COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

Twenty-third session
Geneva, 23 to 27 March 2020

Submissions from entities in the United Nations system, international organizations and other stakeholders on their efforts in 2019 to implement the outcomes of the WSIS

Submission by

United Nations Economic Commission for Europe

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 23rd session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

Progress made in the implementation of the outcomes of the
World Summit on the Information Society
at the regional and international levels

I.   **EXECUTIVE SUMMARY**

1.   The implementation of the outcomes of WSIS by the United Nations Economic Commission for Europe (UNECE) remains focussed on areas related to economic development and sustainability.

2.   The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) continually develops and revises recommendations regarding business-to-business transactions and trade facilitation measures which often rely on the use of ICT solutions. In 2019, work was carried out on the implementation of various ICT-related initiatives in areas such as Blockchain, Internet of Things, eAgriculture standards, eBusiness standards and semantic data models.

3.   After completing two White Papers on the use of Distributed Ledger Technologies (including Blockchain) to support electronic business and trade facilitation, UN/CEFACT launched new initiatives on the interoperability of such ledgers. This work included test implementations in the Asia-Pacific region.   Work continued on the development of E-business standards to help businesses and governments exchange information in many areas, including transport, supply chain, customs, agriculture, procurement, insurance and finance.

4.   UN/CEFACT has simplified the use of its semantic library of business terms for electronic messages, the UN/CEFACT Core Component Library, with the use of Reference Data Models (RDM). The overarching Buy-Ship-Pay RDM was completed and published in 2019 and joins the already available RDMs for Supply Chain and Multi-Modal Transport.

5.   Access to information and knowledge on environmental matters through the use of electronic tools remains an important area of activity for UNECE, in particular in connection with the Aarhus Convention and its Protocol on Pollutant Release and Transfer Registers (PRTRs). The Task Force on Access to Information has been promoting active dissemination of environmental information, in particular regarding open digital data records, and the use of modern digital technologies. The 2005 Recommendations on Electronic Information Tools are being updated through a consultative process. Case studies have been compiled on the effective use of electronic information tools and related issues to support capacity-building initiatives. In 2019, activities under the Protocol on PRTRs focused on addressing the changing needs of users while reacting to the advancements in information technology. Ongoing work explores ways to bring the Protocol's provisions to modern requirements and promote synergies with reporting under other multilateral environment agreements (MEAs).

6.   UNECE continues to support the development of the Shared Environmental Information System across the pan-European region with the aim to ensuring timely, reliable and high-quality environmental information. Environmental Performance Reviews routinely include a chapter or sections addressing environmental education and access to environmental information.

II. OVERVIEW OF PROGRAMME-SPECIFIC ACTIONS

The following sections describe the work done by the various UNECE subprogrammes to support individual WSIS Action Lines.

A. ACTION LINE C1: THE ROLE OF PUBLIC GOVERNANCE AUTHORITIES AND ALL STAKEHOLDERS IN THE PROMOTION OF ICTS FOR DEVELOPMENT

Trade

7.	The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) develops and maintains recommendations and standards through a collaboration between the public and private sectors to facilitate national and international trade and business transactions. The base guidance on Single Window has been further developed with two major contributions: the completion of the revision of Recommendation 33 (planned to be published in 2020), which is the basic principle of Single Window used internationally, and the publication of Recommendation 37 on Single Submission Portals, which aims to stimulate platforms for business-to-business transactions.

8.	UN/CEFACT worked on a White Paper on how eCommerce platforms can support the integration of micro, small and medium enterprises (MSMEs) in international trade and the measures that government authorities can take to promote such integration. The paper, under the title *Integrated Services for MSMEs in International Trade*, is based on the guiding principles contained in the recently published Recommendation 37.

B. ACTION LINE C3: ACCESS TO INFORMATION AND KNOWLEDGE

Environment

9.	In 2019, UNECE continued to support the development of a Shared Environmental Information System across the pan-European region. The aim is to ensure that timely, reliable and high-quality environmental information, which is essential for evidence-based policies and informing the public, is easily accessible. Under the UNECE Environmental Performance Review Programme, reviews of Albania, Bosnia and Herzegovina, Kazakhstan, Mongolia and North Macedonia were published, including chapters or sections addressing environmental education and access to environmental information.

