A draft Guide for Facilitating Concurrent Implementation of National and Cross-Border Paperless Trade in Asia and the Pacific

A draft document for discussion at the ad-hoc session of the Standing Committee held online on 23-24 January 2024

For limited distribution

1. Introduction

The Standing Committee of the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific (CPTA), during its second session held in 2023, requested the secretariat to prepare a draft guide on facilitating concurrent implementation of national and cross-border paperless trade systems, and present it to the third session of the Standing Committee for its review and consideration.

To expedite trade digitalization for leveraging international trade towards sustainable development, this guide aims to provide policy makers in the Asia-Pacific region with concrete case studies and recommendations for facilitating implementation of national-level and cross-border-level paperless trade systems simultaneously where business needs and appropriate factors have been met.

Recognizing that concurrent implementation may not be necessary for all cases, there are certain conditions where concurrent implementations offer more advantages than sequential ones. To encourage consistency and leapfrog to the potential benefits of trade digitalization, it is recommended that both domestic and cross-border paperless trade systems be designed and implemented simultaneously, especially for the situations where trade-related data and documents are generated by stakeholders within one country and subsequently used by other stakeholders along the international trade chain in another trading country. However, it must be validated that the concurrent implementation of those domestic and cross-border digital trading systems resolves the actual pain points and offers real business impacts for traders and relevant regulatory agencies, such as in reducing the time spent and cost of business operations, speeding up regulatory procedures and improving compliance of both exporting and importing countries.

This guide highlights the benefits of implementing these systems concurrently with several concrete case experiences. Implications and recommendations are also offered for policy makers in developing national and cross-border paperless trade systems in Asia and the Pacific, including considerations and suggestions for their concurrent development.

The purpose of this guidebook is to equip policy makers in Asia and the Pacific with recommendations and concrete cases in facilitating concurrent implementation of national and cross-border paperless trade systems for the circumstances where they are preferable and beneficial.

This guide should at least create an awareness and also support policy makers in facilitating and expediting the implementation of international trade digitalization among countries in the Asia-Pacific region, especially where the concurrent implementations of both domestic and cross-border paperless trade digitalization are recommended.

The preparation of this guide for policy makers stems from a request by the Standing Committee of the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific during its second session held in 2023. This guide will be developed through several rounds of expert consultation, case studies, and peer review. Therefore, this first draft was initially written with inputs from a UNNExT Expert Group Meeting on the very same topic held online on December 15, 2023. During the brainstorming, there were 26 paperless trade experts and participants from 10 countries, 3 international agencies, and 2 regional economic associations. This written version still needs to be further reviewed by experts in paperless trade systems and policymakers from the Asia-Pacific region to ensure accuracy and relevance.

The initial structure of this guide includes a summary section followed by an introduction and rationale section.

The 2nd section briefly describes case studies and lessons learned about the establishment of domestic and cross-border paperless trade systems from various countries and regions with diverse context, and with different types of digitalization. Recognizing that it is not always necessary for implementation to be concurrent, rationally it should be very much dependent upon business needs and other appropriate factors. A methodology used here is by observing good practices, and revealing certain conditions and success factors for the situations where implementing both domestic and cross-border paperless trade systems simultaneously is beneficial, for example, in terms of better facilitation, expedited implementation, reduced costs and efficiencies.

The last section attempts to synthesize key implications and actionable policy recommendations that could expedite and leap frog the benefits of international trade digitalization among countries in the Asia-Pacific region, especially where the concurrent analysis and implementation for both national and cross-border paperless trade systems are recommended.

2. Case Studies and Lessons Learned

This chapter includes concrete case examples, lessons learnt and their implications for policy makers in Asia the Pacific, such as, experiences of EU Single Window, IPPC e-Phyto Solution, e-CITES, ASEAN SW, Pakistan SW, China SW and ROK SW. We try to extract key takeaways from each case study, and discuss their implications for policymakers in the Asia-Pacific region.

2.1 A Regional-wide Cross-Border Paperless Trade Platform: EU Single Window

This section briefly describes key success factors and their lessons learned in driving the implementation of a region-wide cross-border paperless trade platform among EU member states. This case is about the European Union's Single Window environment for Customs and non-Customs operations which is abbreviatedly called EU SWE-C.

Following a decade of pilot projects and nearly four years of planning and dialogue, the legislation to create the European Union Single Window Environment for Customs was officially enacted into EU legislation in December 2022.

