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 the progress made in the implementation of the outcomes of the WSIS during the past 20 years

Submission by

United Nations Environment Programme

This submission was prepared as an input to the report of the CSTD secretariat that will inform the substantive discussion at the CSTD on the progress made in the implementation of the outcomes of the WSIS during the past 20 years during its 28th annual session in April 2025, in response to the request by the Economic and Social Council, in its resolution E/RES/2023/3, to the CSTD to conduct such substantive discussions and to report thereon, through the Economic and Social Council, to the General Assembly.

United Nations Commission on Science and Technology for Development

Twenty years in the implementation of outcomes of the World Summit on the Information Society (WSIS)

WSIS+20 Reporting Template

Name of organization: UNEP
Name of respondent: David Jensen
Role of respondent: Regional Coordinator for Digital Transformation, North America and Europe
Date of response: 17 October 2024

I. What is your organisation's formal role and responsibilities concerning WSIS implementation?

a. Mandates of your organization relevant to the WSIS implementation

UNEP is one of the facilitators of Action Line C7, E-Environment – together with ITU and WMO. UNEP's mandate is to find solutions to the triple planetary crisis of climate change, nature and biodiversity loss, and pollution and waste. This includes promoting solutions based on digital technologies as well as minimizing the impact of digital technologies on the environment.

The three facilitators of the Action Line C7, E-Environment tend to divide responsibilities along the following goals:

- **Goal 1 (UNEP):** Use and promote ICTs as an instrument for environmental protection and the sustainable use of natural resources.
- **Goal 2 (ITU):** Initiate actions and implement projects and programs for sustainable production and consumption and the environmentally safe disposal and recycling of discarded hardware and components used in ICTs.
- **Goal 3 (WMO):** Establish monitoring systems, using ICTs, to forecast and monitor the impact of natural and man-made disasters, particularly in developing countries, LDCs and small economies.

b. Brief History of your organization's contribution to the World Summit on the information Society (WSIS)

UNEP can identify a number of important contributions to the goals of WSIS:

1. Digital platforms that monitor different environmental variables:

- Digital Hub of the Global Partnership for Plastics and Marine Litter (2012)
- Freshwater ecosystem explorer (2019)
- Sustainable Consumption and Production Hotspot Analysis Tool (2020)
- UN Biodiversity Lab (2021)
- Ocean Watch (2021)
- Application to Support the System for Environmental and Economic Accounting (SEEA) within the ARIES Platform (Artificial Intelligence for Environment and Sustainability) (2022)
- Digital Hub for Ecosystem Restoration (2023)
- International Methane Emissions Observatory (2024)
- STRATA platform for climate security hotspot analysis (2024)

2. Knowledge products

- The case for a Digital Ecosystem for the Environment: Bringing together data, algorithms and insights for sustainable development (2019)
- UNEP's contribution to Round Table 1B on Digital Public Goods: Environmental data as digital public goods within a digital ecosystem for the planet (2020)
- Guidelines for Providing Product Sustainability Information in E-commerce (2022)
- Blockchain for Sustainable Energy and Climate in the Global South (2022)
- Reducing Consumer Food Waste Using Green and Digital Technologies (2022)
- CODES Action Plan for a Sustainable Planet in the Digital Age (2022)
- Harnessing Digital Technologies for the Circular Economy Report (2023)
- Digital Public Infrastructure for Environmental Sustainability Report (2024)
- Digital Technologies for Environmental Peacebuilding: Horizon Scanning of Opportunities & Risks (2024)
- Artificial Intelligence (AI) end-to-end: The Environmental Impact of the Full AI Lifecycle Needs to be Comprehensively Assessed (2024)
- A Global Foresight Report on Planetary Health and Human Wellbeing (2024)

- UNEP also contributed to the UNCTAD Digital Economy Report 2024: Shaping an environmentally sustainable and equitable digital economy (2024)

3. Private sector and multistakeholder partnerships

- Global E-waste Monitor (2017)
- Playing for the Planet Alliance (2020)
- Coalition for Digital Environmental Sustainability (CODES) (2022)

4. Capacity building support

- Digital4Sustainability e-learning programme (2023)

c. Implementation processes and initiatives within your organization and/or in partnership with other organisations

- Global Environmental Data Strategy under UN Environment Assembly Resolution 4/23

II. What have been your organization's main contributions to the direct implementation of the WSIS outcomes and related areas of digital development since the Summit, particularly since 2015?

b. WSIS Action Lines (as lead, co-facilitator or supporting participant)

UNEP's primary contributions have been in the delivery of: a) 9 digital platforms that can monitor different environmental variables; b) 12 knowledge products that explore different risks and opportunities of digital technologies for environmental sustainability; c) 3 multi-stakeholder partnerships; d) 1 training programme on digital sustainability to help build stakeholder digital literacy; e) 1 global governance process on environmental data.

b. WSIS-related projects

UNEP has not fund-raised or directly implemented any specific WSIS projects. However, many UNEP projects make important contributions to WSIS goals as outlined in Section I.

c. Indicators used to measure the impact of ICT in the achievement of the SDGs in your organization's area of work

UNEP has not adopted any specific global indicators on how ICTs are contributing to the implementation of the SDG's in UNEP's area of work. However, each data platform or report has specific impact indicators that are tracked.

d. What assessment has your organization made of its engagement in WSIS-related work and digital development in its areas of responsibility?

