



DIVISION ON TECHNOLOGY AND LOGISTICS

ASYCUDA NEWSLETTER



ASYCUDA
40
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September 2021

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Editorial

English version



UNCTAD's 15th quadrennial ministerial conference, a virtual event being hosted by Barbados and taking place 3–7 October, will bring together Heads of State and Government, ministers, the business world, and civil society. They will discuss global trade, development, the economic impact of the COVID-19 pandemic, and progress towards the 2030 Agenda for Sustainable Development.

Focusing on moving “from inequality and vulnerability to prosperity for all”, UNCTAD 15 is a major global event that aims to ensure trade’s positive impact, aligning “the sustainable development agenda with global efforts to recover from the COVID-19 pandemic”¹. Participants will assess progress towards the SDGs, and address the funding and technology needs of developing countries, as the international community tackles the economic and development impact of the pandemic.

2021 is a landmark year for ASYCUDA, UNCTAD's largest technical cooperation programme, as it celebrates its 40th year of improving social and economic conditions in developing countries by facilitating trade. The Programme actively contributes to the delivery of SDGs² including – but not limited to – securing the collection of customs duties and taxes (SDG 17 “Improve domestic capacity for tax and other revenue collection”), contributing directly to economic growth (Goal 8), and upgrading ICT infrastructure, especially in Africa and Least Developed Countries (Goal 9).

Since the beginning of the pandemic, the Programme has supported user-countries with countering its economic impact. In April 2020, ASYCUDA published recommendations for adapting ASYCUDAWorld³ to COVID-19 enforced restrictions, including adjusting the ICT infrastructure and reviewing organizational arrangements. Experts in the field and headquarters tailored support to each user-country, using technology to ensure remote assistance. Due to travel restrictions, remote assistance and virtual trainings have temporarily complemented the Programme's support. While this has been necessary, it has also reinforced the view that ASYCUDA's work implementing state-of-the-art technology and providing expertise to facilitate trade through automation and the building of national capacity, requires an on-site presence.

At the request of Member States and international organizations, ASYCUDA capitalized upon travel

¹ <https://unctad.org/news/nations-meet-barbados-chart-new-path-post-coronavirus-economic-recovery>

² <https://asycuda.org/en/impact-on-sdgs/>

³ <https://unctad.org/webflyer/adapting-use-asycuda-world-covid-19-situation>

restrictions to further enhance its systems and develop new ways to serve the trade community. It proved a good opportunity to: develop new partnerships; focus on technology and technical developments; and assess our systems to improve their functionalities, especially in this “new environment”.

In that context, WTO requested technical assistance from ASYCUDA to develop a tool that automates recurring trade data notifications from Member States using ASYCUDAWorld. The solution is called ASYADN. The German Corporation for International Cooperation (GiZ) is currently collaborating with ASYCUDA on the development and implementation of ASYHUB, a standardized data integration platform between external systems and ASYCUDAWorld. It aims to facilitate data exchange among these systems. As an output of a partnership with the UN’s Office for the Coordination of Humanitarian Affairs (OCHA), ASYCUDA is developing the Automated System for Relief Emergency Consignments (ASYREC) which coordinates and facilitates the imports of humanitarian relief. ASYREC was enhanced to better automate simplified procedures for the prioritization and clearance of consignments of medicines and medical equipment to fight the COVID-19 virus. Sri Lanka successfully piloted eCITES, an online solution for electronic permit management to improve the capacity to control international trade in CITES listed species. It was developed with CITES and showcased at COP18. “The solution makes a significant contribution to our global collective efforts to combat illegal trade in wildlife, especially for parties that do not have access to electronic permit management systems,” said Shamika N. Sirimanne, UNCTAD’s Director of Technology and Logistics.

The Programme is enhancing ASYCUDAWorld with new features and modules, such as “Dynamic Selectivity” which can be plugged in automatically by any country using selectivity in ASYCUDAWorld. It further assists customs intelligence in achieving efficient risk management by automatically targeting risk profiles. In addition, ASYCUDAWorld is now enhanced with a functionality that automates and facilitates the immediate release of goods for express operators.

Finally, the Programme has also enhanced its capacity building component by implementing an e-learning platform. It consists of video tutorials, documents, and exercises aimed at mastering the use and configuration of ASYCUDA systems such as ASYCUDAWorld, ASYREC, and eCITES. It is a valuable solution that complements complex classroom trainings, especially useful during pandemic enforced remote learning.

In the following articles, we invite you to discover more about these new systems, modules, and partnerships. They offer interesting solutions to issues faced by the trade community and confirm ASYCUDA’s international recognition as a development programme specialized in automation and innovation.

We invite you to send any comments you might have to asycuda@unctad.org. You can also follow us on our official twitter account: [@AsycudaProgram](https://twitter.com/AsycudaProgram) and LinkedIn.

ASYCUDA Programme,

Division on Technology and Logistics,
Geneva, September 2021

Éditorial

Version Française



La quinzième session de la Conférence des Nations Unies sur le Commerce et le Développement (CNUCED 15), événement virtuel dont l'hôte est la Barbade et qui se déroulera du 3 au 7 octobre 2021, réunira des chefs d'Etat et de Gouvernement, des ministres, le monde des entreprises et la société civile. Ces derniers discuteront de la situation du commerce mondial et du développement, de l'impact économique de la pandémie de la COVID-19 et les avancées vers l'atteinte des objectifs de l'Agenda 2030 de l'ONU pour le développement durable.

CNUCED 15, dont le thème sera « des inégalités et de la vulnérabilité à la prospérité pour tous », est un événement mondial majeur qui vise à assurer l'impact positif du commerce et l'alignement de l'agenda du développement durable avec les efforts mis en place par les pays pour se rétablir des effets de la pandémie de la COVID-19¹. Les participants évalueront les progrès effectués vers l'atteinte des objectifs du développement durable (SDG) et discuteront des besoins financiers et technologiques des pays en développement alors que la communauté internationale lutte contre l'impact sur l'économie et le développement de la pandémie.

2021 est une année historique pour SYDONIA, le plus grand programme de coopération technique de la CNUCED. En effet, le Programme célèbre ses 40 ans de facilitation du commerce par l'amélioration de l'environnement social et économique des pays en développement. Le Programme participe activement à l'atteinte des SDG² entre autres en assurant et sécurisant la collection de taxes et droits douaniers (SDG17 « Renforcement des capacités pour la collecte des taxes et autres recettes »), en contribuant directement à la croissance des économies (SDG 8) et en assurant une mise à niveau de l'infrastructure technologique (SDG 9), particulièrement en Afrique et dans les pays les moins avancés (LDC).

Depuis le début de la pandémie, le Programme a assisté les pays utilisateurs de ses systèmes à contrer son impact économique. En avril 2020, SYDONIA a publié des recommandations sur l'adaptation du système SYDONIAWorld³ aux restrictions liées à la COVID-19, en ajustant l'infrastructure technologique et en révisant les arrangements organisationnels. Les experts sur le terrain mais aussi au siège à Genève, ont dû adapter leur assistance aux pays en utilisant la technologie afin d'assurer un support à distance. Les restrictions de voyage ont permis au Programme de compléter son support aux pays en fournissant une assistance et des formations à distance. Bien que nécessaire, ce support à distance a renforcé l'idée selon laquelle la mise en place d'une technologie de pointe et l'assistance dans la facilitation du commerce à travers l'automatisation, requièrent une présence sur le terrain.

A la demande d'états membres et d'organisations internationales, SYDONIA a profité des restrictions

¹ <https://unctad.org/news/nations-meet-barbados-chart-new-path-post-coronavirus-economic-recovery>

² <https://asycuda.org/en/impact-on-sdgs/>

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de voyage afin d'améliorer ses systèmes et développer de nouveaux outils servant le secteur du commerce international. Il s'agit en effet d'une bonne opportunité pour développer de nouveaux partenariats, focaliser sur la technologie et les développements techniques et évaluer nos systèmes afin d'en améliorer les fonctionnalités, particulièrement dans ce « nouvel environnement ».