The following are key factors for steering the concurrent implementation of both domestic and cross-border electronic interoperability among the EU member states.

- **Regional-wide Mandate:** It should be emphasized that for the EU context it is an economy that has already harmonized into a single economic union especially with the concept of Customs Union. This is quite different from other regions and countries especially in Asia and the Pacific. The regional commitment through the EU parliament's mechanism is quite unique for the EU member states. Nevertheless, we have learned that by the EU Regulation 2022/2399 enacted in 2022 it has helped in mandating all 27 EU member states to commit and collaborate in concurrently implementing the European Union Single Window Environment for Customs with concrete actionable frameworks and timelines.
- **Harmonization of A Legal Framework:** A legal framework has been established to improve information sharing and digital cooperation between customs and non-customs domains. Harmonizing the legal framework across EU member states helps creating a uniform operating environment for the Single Window system, promoting interoperability and minimizing confusion or duplication of efforts.

  Rules have been set out to improve digital administrative cooperation and information-sharing between customs administrations and other government authorities, in charge of enforcing EU non-Customs formalities at the EU border in different areas of EU responsibility under the treaties, such as health and safety, environment protection, fisheries, agriculture and market surveillance.
- **Data Harmonization and Standardization of Services:** The EU Regulation 2022/2399 requires EU Member States to establish and operate a set of services and systems. Data harmonization among different systems has also been established to enable information to be semantically and syntactically exchanged between the electronic systems of their Customs authority, partner competent authorities and economic operators.
- **Interoperable IT Infrastructure:** The overall IT architecture for the cross-border data exchange and interoperability has been proposed and agreed.

  The decision is in establishing a centralised system, known as the EU Customs single window certificates exchange system (EU CSW-CERTEX) to improve the sharing and processing of data submitted to customs and partner competent authorities by economic operators, ensuring that those authorities receive the original data in real time.
- **Data Privacy and Protection:** The agreed system is designed with privacy and data protection at its core.

  For example, data is kept in the source systems (customs or non-customs) and used only for the purposes already established by customs legislation and sectorial legislation. The exchange hub (the EU CSW-CERTEX) does not store any data when performing data-processing operations. All the exchanges and transformations take place in real time, triggering the contextual erasure of any data as soon as the processing operations are completed. The only data kept in the system is a log file indicating that a transmission has taken place, along with the reference numbers of the documents concerned.
- **Stakeholder Engagement and Collaboration:** Customs and Non-Customs agencies of each member state are strongly engaged and collaborated.
- **On-going Monitoring and reporting:** The European will prepare annual progress reports to assess the state of digitalization of all non-customs formalities at the EU border, including expected future developments and prospective interactions with customs.

Every third year, the annual reports will also cover monitoring and evaluation of the functioning of the EU SWE-C, focusing particularly on its impact on economic operators.

Key Implications

All of the seven factors and mechanisms applied within the EU region above have suggested several good practices useful for policy makers in the Asia-Pacific region. This EU SW initiative has driven the concurrent implementation and adoption of trade digitalization domestically within each EU member state, and also interoperably across the member states. Many of them, with some context adjustments, could be utilized for promoting and expediting the implementation of trade digitalization among countries in the Asia-Pacific region.

2.2 ASEAN Single Window: An Integration of multiple National Single Windows

The ASEAN Single Window (ASW) represents a regional effort in harmonizing and integrating the National Single Window (NSW) systems of all ten ASEAN member states (AMS). With the ASW Agreement signed by all AMSs in 2005, it is the commitment to establish the ASW environment to expedite customs clearance procedures among member states to achieve greater economic efficiency. This environment aims to streamline and digitalize trade processes by allowing a unified data submission, synchronized information processing, and a unified decision-making mechanism for Customs release and clearance, benefiting both AMS and participating countries.

ASEAN member states have mobilized the ASW Agreement and its collaboration to drive the establishment the National Single Window environment to simplify and automated regulatory procedures and co-ordination among different agencies within the country, also implement cross-border electronic business processes and information exchange with other AMS' NSWs, and other non-ASEAN countries.

Cross-border trade procedures covered within the ASW environment include the exchange of ASEAN Customs Declaration Document (ACDD), exchange of ATIGA e-Form D, exchange of Electronic Phytosanitary (e-Phyto) Certificates, exchange of electronic Animal Health Certificate (e-AH), exchange of electronic Food Safety Certificate (e-FS).