10.	Activities under the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) aim to promote effective public access to environmental information. In 2019, the Task Force on Access to Information continued to support active dissemination of environmental information, as open digital data records, and the use of modern digital technologies by both public authorities and the general public. In particular, it addressed the provision of information to the public in case of imminent threat to the environment and public health to support work under the Sendai Framework for Disaster Reduction 2015-2030 and the 2030 Agenda for Sustainable Development. Consultations for the preparation of an update of the recommendations on electronic information tools by the 2021 session of the Meeting of the Parties of the Convention have started. This update will take into account the developments in the Shared Environmental Information System, geospatial information management, Earth observation data, e-Government, open government data, reuse of public sector information and other relevant initiatives and technical developments.

11.   The Protocol on Pollutant Release and Transfer Registers (Protocol on PRTRs) to the Aarhus Convention is the only global legally binding instrument to ensure public access to information through the establishment of coherent, nationwide PRTRs. It provides minimum standards for equal rights and transparency in the use of environmental data and offers a legal framework for enhancing public access to information. Free web-based access to geo-referenced environmental data empowers the public, decision makers in government and industry, scientists and journalists to make informed choices. While technical aspects of data gathering and management issues were at the core of activities right after the coming into force of the Protocol in 2009, Parties and stakeholders have now shifted focus towards exploring ways to bring the Protocol's provisions in line with modern requirements and using PRTRs for reporting under other MEAs. Ongoing work covers issues such as comprehensive data gathering and connecting with other electronic databases; modern means to provide information in a user-friendly and integrated way; and promotion of knowledge about use of pollutant releases and transfers for fact-based decision-making.

Trade

12.   The Trade Facilitation Implementation Guide (TFIG) brings together the standards and tools of the UNECE and other organizations in a free, web-based, interactive knowledge management tool. It provides a single source where policymakers and implementers can find essential trade facilitation information. The TFIG has been updated in 2019 in order to further support the implementation of the World Trade Organization's Trade Facilitation Agreement (WTO TFA) including with two new paths to navigate it: on the implementation of the WTO TFA and on supporting MSMEs. Major updates were also provided for the sections on rationalizing trade documents and Single Window.

13.   UNECE, together with the other UN Regional Commissions developed an IT tool covering the achievements of countries in paperless trade and trade facilation. The tool allows to check the state of play of countries' capacities in this area and provides reports on the evolution of digital trade. The tool is available at: https://untfsurvey.org/

C.   ACTION LINE C4: CAPACITY-BUILDING

Environment

14.   The secretariat of the Aarhus Convention and of the Prototocol on PRTRs in cooperation with partner organizations, continued its efforts to strengthen countries' capacities to disseminate and reuse environmental information; establish and improve PRTRs and effectively use electronic information tools for implemenation of and reporting under the Aarhus Convention and its Protocol. The secretariat, in cooperation with the European Environment Agency, organized a workshop on Open Data for the Environment (Geneva, 2 October 2019), which took stock of the outputs of the first meeting on open data and e-government for the environment (Kyiv, 5-6 March 2019) and national round tables in Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova and Ukraine. The discussion focused on good practices, open data maturity reports, and roadmaps for these countries to improve the dissemination and sharing of environmental data through e-governance and open data initiatives. Synergies with initiatives that could make PRTRs and other environmental information or data publicly available to access, reuse and redistribute are being explored further.

Trade

15.   UNECE supports countries in the implementation of measures foreseen in the WTO TFA and other trade facilitation initiatives through training and capacity building conferences in the UNECE region as well as, in cooperation with other organizations, in Western Asia and Africa. In 2019, UNECE

has supported countries in the dematerialization of their documentary requirements as well as organizing capacity building activities on the use of semantic data sets for individual countries' needs.