Dans ce contexte, l'OMC a soumis une demande d'assistance technique à SYDONIA pour le développement d'un outil automatisant l'envoi et les notifications des données du commerce des pays utilisant le système SYDONIAWorld. La solution mise en place est appelée ASYADN. La Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), corporation allemande de coopération internationale, collabore actuellement avec SYDONIA pour le développement et la mise en place d'ASYHUB, une plateforme d'intégration et de facilitation d'échange standardisé des données du commerce entre SYDONIAWorld et des systèmes externes. En parallèle, le Programme SYDONIA, en collaboration avec OCHA (Bureau de la coordination des affaires humanitaires de l'ONU), améliore son système automatisé de dédouanement facilité et coordonné des envois de secours. Ce système, nommé ASYREC, a aussi été amélioré et adapté afin de répondre aux besoins de dédouanement priorisé et rapide de médicaments et d'équipement sanitaires permettant de lutter contre le virus de la COVID-19. En 2020, le Sri Lanka a piloté avec succès la mise en place d'eCITES, une solution électronique développée par SYDONIA et la Convention sur le commerce international des espèces de faune et de flore sauvages menacées d'extinction (CITES). Ce système automatise, gère et contrôle l'attribution de permis pour le commerce international d'espèces en danger d'extinction. eCITES a été présenté durant les réunions de la COP18 à Genève en 2019. « La solution contribue de manière significative à nos efforts collectifs globaux pour combattre le commerce illégal des espèces de faune et flore, en particulier dans les pays n'ayant pas accès à des systèmes de gestion de permis électroniques » décrit Shamika Sirimanne,

Directrice de la Division sur la Technologie et la Logistique de la CNUCED.

Le Programme SYDONIA travaille aussi sur l'amélioration des systèmes existants comme SYDONIAWorld. Un nouveau module de Sélectivité Dynamique a été mis en place dans SYDONIAWorld et peut être connecté directement au système. Ce module assiste les services douaniers dans la mise en place d'une stratégie de gestion des risques efficace et efficiente basée sur le ciblage et l'établissement automatiques de profils à risque. SYDONIAWorld a aussi été enrichie par le développement d'une fonctionnalité qui automatise et facilite l'enlèvement immédiat de marchandises de prestataires d'envois express.

Enfin, SYDONIA a aussi enrichi son offre de renforcement des capacités des équipes locales en mettant en place une plateforme d'e-learning. Celle-ci contient des tutoriels vidéo, de la documentation, des exercices permettant à ses utilisateurs de maîtriser l'utilisation et la configuration des systèmes SYDONIA comme SYDONIAWorld, ASYREC et eCITES. Cette solution est un complément utile aux formations classiques en présentiel, en particulier durant ces temps de pandémie.

Dans les articles suivants, nous vous invitons à découvrir plus en détails tous ces partenariats, nouveaux systèmes et modules. Ils offrent des solutions intéressantes aux situations rencontrées par la communauté du commerce international et confirment la reconnaissance internationale du Programme SYDONIA comme un programme de développement spécialisé dans l'automatisation et l'innovation.

Nous vous invitons à envoyer vos commentaires à asycuda@unctad.org. Vous pouvez également nous suivre sur nos comptes officiels Twitter [@AsycudaProgram](https://twitter.com/AsycudaProgram) et LinkedIn.

Programme SYDONIA,

Division de la Technologie et de la Logistique,
Genève, septembre 2021

Editorial

Versión Española



La 15ª conferencia cuatrienal de la UNCTAD (UNCTAD15), evento organizado por Barbados que se celebrará en línea del 3 al 7 de octubre de 2021, reunirá a Jefes de Estado y de Gobierno, ministros, empresarios y sociedad civil. Los Estados miembros evaluarán las cuestiones actuales de comercio y desarrollo, el impacto económico de la pandemia de COVID-19 y el progreso hacia el cumplimiento de los objetivos de la Agenda 2030 para el desarrollo sostenible.

La UNCTAD 15 se centrará en pasar “de la desigualdad y la vulnerabilidad a la prosperidad para todos”, UNCTAD 15 es un importante evento mundial que tiene como objetivo garantizar el impacto positivo del comercio, alineando la agenda de desarrollo sostenible con los esfuerzos realizados por los países para recuperarse de los efectos de la pandemia de la COVID-19¹. Los participantes evaluarán el progreso realizado hacia el logro de los Objetivos de Desarrollo Sostenible (ODS) y abordarán las necesidades de financiación y tecnología de los países en desarrollo, mientras la comunidad internacional combate el impacto económico y de desarrollo de la pandemia.

2021 es un año histórico para ASYCUDA, el programa de cooperación técnica más grande de la UNCTAD. De hecho, celebra su cuadragésimo aniversario mejorando las condiciones sociales y económicas en los países en desarrollo mediante la facilitación del comercio. El Programa contribuye activamente a la consecución de los ODS², lo que incluye, entre otros, garantizar la recaudación de derechos de aduana e impuestos (ODS 17 “Mejorar la capacidad nacional para recaudar ingresos fiscales y de otra índole”), contribuyendo directamente al crecimiento económico (Objetivo 8). y mejora de la infraestructura de las TIC, especialmente en África y los países menos adelantados (Objetivo 9).

Desde el comienzo de la pandemia, el Programa ha apoyado a los países usuarios a contrarrestar el impacto económico. En abril de 2020, ASYCUDA publicó recomendaciones para adaptar ASYCUDAWorld³ a las restricciones impuestas por la COVID-19, incluido el ajuste de su propia infraestructura de TIC y la revisión de los aspectos organizativos. Los expertos en el campo, pero también en la sede en Ginebra acomodaron un apoyo adaptado a las necesidades de cada país usuario, utilizando tecnología para garantizar la asistencia a distancia. Las restricciones de viaje han permitido al Programa complementar su apoyo a los países proporcionando asistencia y formación a distancia. Si bien esto ha sido necesario, este soporte remoto ha reforzado la idea de que implementar tecnología de vanguardia y ayudar a facilitar el comercio a través de la automatización, requiere una presencia en el terreno.

A petición de los Estados miembros y las organizaciones internacionales, ASYCUDA

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² <https://asycuda.org/en/impact-on-sdgs/>

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aprovechó las restricciones de viaje para mejorar aún más sus sistemas y desarrollar nuevas herramientas al servicio del sector del comercio internacional. De hecho, resultó una buena oportunidad para desarrollar nuevas relaciones de colaboración; centrarse en los avances técnicos y tecnológicos; y evaluar nuestros sistemas para mejorar sus funcionalidades, especialmente en este “nuevo entorno”.

En este contexto, la OMC solicitó asistencia técnica de ASYCUDA para desarrollar una herramienta para automatizar el envío y las notificaciones de datos comerciales de los países que utilizan el sistema ASYCUDAWorld. La solución se llama ASYADN. La Agencia Alemana para la Cooperación Internacional (GiZ) está colaborando actualmente con ASYCUDA en el desarrollo e implementación de ASYHUB, una plataforma para la integración y facilitación del intercambio de datos comerciales estandarizados entre sistemas externos y ASYCUDAWorld. Su objetivo es facilitar el intercambio de datos entre estos sistemas. Al mismo tiempo, el Programa ASYCUDA, en colaboración con OCAH (Oficina de las Naciones Unidas para la Coordinación de Asuntos Humanitarios), está mejorando el Sistema Automatizado para Envíos de Emergencia (ASYREC) para facilitar y coordinar las importaciones de ayuda humanitaria. ASYREC ha sido renovado y adaptado para satisfacer las necesidades de despacho aduanero prioritario y rápido de medicamentos y equipos sanitarios para combatir el virus COVID-19. Sri Lanka llevó a cabo con éxito las pruebas piloto de eCITES, una solución electrónica desarrollada por ASYCUDA y la Convención sobre el Comercio Internacional de Especies Amenazadas de Fauna y Flora Silvestres (CITES). Este sistema automatiza, gestiona y controla la asignación de permisos para el comercio internacional de especies amenazadas. eCITES se presentó durante las reuniones de la Decimoctava reunión de la Conferencia de las Partes (CoP18) en Ginebra en 2019. “La solución contribuye significativamente a nuestros esfuerzos colectivos globales para combatir el comercio ilegal de especies de flora y fauna, particularmente en países sin acceso a sistemas electrónicos de

gestión de permisos”, describe Shamika Sirimanne, Directora de la División de Tecnología y Logística de la UNCTAD.

El Programa ASYCUDA también está trabajando para mejorar los sistemas existentes como ASYCUDAWorld con nuevas funciones como el módulo de “Selectividad dinámica”, que puede ser conectado automáticamente al sistema. Este módulo ayuda a los servicios de aduanas a establecer una estrategia de gestión de riesgos eficaz y eficiente basada en la focalización automática y el establecimiento de perfiles de riesgo. ASYCUDAWorld también se ha enriquecido con una funcionalidad que automatiza y facilita el despacho inmediato de mercancías para los operadores de envío urgente.