Currently, ATIGA e-Form D is operated fully among all 10 ASEAN members. In December 2020, 3 AMS namely Cambodia, Myanmar and Singapore started the cross-border electronic exchange of the ASEAN Customs Declaration Document (ACDD), followed by Malaysia and Thailand from March 2021. In November, 2021 the Philippines has been given the green light by ASEAN for the electronic exchange of the ASEAN Customs Declaration Document.

AMSs have worked on aligning the data structure of electronic Phytosanitary (e-Phyto) Certificate with the International Plant Protection Convention (IPPC) e-Phyto Guideline before planning for the end-to-end test exchange among ready AMS by 2021. Currently, some ASMs including Thailand and Indonesia have already adopted the cross-border electronic exchange of ePhyto certificates.

To expand the scope of the ASW, the ASEAN Single Window Steering Committee has developed the roadmap for the exchange of e-document with ASEAN Dialogue Partners (DPs) to identify the mandatory steps including a) feasibility study; b) legal framework establishment; and c) system implementation to enable the exchange of e-documents across the region.

Key Implications

The implementation of the ASW offers several key lessons and implications that can be valuable for other countries in the Asia-Pacific region.

- **Collaboration and Harmonization:** One of the primary lessons is the importance of collaboration and harmonization among member states. ASW's success is built on the commitment of ASEAN nations to work together and align their customs procedures and data standards. Other countries in the region can benefit from fostering similar collaboration to streamline and digitize cross-border trade.
- **Standardization of Data:** ASW emphasizes the need for standardized data and document formats for efficient electronic exchange. This lesson underscores the significance of establishing common data standards and formats in cross-border trade to ensure compatibility and interoperability among different systems.
- **Legal Framework and Agreements:** The ASW's implementation involved the development of legal frameworks and agreements, and also for mutual recognition of cross-border electronic data, among member states. Other countries can learn the importance of creating legal structures to support cross-border data exchange and trade facilitation initiatives.
- **Capacity Building:** ASW has highlighted the importance of capacity building and training for customs officials and stakeholders. Other countries can benefit from investing in skill development and awareness programs to ensure the successful adoption of electronic customs and non-customs procedures.
- **Phased Implementation:** ASW adopted a phased approach to implementation, starting with simpler processes before moving to more complex ones. This incremental approach allows for gradual adjustments and reduces disruptions. Other countries can consider a similar phased implementation strategy.
- **Technology Infrastructure:** A crucial lesson is the significance of robust technology infrastructure to support electronic data exchange. Countries need to invest in secure and reliable systems that can handle the volume of trade-related data effectively.
- **Stakeholder Engagement:** The involvement of various stakeholders, including the private sector, is vital for the success of ASW. Other countries should engage with businesses, trade associations, and other relevant parties to gather input and ensure a smooth transition to its digitally transformed procedures.
- **Monitoring and Evaluation:** Continuous monitoring and evaluation of ASW's performance have been essential for identifying areas of improvement. Other countries should establish mechanisms for ongoing assessment to adapt and enhance their own electronic trade facilitation systems.
- **International Cooperation**: ASW underscores the value of international cooperation, not only within ASEAN but also with external partners. Collaboration with neighboring countries and regional organizations can facilitate cross-border trade and expand economic opportunities.

- **Transparency and Accountability:** Ensuring transparency and accountability in the implementation of paperless trade procedures is critical. Other countries should prioritize transparency in their systems to build trust among stakeholders and ensure compliance.

The ASW has adopted a phased and incremental approach to its implementation, for example, most member states have focused on the implementation of their national-level Single Windows first before the cross-border ones. However, all of the enabling components discussed above have been analysed and designed towards its regional integration and cross-border interoperability which is its main goals from the beginning.

2.3 A Global Cross-Border Paperless Solution: IPPC ePhyto

The International Plant Protection Convention (IPPC) has offered a great case study and lessons learned on how a global plant health certification process and its digital transformation has been created, promoted and adopted by many countries with diverse levels of readiness.

The following are its key success factors and lessons learned for serious consideration and probable adoption by policy makers in the Asia-Pacific region.