D.   ACTION LINE C5: BUILDING CONFIDENCE AND SECURITY IN THE USE OF ICTS

Trade

16.   In 2019, UN/CEFACT published two White Papers on the use of Distributed Ledger Technologies (including Blockchain) to support electronic business and trade facilitation measures as well as a general paper on sectoral needs and use cases. This technology has the potential for improving trustworthiness of transactions and allow greater collaboration in a secure environment. Work has begun in 2019 on the interoperability between ledgers in order to ensure a transference of reliability, which is being tested through pilots in Western Asia.

17.   Work started within UN/CEFACT on the creation and management of electronic identities for electronic transactions. This project aims to identify existing major initiatives regarding electronic identities and propose a way forward on how this issue could be approached in a coordinated, harmonized manner.

E.   ACTION LINE C7: ICT APPLICATIONS

1.   C7.B e-Business

Trade

18.   UN/CEFACT continues to develop e-Business standards and clear semantics in order to help businesses and governments to exchange information effectively. The main principle of the work of UN/CEFACT is to identify the base semantic data which that must be exchanged and how this information is related to other business processes along the international supply chain. The result is a complete library of data elements called the UN/CEFACT Core Component Library. This Library covers supply chain activities (invoicing, packing lists, orders…), transport and logistics activities (shipping instructions, transport documents…) and sectoral activities (agriculture processes, finance/payment, insurance…). In 2019, UN/CEFACT produced standards on the Delivery process, Smart Containers, Purchase Order Financing and Data Pipelines.

19.   UN/CEFACT has sought to simplify the use of its semantic library of business terms for electronic messages, the UN/CEFACT Core Component Library. This is done through Reference Data Models (RDM) which create a logical subset of all semantic data and codes required in a specific area of activity. The Buy-Ship-Pay RDM was completed and published in 2019 and joins the already available RDMs for Supply Chain and for Multi-Modal transport. Other RDMs will be proposed in the future to facilitate eBusiness transactions for accounting/audit, agriculture, travel/tourism and other areas. All existing e-Business messages are being updated to support and reflect these RDMs. UN/CEFACT is promoting the use of these standards, notably within the European Union's DG MOVE Digital Transport and Logistic Forum.

2.   **C7.D e-Health**

Trade

20.   The UN/CEFACT Smart Container deliverable released in 2019 provides an innovative use of Internet of Things (IoT). It allows to capture information on container conditions such as temperature and humidity which can ensure the sanitary security of the merchandise. This information can be communicated to the rest of the supply chain ensuring that any necessary sanitary actions can be taken in due time.

3.   **C7.F e-Environment**

Environment

21.   In 2019, the Aarhus secretariat, in collaboration with UNITAR, OECD, EEA, UNEP, OSCE and REC CEE, continued to provide up-to-date information on available electronic tools for access to environmental information and Pollutant Release and Transfer Registers (PRTRs). The related good practices and case studies can be accessed at the PRTR.net global portal, PRTR Learn, the UNECE Public Participation website, and the Aarhus Clearinghouse for environmental democracy .

Trade

22.   UN/CEFACT has developed several messages standards around waste management. Adding to the existing coverage of the Basel Convention on the Transboundary Movement of Waste, UN/CEFACT teams are working on waste analysis and reporting messages in order to have better visibility in this sensitive area of activity.

4.   **C7.G e-agriculture**

Trade

23.   UN/CEFACT has developed the Fisheries Language for Universal eXchange (FLUX) that facililitates better management of fish stocks and contributes to combate illegal and unreported catches. This is an obligatory standard in the European Union that it is implemented in many other countries around the world. UN/CEFACT's Rapid Alert System for Food and Feed (RASFF) facilitates the exchange of information related to health risks in food between exporting and importing countries as well as the recall of batches. The UN/CEFACT eLaboratory Observation Report Message standardizes the exchange of laboratory analysis information across different systems used by multiple stakeholders. Work has also been recently completed on eQuality certificates.

24.   Sanitary and Phytosanitary certification is one of the most widely used certificates for product safety and compliance. UN/CEFACT has developed the eCERT (SPS) standard allowing for an electronic exchange of these certificates between exporting and importing countries as well as the certificate management systems, border clearance processes and the e-business community in general. There are over thirty countries using the UN/CEFACT eCERT standard as well as many multilateral usages such as that of the International Plant Protection Convention.