Por último, el Programa también ha mejorado el componente de creación de capacidad mediante la implementación de una plataforma de aprendizaje electrónico. Consiste en videos tutoriales, documentos y ejercicios destinados a dominar el uso y la configuración de sistemas de ASYCUDA como ASYCUDAWorld, ASYREC y eCITES. Esta solución es un complemento útil a la formación presencial, especialmente útil durante el aprendizaje remoto forzado por la pandemia.

En los siguientes artículos, lo invitamos a descubrir más sobre estos nuevos sistemas, módulos y asociaciones. Ofrecen soluciones interesantes a los problemas que enfrenta la comunidad comercial y confirman el reconocimiento internacional de ASYCUDA como un programa de desarrollo especializado en automatización e innovación.

Lo invitamos a enviar cualquier comentario que pueda tener a asycuda@unctad.org. También puede seguirnos en nuestra cuenta oficial de Twitter: [@AsycudaProgram](https://twitter.com/AsycudaProgram) y LinkedIn.

Programa ASYCUDA,

División de Tecnología y Logística,
Ginebra, septiembre de 2021



“The ASYCUDA Automatic Data Notification (ASYADN) module enables WTO Member States to fulfil their tariff and trade data notification requirements by increasing accuracy and transparency. WTO’s IDB will be significantly enhanced thus contributing to more precise and timely analysis of national and regional preferential tariff initiatives and agreements across the globe.”

Salma Ben Haji,
ASYCUDA Programme Management Officer

Strengthening the statistical capacity of customs authorities plays a key role in facilitating international trade and is essential for the multilateral trading system. Members of the World Trade Organization (WTO) are required to regularly update a range of trade policy related datasets held in the WTO’s Integrated Database (IDB), including annual notifications on tariffs and import data. Every year, WTO members provide data at the most detailed product level, including but not limited to national import tariffs, value and volume of imports by country of origin, tariff line, preferential applied tariffs, and import statistics.

Some WTO members have difficulties obtaining the required information and reporting them in a timely manner, despite using national ASYCUDA systems that handle customs procedures, collect

trade statistics, and are an excellent source of relevant information for notifications.

ASYADN enables members to automate recurring data submissions through a dedicated software module which is part of ASYCUDAWorld, the latest generation of ASYCUDA customs procedures management system. The module, implemented in national customs’ secure environment, is built to aggregate datasets to predefined levels. These aggregated datasets on trade flows, customs duties, and preferential trade arrangements, will directly enhance statistical capacity and improve analysis of national authorities, allowing WTO notifications to be generated at defined intervals in a timely and efficient manner (figure 1).

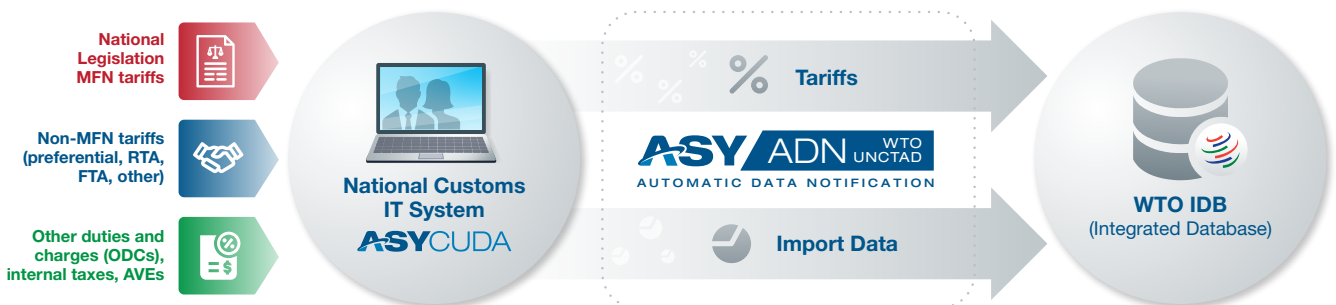


Figure 1: Facilitation of WTO data notifications using ASYCUDAWorld

ASYADN is a tool that automatically extracts data from ASYCUDA national customs IT systems for analysis and dissemination of trade-related information. Its activation, functional configuration, and utilization are very simple. The system administrator sets when to periodically

send automatic notifications to WTO (figure 2) and, additionally, manual push notifications are allowed. Also, via the mapping table, the system can link between tariff column rates and the actual tax code it represents.

Transmission Configuration	
Country Code	CH
Country Name	Suisse
Tariff Transmission	
Tariff Active	<input checked="" type="checkbox"/>
Transmission months for yearly transmission	3,10
Transmission day for yearly transmission	15
Transmission day for monthly transmission	16
Import Transmission	
Import Active	<input checked="" type="checkbox"/>
Transmission months for yearly transmission	10
Transmission day for yearly transmission	17
Transmission day for monthly transmission	18

Figure 2: Activation screen

Taking advantage of ASYCUDA's vast customs data warehouse, tariff and trade data is extracted dynamically at the designated dates and times,

and securely transferred to the WTO's IDB. The transfer includes the latest tariff rates, import data, and relevant reference data (figure 3).

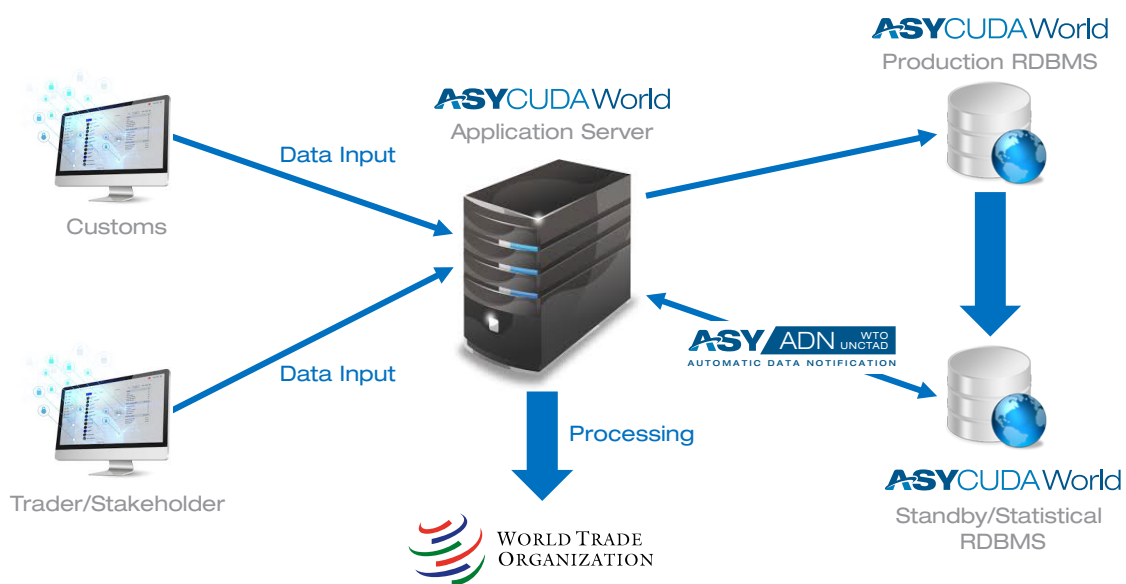


Figure 3: Technical architecture and dataflow of the notification tool within the customs IT environment

The project has two phases: the signing of an MOU between WTO and the government, and the implementation of the software module.

In phase one, the WTO Secretariat works with interested members and observer governments on a standard agreement aligned to existing IDB notification requirements⁴. The agreement specifies the scope of the data notification such as: applied duties and aggregated trade information; and intervals of automatic data notifications. In phase two, ASYCUDA staff and national customs experts deploy the software module on a national server aligned to the

agreed scope, generating aggregated tariff and trade datasets. The implementation includes the training of customs officials to modify the software module and learn about WTO tools for data analysis.

The module will be piloted in Africa and Asia, in Coted'Ivoire and Madagascar. Bangladesh, Cabo Verde, Nepal, Togo, and Zimbabwe have also expressed their interest. Madagascar customs, in cooperation with ASYCUDA, is currently configuring and finalizing the deployment of the module which is expected during the Q3 2021.