- **An International Commitment and its Strong Collaborative Platform:** The International Plant Protection Convention (IPPC) is the intergovernmental treaty that aims to protect the world's plants, agricultural products and natural resources from plant pests. Ratified by 185 contracting parties, the IPPC develops, adopts and promotes the application of International Phytosanitary Measures (ISPMs) as the main tool to safeguard global food security, facilitate safe trade and protect the environment.
- **Clear Strategic Objectives with the Strategic Framework:** Strategic objectives and the ten-years strategic framework (2020-2030) have been established and driven by an authorized international collaborative agency for plant health and related safe trade. The development agenda includes the implementation of **a global system and the national systems** for production and exchange of electronic phytosanitary certificate (ePhyto) information.
- **Harmonization of Electronic Data Exchange:** Cross-border ePhyto information exchange and processes have been harmonized and defined. The structure and transmission of ePhytos will follow a harmonized format through the use of standardized mapping, codes and lists.
- **Planned Activities:** Activities carried out during 2020–2030 include the following.
    1. Successfully establishing of **the IPPC ePhyto hub** as the international system for exchange of electronic phytosanitary certificate information.
    2. Complete establishment of **the IPPC generic ePhyto national system (GeNS)** for production, sending and receiving of electronic phytosanitary certificate information. This would assist many countries without exiting sophisticated IT systems to quickly establish the domestic system, and gain its benefits with less time and less investment costs.
    3. Where needed, supporting contracting parties to implement the ePhyto hub and the generic ePhyto national system.
    4. Investigating the possible incorporation of other databases into the ePhyto hub or associating them with the electronic certification requirements.
    5. Establishing pilot projects for new or improved electronic systems.

Key Implications

It can be noticed that the ePhyto mechanisms, as discussed above, have already assisted several countries that lack sophisticated IT systems or that have not fully established National Single Window environments yet, to be able to expedite the implementation and adoption of national ePhyto systems. Additionally, they simultaneously implemented cross-border ePhyto exchanges with other nations, encountering fewer impediments and incurring lower associated costs.

This implies that many countries in the Asia-Pacific region could also benefit from concurrently designing and implementing national and cross-border digitized procedures with ePhyto solutions with less barriers. It would enable a streamlined and efficient process for the exchange of phytosanitary certificates, benefiting both individual nations and international trade as a whole.

2.4 eCITES: Paperless Enforcement for International Trade of Endangered Species

The objective of electronic CITES or eCITES is to improve the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, so called CITES, by using modern digital technology. This initiative would help simplify compliant trade and combat illegal trade. It should be noted that the digitalization of procedures and electronic information exchange is not an objective in itself, but rather a tool to simplify and improve the work of Management Authorities and other agencies to implement the Convention.

eCITES encompasses electronic procedures for applying for and issuing CITES permits at the national level, verifying and authenticating these permits across the borders, and reporting permit-related information with electronic exchange of permits between member countries.

The utilization of electronic permits, coupled with simplified and digitized trade processes, enables regulatory agencies to enhance their inspection targeting and identify non-compliant actors more effectively. The adoption of eCITES also fosters collaboration and electronic data exchange with Customs and other border control agencies, promoting efficient control of CITES trade. Countries involved stand to gain advantages such as heightened transparency, prevention of fraudulent permits, expedited and more robust reporting, and improved data for non-detrimental findings determination. Ultimately, simplified and automated procedures have the potential to generate fresh business opportunities for compliant traders and rural communities.

CITES encourages all 184 member countries to explore the development and utilization of electronic permits and certificates. However, not all Parties that are part of CITES have implemented the eCITES Permit Systems. According to the CITES website, countries such as the USA, France, Norway, Germany, Czech Republic, Saudi Arabia, Mozambique, Democratic Republic of Congo, China, Sri Lanka, Thailand, Republic of Korea, United Arab Emirates, Uganda, Belgium, Switzerland, and Norway have some form of electronic CITES permit system in place. Mozambique and Sri Lanka have specifically adopted the ASYCUDA eCITES solution, while other countries appear to have developed their own eCITES Permit System. To check the current status of eCITES Permit System adoption worldwide, a map is available at https://cites.org/eng/prog/eCITES.

Key Implications

Referring to the above information and its lessons learned, it implies that there are good opportunities for Asia-Pacific countries to consider in implementing their eCITES permit systems for both domestic operations as well as cross-border electronic information exchange and interoperability across borders. Many countries could gain the benefits of the automated systems by simplifying compliant trade and better combating illegal trade.

