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Contribution by UNECE

to the CSTD 2020-2021 priority theme on "Using science, technology and innovation to close the gap on Sustainable Development Goal 3 on good health and well-being"

PRIORITY THEME 2: Using science, technology and innovation to close the gap on SDG 3, good health and well-being

United Nations Commission on Science and Technology for Development (CSTD)

Can you give examples of international projects/policies aimed at using science, technology, and innovation for early warning, risk reduction and management of national risks? What are the main challenges confronted while trying to implement these projects/policies?

Examples of use of advanced technologies to promote SDG3 are presented on the report of the advisory group of the United Nations Centre for Trade Facilitation, named: Report on the impact of the COVID-19 outbreak on international trade and logistics and the ways advanced technologies can help overcome such disruptions. Published on the 29th of June 2020 it gives several examples of use of modern technology to help realise SDG3, while sharing emphasis on the possible limitations of these technologies and how to overcome them.

Advanced technologies to realise SDG 3 can be seen through:

Blockchain, IoT, remote control and autonomous vehicles, such as drones, robotic process automation (RPA), 3D printing, artificial intelligence, geolocation services, remote monitoring, and data analytics. These technologies have been leveraged to facilitate international trade by utilizing global digital platforms, digital products, legally recognized digital credentials and new (non-contact) delivery methods. They help realize SDG3 through contactless transactions, safe, resilient, secure and efficient transactions.

These technologies are beneficial for SDG3 because they create a disruption-resilient supply chains, international trade and logistics by benefiting from the dematerialization of business processes, documents and assets, making trade of essential items and services more efficient, secured and always on-going. These technologies also enable a “contact-free” transactions in between persons, reducing risks of potential contaminations.

UN/CEFACT is also developing a recommendation on disaster relief and risk reduction to better assess any types of catastrophes that can strike the world, including the recent pandemic we have seen. This policy recommendation supports governments by providing key considerations and practices for implementing preparedness measures for the facilitation of a large influx of humanitarian relief after a disaster. Specific attention is provided to the immediate emergency response phase of a sudden onset disaster scenario. For the purposes of this recommendation and as a high-level indicator, this has been defined as 0 - 15 days following a disaster. This last project will be published in due time. This paper will develop clear guidance on measures and best practices in order to maintain trade flows in the event of a pandemic such as COVID-19. It will build upon the work of the UN/CEFACT Cross Border Facilitation Measures for Disaster Relief project.

Could you share specific examples, projects or initiatives that have used frontier technologies (e.g., AI, drones, blockchain, 3D printing, etc.) or other forms of innovation in general in addressing the Covid-19 pandemic?

Some concrete examples of the use of advanced technologies (frontier technologies) include the following:

Blockchain technology can be used to fight COVID-19. Once example includes The Covid19 Pass project on the HashNET platform, whose goal is to create the C-19 Pass digital certificate (to be issued by health authorities)) that shows the holder has tested negative for the virus and allows the holder to commute and visit designated venues (C19CNV) Certificates are uploaded to HashNET DLT and are retrieved by the holder’s smartphone app as a reference QR code that can be scanned at C19CNV venues.

Another activity which focused on issuing health certificates is the COVID-19 Credentials Initiative (CCI)15, which aims to support projects developing and deploying verifiable credential solutions to help stop the spread of COVID-19 in a controlled, measurable, and privacy-preserving way. Using industry standards, like the Verifiable Credentials16 by World Wide Web Consortium (W3C), CCI works on architecture guidance that all participants could use to solve COVID-19 credential use- cases, such as a digital certificate that prove a negative test result.

Another technology used are drones. Autonomous drones can deliver medications, masks and hand sanitizer to its elderly in remote areas. A heavy-duty four-propeller drone is loaded with a bag of supplies in the city centre then blasts off across the parched, hilly landscape to reach areas that are remote.

Source:
Tolar.io, "HashNET Distributed Ledger Technology (DLT), 2020, available at: https://tolar.io/hashnet
CCI, "The COVID-19 Credentials Initiative website, 2020, available at https://www.covidcreds.com

Can you provide examples of policies/projects/initiatives aimed at strengthening health innovation systems at the global level? For example, how does your organization support the building of innovative capabilities through investments in R&D and human capital? What projects are in place to stimulate healthcare innovation and effectively address safety, ethical and other concerns?

Examples that strengthen health innovation systems at a global level system include the UN/EDIFACT recommendations. These standards aim facilitate exchange between medical providers on medical prescriptions, services, requests and care claims.

Alongside the UN/EDIFACT standards, UN/CEFACT is always looking at developing a trustworthy blockchain exchange framework to promote the use of this new technology. Strengthening the security and the efficiency of data transactions is fully in line with supporting stronger, resilient and more efficient health institutions. On this basis, UN/CEFACT Standards and UNECE Recommendations provide a global basis for interoperable semantic data exchange including UNECE Recommendation 33 on Single Window and Recommendation 37 on Single Submission Portals (SSPs) together with 200+ UN/CEFACT data exchange standards of UN/EDIFACT UNSMs23 and the UN/CEFACT Reference Data Model subset XML Schemas which are based on UN/CEFACT Core Component Library (CCL).

Could you share case studies of international cooperation that have strengthened health capacities, particularly in developing countries? Can you provide success stories involving global cooperation in academic research networks, STI diplomacy, or initiatives to make healthcare innovations accessible for all?

UN Development Account - Evidence-based trade facilitation measures for economies in transition
The project aims at enhancing countries' exports and cross-border trade in Kazakhstan, Ukraine, Georgia, the Former Yugoslav Republic of Macedonia. Emphasis is put to help these countries recover from COVID-19 trade disruptions and help strengthen their medical services using the UNECE trade facilitation policy recommendations, standards and tools and to develop an evidence-based policy coherence to support implementation of provisions of the WTO Trade Facilitation Agreement.

Strengthening the capacity of the Kyrgyzstan National Trade Facilitation Council to implement the WTO Trade Facilitation Agreement
The project strengthens the capacity of the National Trade Facilitation Committee to implement trade facilitation reforms and to develop a trade information portal with the focus on emergencies and overcoming trade disruptions caused by COVID-19.

Strengthening the capacity of Central Asian countries to implement trade facilitation measures and better integrate into the international rules-based trading system
This project strengthens national capacities of Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan to implement trade facilitation measures and better integrate into the international rules-based trading system. This includes capacity building of policymakers and experts

in NTFCs, regulatory agencies and other relevant stakeholders, to develop and implement trade facilitation policies and measures. This can in turn contribute to the efficient and fast recovery from COVID-19 trade disruptions. This work can be considered by other economies addressing similar situations.

Could you suggest some contact persons responsible for projects/policies, related technologies and international collaboration in this context as well as any experts dealing with projects in this area? We might contact them directly for further inputs or invite some of them as speakers for the CSTD inter-sessional panel and annual session.

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Do you have any documentation, references, or reports on the specific examples on the priority theme in your organization?

Advisory Group on Advanced Technologies in Trade and Logistics report on the impact on how can advanced technologies overcome trade disruptions during COVID-19 times:
http://www.unece.org/fileadmin/DAM/cefact/CF_COVID-19_TF-Response/Report_AGAT_-_Advanced_technologies_in_COVID19_INF5.pdf