COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

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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 Human Settlement Programme

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.

Contribution to Annual WSIS report
UN HABITAT 2019

Executive Summary

UN-Habitat, as the UN programme for sustainable cities and human settlements, sees Innovation and frontier technologies as an important enabler for sustainable urban development. Big data, the internet of things and sensor networks offer new ways for urban managers to make informed decisions and strategic choices. Digital platforms and applications are facilitating dialogue between citizens and decision-makers.

In line with this, UN-Habitat has undertaken the below activities during 2019;

Under action lines 4 and 7, UN-Habitat has organized a Makerthon on Internet-of-Things (IOT) and sensing technologies(#IOT4SDG) during UNHA which trained 45 young innovators to develop STEM solutions to meet selected SDG11 challenges, winning teams developed on a low power, wide area network technology a series of wireless air quality sensors for air quality monitoring with machine learning, water quality monitoring solutions using air quality, resistivity and conductivity sensors, and a measure of other devices to increase cities' capacity to deliver on the SDGs around urban air quality, mobility, water and sanitation provision, air and water pollution. UN-Habitat has also led various sessions and demonstrations on intelligent mobility, smart cities and other emerging digital technologies in UN Habitat Assembly (May 2019) and Asia Pacific Urban Forum (Oct 2019).

Relevant to action line 7 as well, the organization has also deployed urban air quality monitoring devices, powered on GSM to monitor air quality changes as a result of placemaking activities and conversion of roads to walking pedestrian streets. UN-habitat has also launched a POC for integrated PCB circuit for ultra-low-cost, affordable and low power IoT devices powered on LoRAWAN with power autonomy of us 4 or 5 years to monitor urban septic tanks and pit latrines septage leakage and prevent sewage manhole overflow, and an on-demand platform for requesting water provision and wastewater removal services.

Under action line 1, UN-Habitat delivered a local government capacity development and training workshops on the role and use of internet-of-things and digital technologies for improving SDG 6 and 11 delivery on water and sanitation. The organization is also planning upcoming training to sensitize local governments, private sector and civil society data custodians on the importance of regulating for better open data governance, including strengthening data sharing through APIs for open data governance.

Analytical Review

Many municipalities and national governments still lack involvement of private sector in disclosing data in an open, transparent way, which decreases the municipality's visibility and reduces

effective management and timely resolution of issues within the city and keeps citizens perpetually in the dark and unable to optimize their activities due to lack of information.

Cities in the South fare worse because lack of capacity means that the technology discourse is often dominated by sectoral interests, which are more interested in building data siloes than sharing open data. Non-state actors tend to capture a lot of data on citizens, often with little transparency, accountability, and information access by the citizens or data subjects whose data are often used without their knowledge for commercial and other purposes. On the other hand cities lose out by weakly regulating or engaging sectors to disclose data fairly, judiciously and transparently (appropriately bounded within privacy and cybersecurity best practices).

Therefore, there is a lot of work to mobilize and engage non-state actors to share the city's data, providing vital information about the city's metabolic processes, in an open manner so cities can strategically manage infrastructure to accommodate the rapid development in digitally driven urban services.

Further actions

In working towards becoming a digitally mature enterprise, UN-Habitat will be better placed to achieve its mandate of socially and environmentally sustainable towns and cities with the goal of providing adequate housing for all. The organization will pursue innovative high-tech and low-techdigital solution and establish private and public partnerships to place itself able to effectively implement the SDGs, adopted in the Agenda 2030 that focuses action on people, planet, prosperity, peace and partnerships.

UN-Habitat will be working with local government and local water utilities to explore policy innovations in support of "expanded deployment of frontier technologies in cities" as per subprogramme 2.3 in UN-Habitat's Strategic Plan 2020-2023 and will develop Memorandums of Understanding, multipartite agreements between local governments and non-state actors to commit to an action plan/initiatives for implementing open data models/specifications in their cities.