2.5 Republic of Korea's Single Window and Cross-Border Paperless Trade

Initiated by the Presidency in 2003 to align with the revised Kyoto Convention and recommendations by international organizations including WCO and UN, the Government of the Republic of Korea has launched a multi-phased Single Window project as one of its major trade strategies. The Korea Customs Service (KCS) accordingly conducted business process redesign (BPR) and information systems strategic planning (ISP) including simplification and clear better to-be digitalization of trade procedures and data, and their implementation plans.

This regulatory Single Window environment was implemented in three phases from 2004 to 2007. The initial huge budget of 5.7 billion won was invested by the government. KCS has started the implementation of its Clearance Single Window Project as its first phase. Then later, as of 2011, 23 government agencies relating to trade requirement verification are connected through internet-based clearance portal of KCS for trade facilitation, seamless logistics flow, customs clearance and conveyance reports.

One important lesson learned as a critical success factor in implementing the Single Window platform at the national level is the challenge in coordinating among multiple regulatory agencies. Inter-agency harmonization of similar forms and data elements, and simplification of procedures were defined and agreed to enhance user convenience and reduce logistics costs, which in return helped to boost adoption rate of Single Window and result in financial benefits.

The policy decision makers of the Republic of Korea (ROK) have also long recognized that it is beneficial for the country's trade competitiveness to establish cross-border paperless operations with other countries. ROK has proactively engaged with various countries to establish cross-border electronic information exchange and paperless operations with its trading partner countries. Its domestic and cross-border paperless trade implementation and services have covered several types of trade procedures and documentation requirements, especially for those related to electronic certificates of origin, quarantine-related certificates and other business documents using across the borders. Some of those are as follows.

- **e-Certificates of Origin (e-C/O):** ROK began exchanging e-C/O primarily with China in 2016, followed by Indonesia in 2019 and Vietnam in 2023. In the future, it is strategically planned to expand these exchanges continuously especially with those countries that are its largest trading partner countries.
- **e-Phytosanitary Certificates (e-Phyto):** In 2021, the Republic of Korea has successfully implemented e-Phyto Certificates and exchanges with the United States, followed by New Zealand in 2022. The Republic of Korea has also implemented the electronic exchanges of e-Phyto with other 12 countries including Australia, Israel, Sri Lanka, Guatemala, Panama, Jordan, Uganda, Tunisia, Madagascar, Cameroon, Fiji and Samoa.

- **e-Animal Quarantine Certificates:** Since 2022, the Republic of Korea has electronically exchanged Animal Quarantine Certificates with New Zealand. Overall, the electronic animal quarantine certificates are still limited and they are in the early stages compared to e-C/O or e-Phyto systems. However, electronic animal quarantine certificates have considerable growth potential, especially for countries with significant volumes of livestock import and export.
- **e-NEGO:** An electronic negotiation system offered through a platform called uTradeHub provides a one-stop service for digitally handling negotiation documents. It is designed to increase export competitiveness by enabling exporters to seamlessly conduct negotiation operations without having to physically visit institutions and banks.
    - One of the main functions of e-NEGO Service is the requesting for export bill of exchange negotiation in which there are two major functions related to e-L/C, i.e. negotiation of an e-L/C received on the uTradeHub, and the management of e-L/C balance
    - The benefits of this service for exporters include the following:
        - Reduction in time and cost by streamlining the shipping document receipt and negotiation process.
        - Lower rate of failed negotiation on the shipping date.
        - Decreased delay charges
        - Reduced risk of loss of important documents such as B/L and I/P
    - The benefits for negotiating banks include the following:
        - Reduction in the period of document delivery and receipt between the headquarters and branches
        - Shortened time of payment collection
        - No need for local centers (more efficient human resources management)
    - Other benefits include
        - Improvement in customer services with no need for face-to-face meetings
        - Decreased delay charges
        - Reduced risk of document falsification and alteration.
        - Easier storage of negotiation documents and more convenient search for information
        - Time saving by avoiding document scanning
        - Shortened time of system operation.

