**International Telecommunication Union *(ITU)***

***Call for Inputs: SG report on human rights and loss and damage from the adverse effects of climate change (deadline 31 January 2024)***

*Please provide specific recommendations, if possible, on how to address the critical challenges that have been identified, including actions to be taken at country, regional, and global levels, as well as by different groups of stakeholders, Governments, development agencies, financing institutions, and others.*

**EARLY WARNING FOR ALL**

* In times of increasing climate disasters, climate adaptation will be a critical tool to help countries cope. This includes the Early Warning for All Initiative, where the International Telecommunication Union (ITU) is leading the "Warning Dissemination and Communication" pillar, to look at last-mile connectivity and to ensure that warnings reach the people at risk in time to take action. Today, digital growth presents new opportunities to reach billions of people faster and more effectively, whether before, during, or after disasters. ITU promotes a multi-channel approach where warnings are sent over different communication channels: radio, television, social media, sirens, mobile phones, satellite, etc. ITU endorses an inclusive, people-centered approach that uses existing community-based infrastructures and locally-led feedback mechanisms to ensure messages are understandable and actionable. As only very few countries take advantage of mobile early warning systems, ITU is emphasizing the opportunities in this area: Today, ninety-five percent of the world's population has access to mobile broadband networks and 78 percent of the population owns a mobile phone. This makes mobile networks an incredibly powerful communication channel to alert populations about an imminent hazard. The Action Plan for this initiative, launched during COP 27, calls for the promotion and implementation of geo-located mobile-based early warning services using cell broadcast and/or location-based SMS, as a critical element for 'warning dissemination and communication'.

**TECHNICAL STANDARDS**

* Technical standardization can play a crucial role to address the critical challenges concerning the respect of human rights in the context of avoiding the effect of climate change. Indeed, climate change threatens the effective enjoyment of a range of human rights including those to life, water and sanitation, food, health, housing, self-determination, culture and development.

Indeed, more than ever international cooperation is needed to reach the full potential of digital decarbonation solutions and we recommend to include decarbonization considerations in technical recommendations.

In a rural context, tree types of recommendations can be taken. The first one will focus on **farming advisory and peer support**. The second one will focus on **digitally mapping soils to measure carbon emission**. The third one will aim to **facilitate reforestation** through the coupling of machine learning algorithms (prioritizing sites via image recognition) and drones (providing access to on-site data), and reducing deforestation using digital monitoring tools such as remote sensing imagery.

In an urban context, four types of recommendations can be taken. The first one will support **remote work** by reducing energy consumption through policy recommendations aiming to generalize remote work adapted to different socio-professional profiles. Ideally, office buildings should be closed to maximize decarbonation earnings. The second one will aim to **reduce important transport volumes** through the use of e-commerce. It will reduce greenhouse gas emissions linked to transport via the generalization of e-commerce coupled with shared merchant fleets between companies and less carbon-intensive fleets (bicycles in the case of last mile delivery). The third one will **optimize road traffic** using Machine Learning to relieve congestion in high-traffic areas and reduce traffic jams, which are a source of energy consumption. The last action will ensure the traceability of waste, from collection to recovery in treatment and recycling plants, using geo-located selective sorting garbage cans equipped with fill level detection technology. It will optimize collection and sorting circuits using sensors to increase the efficiency of waste recycling.

Infrastructure optimization can focus on two recommendations. The first one consists in **supporting data migration from data stored in cloud data centers to green data centers**. The second action will give a focus on **decreasing energy consumption of IT infrastructure and implement operational measures on standardized IT facilities to reduce energy consumption** such as replacing copper networks with optical networks or stopping digital services wasting energy such as 2G antennas or old servers running useless services.

Policy reforms will focus on two recommendations. The first one will aim to**improve the energy efficiency of IT equipment** by increasing their lifespan, consignment channels and reconditioning policies. It will be done by decreasing the obsolescence of digital terminals using policy levers supported by public authorities (taxation, technical standards, sectoral subsidies, customs barriers, telecom regulation, carbon footprint obligation). The second action will aim to **recycle IT equipment and reduce waste** to improve the carbon footprint of equipment.

In conclusion, addressing the critical challenges posed by climate change and human rights requires a global effort. Technical standardization should integrate decarbonization considerations, with a focus on rural and urban contexts. Recommendations include farming support, digital soil mapping, technology-driven reforestation, and urban measures like promoting remote work and optimizing waste traceability. Infrastructure optimization involves migrating data to green centers and reducing energy consumption in IT facilities. Policy reforms should extend IT equipment lifespan and improve recycling, leveraging public authorities for effective implementation. This comprehensive approach aims to create a sustainable, rights-respecting response to the interconnected challenges at hand.