Data redundancy and inconsistency is a major reason for slower release of goods and constitutes an important obstacle to trade facilitation. Indeed, different economic operators (transporters, brokers, declarants, ship data providers, etc.) are asked to provide the same data on different e-documents and systems. Furthermore, customs authorities require richer and more detailed information, especially on manifests and waybills, to analyze and mitigate risk better.

To avoid this, customs authorities have recently collaborated with ASYCUDA on the development of interfaces that allow for the exchange of trade data between external systems and ASYCUDAWorld. Although effective, the solution lacks efficiency and any new interfaces impact the whole system. Data integration uses server capacity and the number of data integrations is growing, which overloads both the system and the database, impacting overall performance.

The problem is particularly acute when managing integrations – each having their own interface – during upgrades making the process more time-consuming and expensive.

Customs authorities need a standard framework for development that facilitates deployment and monitoring. A single standardized platform for data processing and integration should be implemented without affecting ASYCUDAWorld's performance and scalability while relieving it from establishing remote connections, exchanging messages, converting and integrating data.

ASYHUB is a standardized data integration platform that uses a secure channel to connect external systems with ASYCUDAWorld. It is aligned with the WCO Data Model version 3.8.1 and International Maritime Organization (IMO) Compendium on Facilitation and Electronic Business requirements. It allows customs IT managers to administer and monitor all data

⁴ <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/MA/367.pdf>

integration tasks from one single dashboard. The dashboard displays a real-time overview of all data integrations with external systems. System administrators can monitor the status of each procedure, including options to start, suspend, or stop any procedures directly from the interface. Through automated notifications or via the dashboard, errors can be detected quickly and addressed swiftly.

The first external system interfaced with ASYCUDAWorld through ASYHUB is the

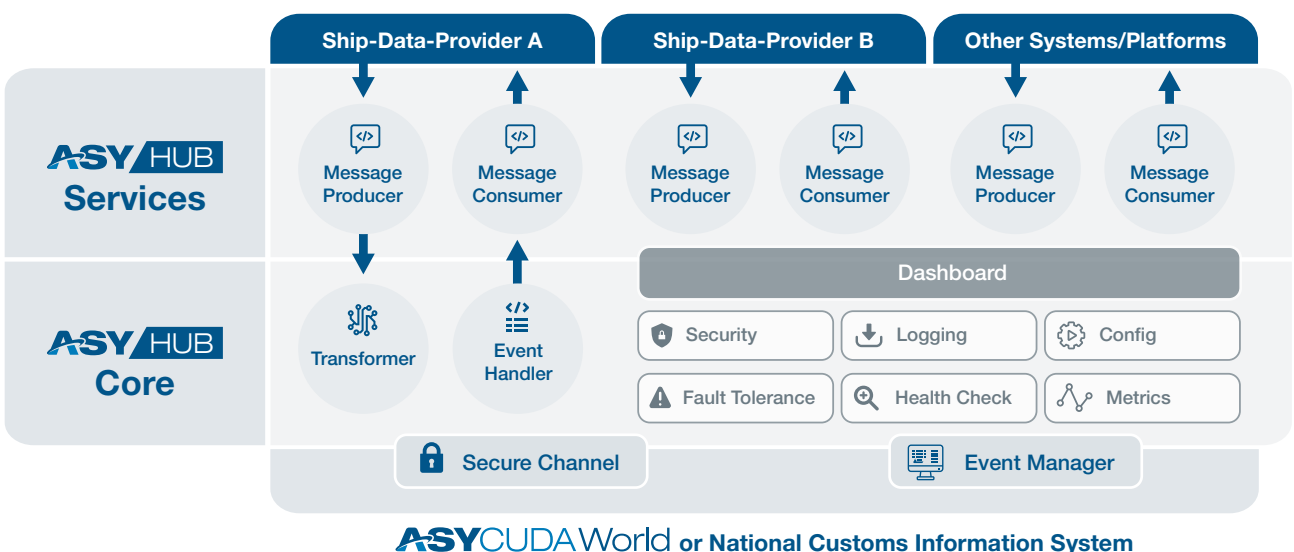
ship data providers', TradeLens. It enhances ASYCUDAWorld's cargo manifest by facilitating the processing of electronic sea cargo manifest pre-arrival (entry) and pre-departure (exit), while harmonizing and streamlining the information exchange between ship data providers and customs authorities (figure 4). The administrative burden for ship data providers is reduced and goods are released quicker. It also enables a more efficient risk analysis and targeting by providing customs authorities with richer information.



Figure 4: Processing of electronic sea cargo manifest pre-departure and pre-arrival

ASYHUB is a cloud-native platform that uses micro service-centered principles. Microservices are a software architecture style that forms a complete system as a collection of several

independent services (making maintenance easier). ASYHUB enables horizontal scalability: executed in parallel across multiple machines. The global architecture is summarized in figure 5.



ASYCUDAWorld or National Customs Information System

Figure 5: ASYHUB global technical architecture

ASYHUB consists of a standard Application Programming Interface (API) for searching, loading, updating, or inserting e-Documents from or into ASYCUDAWorld. It facilitates access to customs data and documents to authorized entities (figure 6). ASYHUB is designed to be extendable by creating new services, and developers can use existing and defined components to build upon it. Developers of services can reuse the same framework and mechanism for creating and managing remote

connections, logging and querying messages, authenticating users and roles, extracting e-documents' data and performing operation on ASYCUDAWorld e-documents.

Such technologies empower organizations to build and run scalable applications in modern, dynamic environments such as public, private, and hybrid clouds.

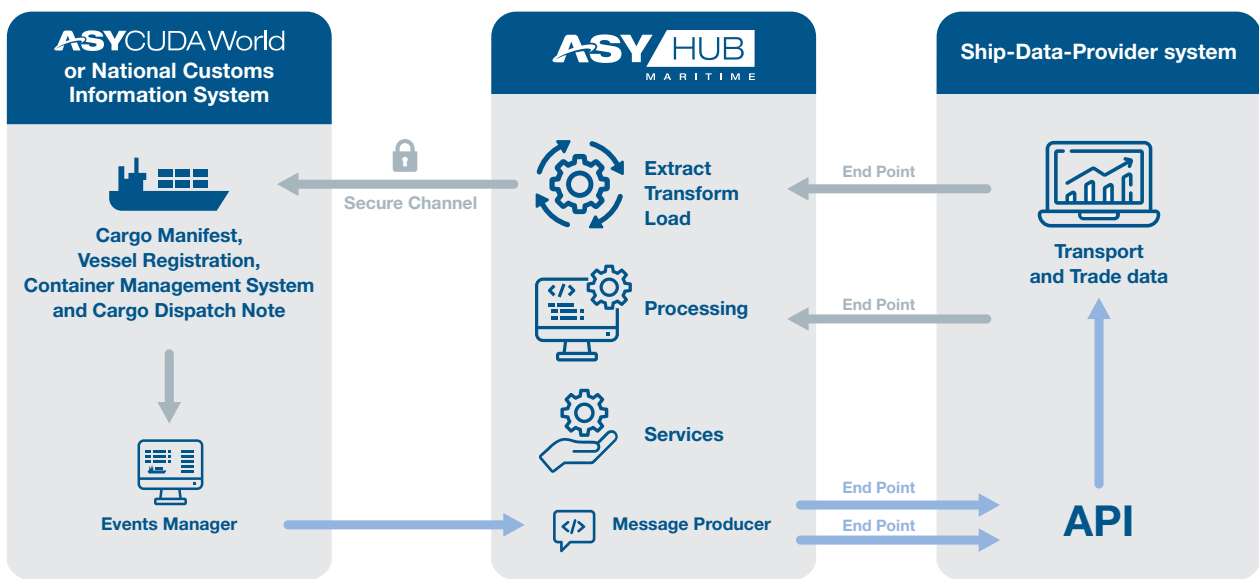


Figure 6: **ASYCUDAWorld interconnection with a ship-data-provider system through ASYHUB**

The ASYHUB project implementation consists of 3 phases – to develop the solution, then implement it in 2 pilot countries, and finally to upscale the approach in potentially all ASYCUDA user-countries. As of Q3 2021, and following

the successful development of the solution, Cambodia and Sri Lanka are piloting ASYHUB's implementation.