- **e-L/C Service:** The electronic Letters of Credit (e-L/C) service, unlike the traditional paper-based L/C, is electronically managed. It electronically processes and systematically manages the entire process from notice to negotiation. This e-L/C system is beneficial for facilitating both domestic and cross-border operations.
    - There are 2 main functions of the e-L/C as follows:
        - Circulation Management: Notifying trading companies of e-L/C issuance and circulating the L/C stored in the e-Trade Document Repository to a third party including a

purchasing bank that requests for the confirmation of the original copy, for example, management of e-L/C incoming notice, management of e-L/C transfer and negotiation request, and management of e-L/C history
    - Balance Management: Managing e-L/C balance, negotiation history, and statistics for both notifying and negotiating banks, for instance, management of e-L/C informing notice, management of e-L/C transfer and negotiation request, and management of e-L/C history.
- The benefits of e-L/C services for trading companies include the following:
    - No need for paper L/C
    - Management cost saving through keeping the original L/C in electronic format
    - Prevention of loss and damage of L/Cs
    - Easier circulation of L/Cs to third parties
    - Convenient confirmation of the L/C process
- The benefits of e-L/C services for banks include
    - Easier notification and negotiation of L/Cs
    - Prevention of falsification and alteration of L/Cs
    - Prompt check on the balance of L/Cs upon negotiation request
    - Management of detailed history including L/C opening, amendment, transfer, and negotiation

Key Implications

Overall, the Republic of Korea's success in implementing Single Window and several cross-border paperless trade systems serves as a model for other countries looking to enhance and further advance trade facilitation, reduce administrative burdens, and promote economic growth through streamlined and efficient cross-border trade processes. Exchange of e-animal quarantine certificates, electronic negotiation information exchange, and electronic letters of credits are among cases that domestic and cross-border paperless procedures must be analyzed and designed simultaneously, and then implemented towards the end-to-end digitalized trade procedures including cross-border operations as its ultimate goals.

2.6 China Single Window

China has established electronic Customs and Single Window environments by implementing its domestic paperless coordination mechanism, electronic certificate systems and cross-border interoperability platforms simultaneously since 2000. In 2017, when the World Trade Organisation’s member states are required to adopt the trade facilitation agreement which involves the terms of the implementation of Single window, China spent 2 years to further enhance its regulatory Single Window.

Some key lessons learned include the crucial role of the support and promotion from the government and leading bodies. The national and cross-border cooperation mechanisms have been

formally formulated, for example, the Tianjin and Singapore governments have established the cooperation mechanism for economics and trade to simplify and harmonize their customs declarations and clearance procedures. With those simplification and digitalization, enterprises only need to submit a few relevant electronic declaration information to complete the import declaration.

Key Implications

From the lessons learned through the China Single Window establishment, there are 6 key success factors that have been emphasized.

1. Coordination and government support is crucial. A well-functioning mechanism is essential to ensure effective implementation.
2. Reasonable top-level design and standards
3. Promoting and implementing relevant legal frameworks
4. Cooperation and participation among relevant departments
5. Innovative applications with the latest technology
6. Implementation of SW should be oriented to meet the demands of users.

2.7 Pakistan Single Window

Since 2017, Pakistan Customs has been designated by the Prime Minister's Office of the country to lead the implementation of an ICT based trade related national single window. Pakistan Customs has successfully implemented indigenously designed automation-based trade facilitation initiatives called Web-Based One Customs which offers efficient paperless Customs operations.

Later in 2021, a Pakistan Single Window Act of Parliament (PSW Act) was enacted to ensure strong political support, and institutionalize a legal framework for inter-agency collaboration and its inter-ministerial oversight. A public sector company incorporated under Section 42 of the Companies Act, 2017 has also been notified as the operating entity of the PSW system by the Federal Government under the provisions of the PSW Act 2021.

The PSW platform officially launched in 2022 have gradually simplified and digitalized regulatory trade procedures not only for Pakistan Customs but also for the other 77 government agencies (OGA). It currently digitizes and covers services related to 132 OGA's legal documents, 154 import/export regulatory measures, 27721 unique commodity codes, 153 application forms, and 143 procedures for regulatory measures.

The PSW platform includes and also integrates with other related services. The Trade Information Portal of Pakistan provides all the regulatory and procedural information to conduct international trade across Pakistan's borders. The risk assessment services on OGA's LPCOs (Licenses/Permits/Certificates and Other Documents) can also be performed and used for better clearance.

Concurrently, cross-border electronic data interchange systems have also been established with several trading partner countries. MoUs with regional countries include CAS, China and Russia for sharing of information related to advance export declaration, certificates and statistics through SW integrations.

