange Information on Catch Documentation Scheme and Traceability of Fish and Fishery Products*. 111 pages.
- Yeap Soon Eong. (2016). Securing the Niche of ASEAN Fishery Products in the Global Market: Traceability System for ASEAN Aquaculture Products. *Fish for the People*, 14(2), 34-40. <https://repository.seafdec.org/handle/20.500.12066/992>

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