ASYREC

RELIEF CONSIGNMENTS

Severe natural disasters are becoming increasingly frequent, making relief consignments and their clearance a key aspect of humanitarian assistance. Concerningly, international humanitarian assistance consignments can quickly create bottlenecks at borders (figure 7) and the timely processing of these in crisis situations needs improving. Automating, streamlining, and standardizing processing procedures can expedite the release of relief imports. However, any solution must be compatible with the international standards that are compliant with automated customs systems to accelerate the processing of international relief for humanitarian crises, natural disasters, or complex emergencies – the ultimate objective being to save lives.



Figure 7: Food items that expired by the time they were accessible

To better respond to these life-saving emergencies, UNCTAD and OCHA have partnered to develop a dedicated solution, fully integrated with ASYCUDA systems. The Automated System for Relief Emergency Consignments (ASYREC) provides for the

smooth and efficient coordination of humanitarian relief imports. Of utmost importance for the humanitarian aid coordination mechanism, the Global Logistics Cluster, the tool ensures that the humanitarian response to an emergency crisis proves logistically timely and effective.

ASYREC automates aspects of the humanitarian response, such as: the automatic activation of the simplified procedure by the affected country's request/acceptance of international assistance; the automated streamlining of procedures with clear definition of roles, responsibilities, and eligibility of stakeholders/humanitarian donors in the system prior to emergency; the easy identification of humanitarian consignments; the effective management and control of donations, including unsolicited ones; and the efficient post-clearance audit control and assessment of humanitarian operators' compliance, performed by customs and disaster management agencies.

Moreover, in today's COVID-19 pandemic context, and in line with OCHA's vision of a "world that comes together to help crisis affected people to rapidly get the humanitarian assistance they need"⁵, ASYREC enables the prioritization and clearance of consignments of medicines and medical equipment. It can support Member States in their fight against the pandemic by accelerating the clearance of materials to assist the most vulnerable by: facilitating the cross-border movement of relief and essential supplies; coordinating controls using risk-management techniques; and enhancing cooperation and coordination between customs and eligible organizations.

ASYREC provides national disaster management agencies, border agencies, and the humanitarian

5 https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/this_is_ocha_2020_en.pdf

community in general with the support required to manage emergencies in phases (figure 8).

Phase 1, the pre-emergency or preparedness stage, establishes the list of emergency relief items, sets the applicable customs procedures and simplifications (figure 9), registers organizations involved in relief operations, and provides simplified customs declarations, relief from import duties, and temporary admission.

Phase 2, the emergency or response stage, initiates the emergency registration, registers the government priority relief items, activates the pre-arrival lodging of simplified e-declarations, and processes the arrival of goods with coordination of controls.

Phase 3, the post-emergency or recovery stage, performs post-audit, assesses humanitarian operators' compliance, and updates the list of priority items and eligible organizations as required.

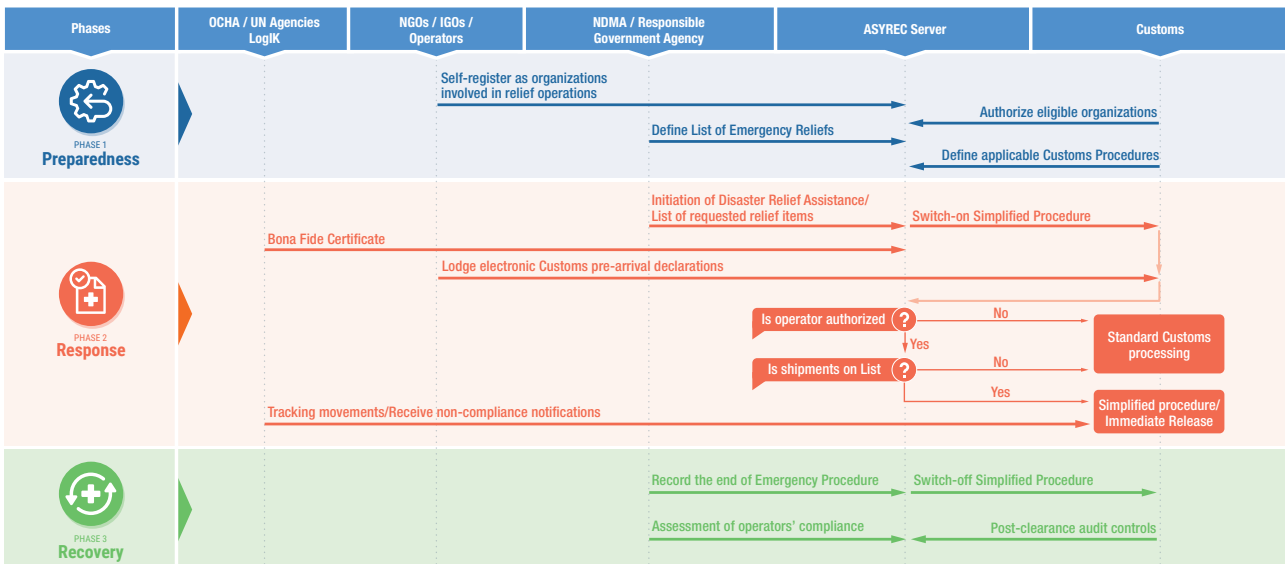


Figure 8: ASYREC's phases to manage emergencies

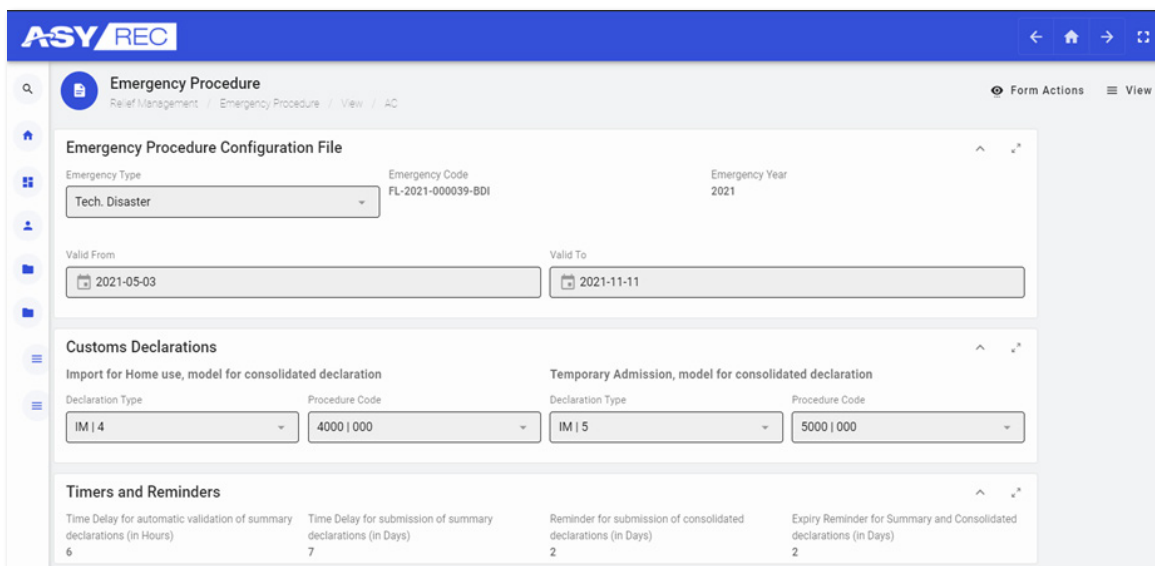


Figure 9: Emergency Procedure Configuration on ASYREC

ASYREC is open source and uses the latest technologies. The source code is made available so that it can be adapted to national requirements. It is compatible with all Database Management Systems (MSSQL, Oracle, MySQL, PostGreSQL) and customs IT systems, as an online solution or as a standalone system where the customs IT system is no longer operational. The application can be hosted in-country or at any agreed datacentre worldwide. The system and its data are owned by customs and the National Disaster Management Authority to ensure system sustainability and to avoid any external and/or unauthorized use of data.

ASYREC is aligned with established international standards, for instance the revised Kyoto Convention, the Istanbul Convention on Temporary Admission, and the 2011 Resolution of the Customs Cooperation Council on the Role of Customs in Natural Disaster Relief.

ASYREC is available to interested countries free of charge (no purchase cost or license fees), within the framework of technical assistance agreements for the provision of training and support during the customization, testing, piloting, and rollout of the national ASYREC system. It involves the National Disaster Management Authority, the customs department, and the humanitarian aid community.