PSW is also integrated with the IPPC ePhyto hub for cross-border exchange of SPS e-certificates. The system transforms the data elements from Phytosanitary Certificate issued by Pakistan NPPO, into XML messages based on the IPPC/ISPM 12 standards. The messages are sent to IPPC's ePhyto hub via the communication protocols of SOAP-based web services.

Key Implications

Pakistan's journey toward digital trade facilitation has been carried out through the Pakistan Single Window, and its trade information portal. The domestic interoperability among regulatory agencies and business stakeholders within the country has been designed and implemented concurrently with the cross-border paperless interoperability with its major trading partner countries.

2.8 Philippine National Single Window

The Bureau of Customs of Philippines partnered with the U.S. Mission to ASEAN, in combination with the ASEAN Single Window (ASW) regional platform, in implementing the Philippine National Single Window (NSW) for digitizing trading operations with countries in the ASEAN Region as well as throughout the world.

The first phase of the Philippine NSW is a web-based platform that would allows parties involved in trade and transport to store standardized information in a secure, electronic platform to fulfill import, export and transit-related regulatory requirements.

Some cross-border electronic exchange initiatives were also implemented simultaneously. One such initiative is the electronic Certificate of Origin (e-CO) system that was implemented to facilitate trade through the Philippine NSW and the ASW regional platform in 2020. The country's National Plant Protection Organization (NPPO) has also recently implemented and deployed the cross-border electronic data exchange of ePhyto certificates.

In the early 2023, with the support of the Department of Finance (DOF) and the Department of Information and Communications Technology (DICT), a Memorandum of Agreement has been signed for the full implementation of the Philippines' NSW, now known as TradeNet. This is a significant way forward in onboarding all 73 trade regulatory government agencies for the automated and integrated licensing, permitting, clearance, and certification systems relative to the import and export trade of regulated goods.

The DOF is in charge of leading the collaboration and coordination within the TradeNet system. At the same time, the DICT is responsible for overseeing the technical maintenance of the TradeNet, as agreed during the ARTA meeting in November 2023.

Key Implications

It is worth noting that the National Single Window environment of Philippines has gone through several rounds of iterative enhancement. Each round involves a detailed survey for gathering requirements and understanding of readiness, concerns and suggestions related to digital trade. The pain points of business and the requirements of key stakeholders have been used for further analysis, design and implementation to enhance the services of Philippine NSW.

There is another important observation that should be noted. While there are still several challenges in the development for the national-level Single Window platform, simultaneously cross-border electronic information exchange with other countries has been established and adopted. This is happening where there are certain economic benefits, and relevant government agencies have a strong interest in engaging in the initiative.

Therefore, "what parties are actually interested in cross-border trade in particular" is also a key. However, when a lot of these G2G negotiations take place, it can be very narrow focused on what they want to achieve rather than to check with what traders need to achieve their cross-border trading.

2.9 Other Lessons Learned

It should be emphasized that trade digitalization is more about the combination of technical and legal solutions, consequently the success is not only about technology. For cross-border paperless trade, the interoperability of the legal framework among the member states is also a key aspect.

In certain situations, there could be some misperception that IT solutions could be the answer to everything but actually other resources especially human resources, financial resources, and change management need to be carefully mobilized as well.

In several cases, different capacity issues across different agencies are one of the key challenges. Strong political support and coordination among government agencies and private sector are needed. Legal infrastructure needs to be improved to ensure full scale of implementation.

3. Recommendations for Policy Makers

Key Implications

Key implications for policy makers in the Asia-Pacific region in implementing trade digitalization for national and cross-border paperless trade systems are as follows.

- One common agreement drawn from the above discussion is that the policy makers of the countries in the region should expedite and further enhance the implementation of trade digitalization for both domestic and cross-border paperless trade procedures. Even though the context and paperless trade readiness of countries in Asia and the Pacific might be quite different among each other.
    - It is widely recognized that the advancement of trade digitalization, by encompassing the simplification and digitization of international trade procedures, could empower the Asia-Pacific region to leverage international trade for sustainable development. Transitioning from paper to electronic data and information exchange is anticipated to enhance the ease, transparency, efficiency, inclusivity, and environmental sustainability of international trade.

- Recognizing that concurrent implementation of national and cross-border paperless trade systems may not be necessary for all cases, there are certain conditions where concurrent implementations offer more advantages than sequential ones. It should be very much

dependent on business needs and other appropriate factors, such as the interest, readiness and commitment of leading agencies for the implementation.

- To encourage consistency and leap frog to the full potential benefits of trade digitalization, it is recommended that both domestic and cross-border paperless trade systems be designed and implemented simultaneously, especially for the situations where trade-related data and documents are generated by stakeholders within one country and subsequently used by other stakeholders along the international trade chain in the other trading country.
    - However, it must be validated that the concurrent implementation of those domestic and cross-border digital trading systems resolves the actual pain points and offers real business impacts for traders and relevant regulatory agencies, such as in reducing the time spent and cost of business operations, speeding up regulatory procedures and improving compliance of both exporting and importing countries.
    - Several concrete cases as discussed have shown the possibility and benefits of concurrent implementation of national and cross-border paperless trade systems not only in developed countries, but also in countries in transition. Countries that are still working on the development of their national-level Single Window platformcan simultaneously implement cross-border electronic information exchange with other countries. This is happening where there are certain economic benefits, and where relevant agencies have a strong interest in engaging in the initiative.

Recommendations

The following is an initial list of recommendations for international development agencies, like ESCAP and others, and policy makers of the countries in the Asia-Pacific region to expedite the implementation of their national and cross-border trade digitalization. It aims for leveraging international digital trade toward sustainable development in the region.

1. Convincing policy makers in Asia and the Pacific region to establish trade digitalization policies and strategic planning for concurrent implementation of national and cross-border paperless trade systems where they offer real business impacts for traders and relevant regulatory agencies. This recommendation should be strongly supported by the mechanism of the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific (CPTA).

2. Strengthening institutional arrangement and human capacity of the countries in the region for establishing strategic planning and facilitating concurrent implementation of national and cross-border paperless trade. The support of ESCAP and other related international organizations should be leveraged.

3. Establishing a region-wide cross-border paperless trade initiative with strategic planning to promote the implementation of national and cross-border paperless trade simultaneously.

   The proposed scope and possible services should be cleared and implementable step-by-step by most countries in the region including the countries with less sophisticated digital systems.

Based on its business impacts, this initiative should consider similarities and differences in terms of domestic and cross-border paperless interoperability then recommend whether it should be implemented concurrently or not afterward.

This initiative would encourage concurrent implementation of national and cross-border data exchange systems to support Customs clearance and other regulatory procedures where they are beneficial. Several candidates of digitalized procedures and electronic information exchanges, as seen from concrete cases discussed earlier, should be promoted among countries in the Asia-Pacific region, e.g., electronic exchange of Certificates of Origin, Sanitary and Phyto-Sanitary Certificates, CITES Permits, and Letters of Credits.

A draft list of key components that should be clarified and developed for collaboration and development among participating countries includes the following:

- Harmonization of legal frameworks including the promotion of mutual recognition of documents and data in electronic form.

  Harmonizing legal recommendations and requirements based on the CPTA should be developed in such a way that they would facilitate both domestic and cross-border requirements. A gap analysis should be conducted and compared with existing cases and best practices, such as the ASEAN Single Window Agreement and supporting instruments, and of other countries like e-invoicing of Singapore.

- Capacity Building

  The importance of human resources must be emphasized. Capacity building and training for customs officials, stakeholders from other government agencies and relevant business persons must be continuously conducted. Investing in skill development and awareness programs to ensure the successful adoption of electronic customs and non-customs procedures is very crucial.

- Data harmonization and standardization of services

  Data harmonization must be established to enable electronic information to be semantically exchanged between different electronic systems among the Customs authorities, partner regulatory authorities and economic operators.

  Priorities for services and processes to be digitized must be based upon what provides the most benefits for the business of that respective country or what documents should be implemented first to give the best benefits to the private sector.

- Interoperable IT infrastructure and protocols

  The digitalization level of each country is quite different. To join cross-border paperless trade systems, a minimum common standard should be established as a baseline.

- Data privacy and protection

The agreed digital platform must be designed with privacy and data protection at its core.

- Stakeholder engagement and collaboration mechanism

  The involvement of various stakeholders, including regulatory agencies and the private sector, is vital for success. The engagement of businesses, trade associations, and other relevant parties would help gather input and ensure a smooth transition to its digitally transformed procedures.

- On-going monitoring and reporting

  Continuous monitoring and evaluation of the national and cross-border paperless trade performance must be periodically conducted for identifying areas of improvement, and further advancing its implementations.

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