The duration of such a technical assistance project is estimated at around six to twelve months. However, the effective duration of the project and the associated budget to cover the cost of expertise, capacity building, and deployment, are subject to the specific conditions and requirements of interested countries.



Customs administrations worldwide have benefited from ASYCUDA's powerful risk management, or "selectivity", engine to target consignments in an efficient and intelligent manner.

Article 7.4 of the 2017 Trade Facilitation Agreement (TFA) binds and encourages WTO Member States to establish a risk management system for customs control which should be focused on high-risk consignments. In addition to this, the World Customs Organization (WCO) SAFE Framework of Standards 2.4 to 2.8 recommends to all Member States to use "sophisticated methods to identify and target potentially high-risk cargo, including – but not limited to – advanced electronic information about cargo shipments to and from a country

before they depart or arrive; strategic intelligence; automated trade data; anomaly analysis; and the relative security of a trader's supply chain". SAFE, like article 7.4 of the TFA, also says that Member States should establish a risk management system and set up targeting criteria.

Bearing in mind these sets of recommendations and standards, ASYCUDA introduced Dynamic Selectivity to be plugged in automatically by any country using selectivity in ASYCUDAWorld (figure 10). It further assists customs intelligence in achieving efficient and fully automated risk management at different stages of the clearance process. As opposed to the current selectivity that executes targeting criteria entered manually, with Dynamic Selectivity, the system automatically identifies targets and manages risk profiles

based on history of examinations, inspection acts, and frauds found in the database. Based on a machine learning model, the system extracts and analyzes data elements (declarant, importer, country of origin) from processed e-documents to calculate a score that determines the level of customs inspection (i.e., selectivity lane).

Among the advantages of Dynamic Selectivity are:

- Increased revenue through more efficient potential fraud detection
- Decreased customs clearance delay
- Automatic management of risk profiles

- Decreased fraud occurrence
- Automatic feedback and enhancement of the selectivity engine through implementation of a machine learning model
- Enhancement of selectivity criteria based on statistical and mathematical models
- Reduction in the predictability of lane selection
- Enhancement of the inspection act to record fraud per item
- Facilitation of the implementation of Agreed Economic Operators (AEO)

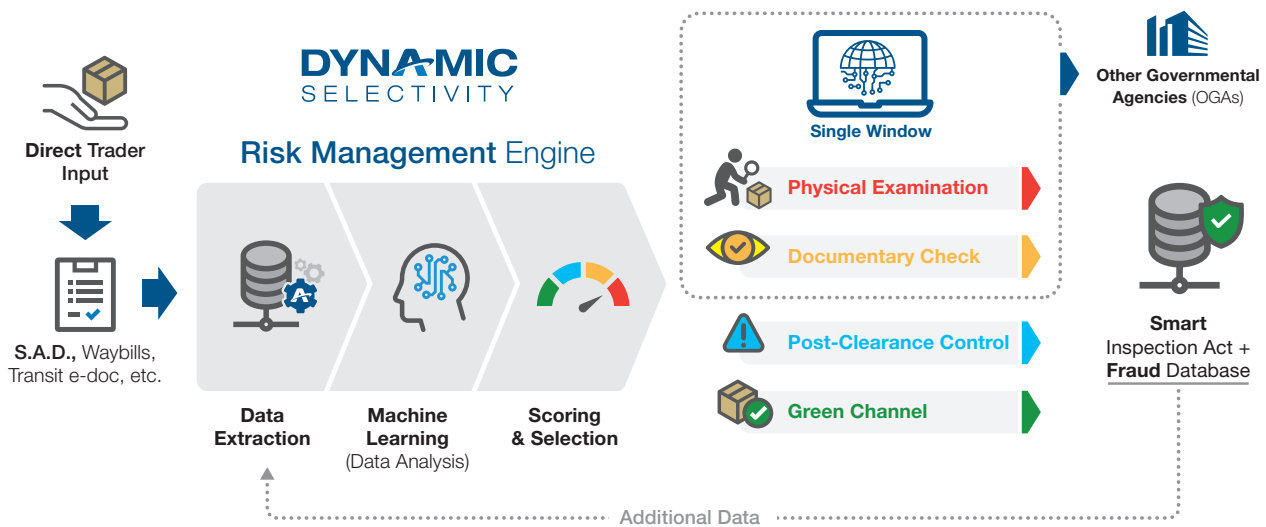


Figure 10: **Dynamic Selectivity risk management process**

The current ASYCUDAWorld risk management module is modified to enhance the selectivity criteria, add a scoring system, and enhance the inspection act. A machine learning component is added to perform detailed but rapid analysis of targeted risk data, based on past examinations and fraud, to assign a score and the degree of inspection.

This feature will be an integrated part of an upcoming release of ASYCUDAWorld. An upgrade of ASYCUDAWorld will be necessary to integrate the modifications to existing modules and to add the machine learning component to the customs IT environment. A comprehensive use of the already-existing ASYCUDAWorld selectivity module is a recommended prerequisite to reap the full benefits of dynamic selectivity.



“As a result of the excellent cooperation and full commitment of the Sri Lanka Department of Wildlife Conservation, a tailor-made release of UNCTAD ASYCUDA’s eCITES permit management solution was deployed offering a unique opportunity for Sri Lanka to combat the illegal trade of endangered species, to protect their biodiversity for future generations, and to move forward in achieving SDG 15.”

Marianne Dumont,
ASYCUDA Programme Management Officer

Countries need to improve their operational capacity to control the export, import, and introduction by sea of specimens of endangered CITES-listed species of flora and fauna, and products derived from or contributing to the conservation of biodiversity and the environment. In order to do that, they need a system that allows for the application, processing, issuance, and reporting of permits for the import/export of endangered CITES-listed species.

ASYCUDA already provides several permit management solutions integrated with customs systems. So, in December 2018, CITES and ASYCUDA signed a cooperation project for the development of eCITES, an online solution for electronic permit management to improve the management authorities’ capacity to control trade of CITES listed species (figures 11 & 12). eCITES is of particular interest for CITES Parties with low to medium permit volumes and for Parties from developing and least developed countries.

eCITES is a cost-effective, easy to deploy, and user-friendly system for interested national management authorities. The solution intends to maximize business value and maintain cost efficiency while ensuring a seamless transition from the current working procedures to the

new system. It includes – but is not limited to – automation of the CITES permit procedure, transparency and accountability in the permit process, interaction between stakeholders, faster and better controlled permit process, conformity with the provisions of CITES Convention, electronic permit exchange with customs and trade IT systems and electronic customs risk management.



Figure 11: eCITES login screen, main dashboard & electronic application form

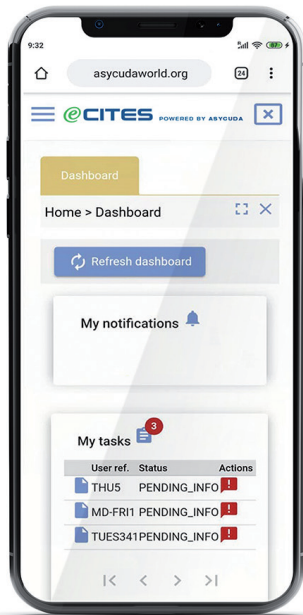


Figure 12: eCITES mobile application

In February 2020, Sri Lanka piloted the implementation of eCITES (figure 13). Beforehand, the solution was tailored and configured to comply with the Department of Wildlife Conservation requirements and regulations, and stakeholders were trained on its efficient use and configuration. In 2020, more than 700 permits were issued.



Figure 13: eCITES launch ceremony in Sri Lanka

In 2021, the ASYCUDA Programme enhanced eCITES with new functionalities and design (figures 14 & 15), improving usability and procedure handling. A new layout for document forms and data grids was introduced as well as a dark mode that is easier on the eyes and less energy consuming for smartphone batteries. Moreover, a new interface was developed to define rules for the calculation of processing fees.

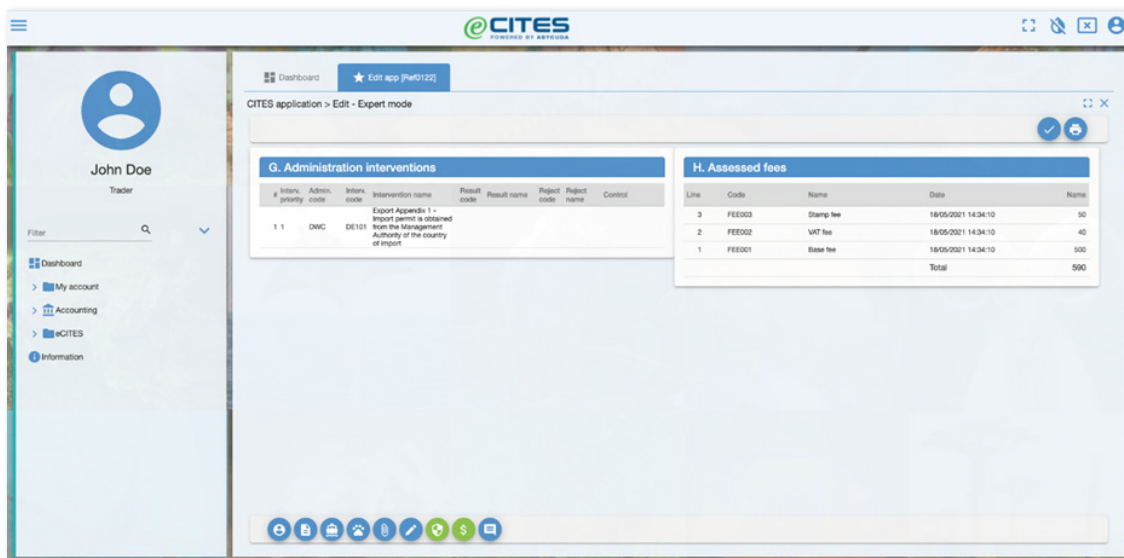


Figure 14: eCITES new dashboard

Code #	Name	Type of concept	Type of value	Value	Document code	Document name	Valid From	Valid To
FEED01	Base fee	FEE	FIX AMOUNT	500	CitesApplicationModel	Cites permit	20/11/2020 00:00:00	
FEED02	VAT fee	FEE	PERCENTAGE	8	CitesApplicationModel	Cites permit	20/11/2020 00:00:00	
FEED03	Stamp fee	FEE	PERCENTAGE	10	CitesApplicationModel	Cites permit	20/11/2020 00:00:00	

Figure 15: eCITES new payment feature

eCITES is a cloud-based system. The technical infrastructure of the core service is to be initially hosted and maintained by UNCTAD ASYCUDA. It is intended to be maintenance free for the management authority and does not require advanced technical expertise or in-house IT systems.

As the system is already developed and accessible online (it was showcased at CITES COP18), it can be deployed in a country at short notice, being implemented through a technical assistance agreement between UNCTAD and

the beneficiary country. The implementation steps include: needs assessment and permit process; start up and rollout missions; national configuration; training of staff and traders; post implementation online support; and troubleshooting.

Countries own their eCITES implementation including the source code of the system. A Party may always choose to operate the solution under their own responsibility and in their own country, or within a regional eCITES centre that is supported by a group of countries.

e-learning

Capacity building has always been an important component of ASYCUDA's technical cooperation projects. Indeed, the ASYCUDA Programme is committed to ensuring system sustainability and ownership through - basic and advanced - technical and functional trainings. Local customs staff should be able to maintain and upgrade ASYCUDA systems and servers, as well as configure and enhance their functionalities and features.

Since ASYCUDA systems are built based on state-of-the-art technology and advanced experience in trade facilitation, classroom trainings are long (approx. 2 weeks each) and complex. Participants need to periodically review the concepts covered during training and extended practice for at least 2 months following the completion of the course. Moreover, due to the COVID-19 pandemic travel restrictions, ASYCUDA staff has been unable to deliver the

in-person, high quality trainings - virtual sessions have been delivered but cannot replace face-to-face interaction.

The Programme has therefore decided to implement an e-learning platform for all its systems' users, intended to complement ASYCUDA classroom trainings. Blended learning with classroom training and e-learning is considered an ideal combination, but also convenient for customs staff that wish to deepen their knowledge and expertise during the travel restrictions.

The ASYCUDA e-learning solution is based on Moodle, the most efficient Learning Management System platform. It is inspired

by the TrainForTrade e-learning platform, UNCTAD's reference programme in capacity building. It combines different learning styles: visual, auditory, reading, and experiential. UNCTAD staff designed the solution to meet the Programme's and users' requirements and expectations. As of mid-2021, 3 functional courses are available covering ASYREC, eCITES, and ASYCUDAWorld in English (figure 17) and French. The Moodle includes high-quality video tutorials (figure 19), documentation, articles written by experts, theoretical exercises, a satisfaction survey, and a discussion forum for use by participants and moderators. The platform will also be complemented with live chats and virtual training sessions.



Figure 16: ASYCUDA e-learning homepage

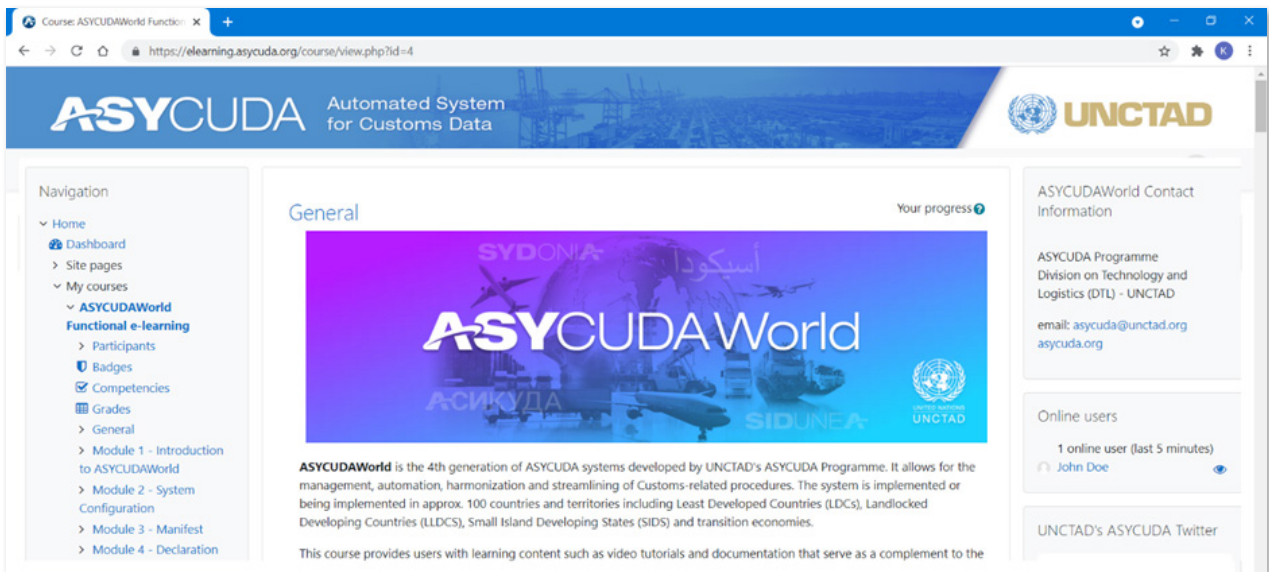


Figure 17: ASYCUDAWorld e-learning course introduction page

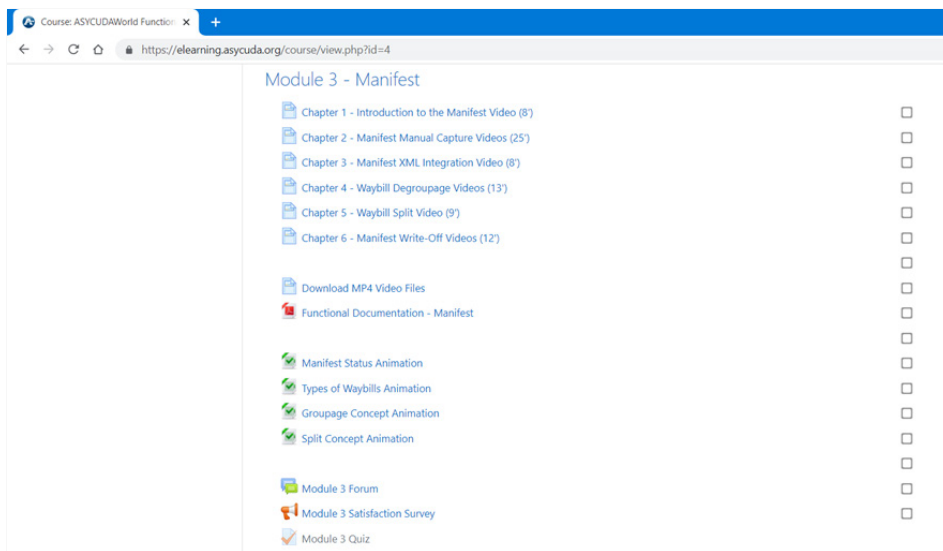


Figure 18: ASYCUDAWorld e-learning course module content

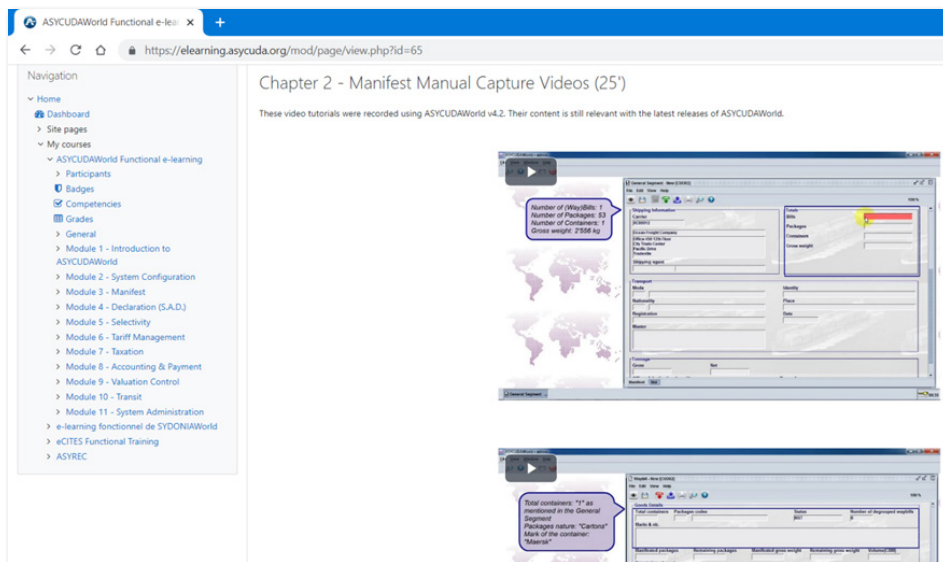


Figure 19: ASYCUDAWorld e-learning course video tutorials

Express Courier Enhancement

Express consignments require immediate release so ASYCUDAWorld needs to be able to detect these at the very beginning of the goods clearance process, which starts with the registration of the manifest and its waybills before the goods arrive.

In this context, ASYCUDAWorld is now enhanced with a feature that automatically detects the category of goods being carried in every waybill and facilitates the immediate release of goods for express courier operators. This solution is based on the sharing of information via electronic data exchange.

The ASYCUDAWorld waybill has been adapted to control the declared customs' value, the goods' classification, and analyze any specific handling information that might be helpful in identifying the express consignments (figure 20).

Following the WCO goods categories model, customs authorities can setup through the system's national configuration the requirements for the four goods categories i.e.:

CAT 1: Correspondence and documents

CAT 2: Low-value consignments for which no duties and taxes are collected / Non-dutiable goods

CAT 3: Low-value dutiable consignments (simplified declaration)

CAT 4: High-value consignments (full declaration)

In the case where the goods categories section is not defined and remains empty, then the system will follow the normal process as in previous releases.

The screenshot shows a 'Goods Details' form. A red arrow points to the 'Specific Circumstance Indicator' field, which contains 'F31'. Below this, a table lists package details:

Manifested packages	Remaining packages	Manifested gross weight	Remaining gross weight	Volume(CBM)
11	11	114,00	114,00	0,75

Below the table, 'Description of goods' includes 'Harmonized Commodity Code: 140490' and 'Description: VEGETABLES PRODUCTS'. At the bottom, 'Declared Values and Seals Details' shows 'Value for customs' as 95,64 EUR and 'Value for transport' as 120,00 EUR.

Figure 20: Identification of express consignments in a waybill

When CAT 1 is identified, the waybill gets the special status “Cleared” in ASYCUDA. The express operators can access the waybill and print the release order for immediate release without going through goods clearance. When

CAT 2 is identified, the waybill is assigned a special status “Selected for control” waiting for the operator to provide the HS code (at least 6 digits). Once this is done, it goes to the “Cleared” status and the goods can be released.

For CAT3, ASYCUDAWorld has been enhanced with 2 new modules ASYEXPRESS and ASYRISK.

ASYEXPRESS allows customs authorities to configure the exact conditions that apply for express simplified declarations in their national

environment. The configurator provides a means to list authorized businesses and economic operators that can access this facility. The Express Declaration Generator allows express operators or their clearing agent to link a waybill of category 3 to an automatic generation of a simplified declaration (figure 21).

The screenshot shows the 'Express Declaration - Generator' window. It is divided into several sections: 'Waybill Details', 'Taxation', 'Traders Details', and 'Declaration Details'. Red arrows point to specific fields with explanatory text.

Waybill Details: Includes fields for Waybill barcode, Office of departure / arrival (CUO11 Zurich Kloten Airport), Voyage number (TK0605), Date of departure (19/11/2019), and Waybill reference number (235-60178532).

Taxation: A table showing tax types and amounts.

Type	Tax base	Rate	Amount	MP
ICD	95,64	28,60	27,35	1
VAT	122,99	15,00	18,45	1
STF	100,00	10,00	100,00	1
Total			145,80	

Traders Details: Includes fields for Exporter (GLOBAL AFFAIRS CANADA) and Consignee (THE CANADIAN HIGH COMMISSION).

Declaration Details: Includes Model & Reference (JM 4 A000 000), Reference number (2020 SIMPLIFIED01), Declarant (Broker Services), and Goods (Flour, meal and powder of the dried leguminous vegetables of 0713).

Annotations:

- Waybill details captured or automatically filled by waybill barcode
- STF is a global tax, the system is able to automatically retrieve global taxes from taxation rules if any--
- Model and procedure automatically filled from the configuration where we set up what is the model being used for express
- Underlined in red mandatory information to be provided. Other info comes automatically from waybill
- Automatically filled from waybill and can be overwritten
- Broker details automatically filled. By giving access to broker we avoid ownership problem on waybill

Figure 21: Automatic generation of express declaration

ASYRISK was designed to provide a modern approach to risk assessment and cargo control at multiple stages: before arrival and pre-loading;

at arrival confirmation of the manifest; and when the cargo manifest is registered. This module offers a new set of selectivity lists and risk criteria

with a wide set of options (figure 22). In addition, the waybill has been updated to integrate a new application form to clear selected waybills, define

the required interventions, and tools to track waybills selected for high, medium and low risk.

Cargo Risk Management - Criteria

Identification

Code	Administration	Valid From	To
UNDERVALUE		01/05/2020	
Risk Category	Risk Level	Risk Stage	
UNDERVALUE	under valuation	HIGH RISK	
		Cargo's registration	

Properties

Status Activated <input checked="" type="checkbox"/> Suspended <input type="checkbox"/> Expired <input type="checkbox"/>	Mode Production <input checked="" type="checkbox"/> Discussion <input type="checkbox"/> Simulation <input type="checkbox"/>	Created on 16/05/2020 Customized Schedule <input checked="" type="checkbox"/> Feedback Required <input checked="" type="checkbox"/>	Linked Customs Offices <input type="button" value="+"/> <table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>CUO11</td> <td>Zurich Kloten Airport</td> </tr> <tr> <td>CUO05</td> <td>Geneve Port Franc</td> </tr> </tbody> </table>	Code	Name	CUO11	Zurich Kloten Airport	CUO05	Geneve Port Franc
Code	Name								
CUO11	Zurich Kloten Airport								
CUO05	Geneve Port Franc								

Risk Description
Under valuation for spirits and cigarettes

Risk Area
waybills in wrong category

Instructions
Check waybill
Goods examination required

Notification Required

Email(s) contact for automatic notifications
wasim.gahbiche@gmail.com

Required Intervention(s)

Code	Name
10	Documentary controls
41	Identification of consignment ...

Figure 22: Express Courier Risk Criteria

An upgrade of ASYCUDAWorld will be necessary to integrate the modifications to existing modules and to add the ASYRISK and ASYEXPRESS modules to the customs IT environment. Functional training will be required to configure and maximize use of the features.

Testing will start in Member States in the Caribbean region and in the Balkans during the last quarter of 2021.