UNEP has not conducted a formal internal assessment of its level of engagement in WSIS-related work. WSIS was not a formal anchor used to justify UNEP's work on digital technologies.

IV. What does your organization see as the main achievements, problems and emerging issues arising from WSIS and from digital development in its areas of responsibility since the Summit, particularly since 2015?

a. What have been the main achievements of WSIS and digital development?

WSIS offered an important platform to convene stakeholders and share information on needs and best practices, but it lacked a commitment and accountability structure.

b. What problems, obstacles and constraints have been encountered?

Challenge 1: Environmental fora (e.g. multilateral environmental agreements and other international environmental policies processes) are not systematically including digital technologies as enablers of their goals or considering negative impacts from digital technologies

Challenge 2: National and international strategies, policies and progrogrammes for digital transformation and digital public infrastructure are not considering environmental opportunities in a systematic manner

Challenge 3: There is a patchwork of international standards supporting the inter-operability and governance of environmental data as well as on measuring the direct, indirect and higher-order effects of AI on the environment

Challenge 4: Digital platforms and algorithms are not systematically promoting sustainable products and services or helping inform consumer choice

Challenge 5: Just transition and linking the environment agenda to development remains difficult.

Challenge 6: Joint action across multiple stakeholders is hard to monitor and enforce. Shared accountability often leads to an accountability vacuum.

Challenge 7: Policy gaps and lack of regulatory frameworks. Many countries lack clear policy frameworks that support the use of digital technologies for environmental sustainability, leading to inconsistent adoption of digital solutions.

c. What new opportunities and challenges have emerged over the years since WSIS which need to be addressed?

- Consider how digital environmental sustainability goals can be addressed within major multilateral environmental agreements and other international environmental policies and processes to accelerate their work
- Ensure environmental opportunities are integrated within national digital transformation strategies and investment plans for digital public infrastructure
- Establish an international framework for environmental data governance and standards to enable inter-operability, quality control, equitable access, etc
- Ensure emerging AI standards including measurement and disclosure frameworks for environmental impacts across the full AI-value chain
- Develop digital sustainability standards for consumer information based on product environmental footprint to enable sustainable filtering, comparisons and green recommendations
- Emerging tools in big data, artificial intelligence and business intelligence provide opportunities to generate deeper insights of environmental patterns, thus countries need to be capacitated to adopt new technologies.
- The critical minerals needed for energy and digital transitions largely overlap, necessitating new frameworks and digital tools to track and trace critical minerals across their lifecycles in order to maximize their recovery and circularity.
- The global distribution of the benefits and impacts of digitalization is unequal. Developing countries often experience disproportionate environmental

impacts from digitalization, such as from raw materials extraction or disposal of e-waste, while receiving fewer of the economic and social benefits associated with digital transformation.

- Countries and communities with limited access to digital infrastructure and technologies (the digital divide) are unable to fully leverage the environmental benefits of digital solutions, thereby exacerbating inequality in addressing environmental challenges globally.

V. Lessons learned in the implementation of the Summit outcomes in your organisation's specific areas of responsibility

Lesson 1: Environmental dimensions of digital transformation and ICT (both positive and negative) are still not a priority topic for many member states.

Lesson 2: It is difficult to measure the positive environmental contribution that digital technologies and ICT can make to the environmental sector.

Lessons 3: It is paramount to adopt harmonized international standards to measure the environmental impacts of digital technologies across their full lifecycles, including direct, indirect and higher order effects.

VI. Observations or recommendations concerning the future of WSIS and digital development, taking into account the outcomes of the Summit of the Future in September 2024

Any revised WSIS framework needs to take into account the following environmental sustainability actions that were included in the Global Digital Compact:

- 8 (e) Digital technologies unlock new capabilities and opportunities for advancing environmental sustainability. Our cooperation will leverage digital technologies for sustainability while minimizing their negative environmental impacts
- 11 (e) Promote sustainability across the life cycle of digital technologies, including context-specific measures to increase resource efficiency and to conserve and sustainably use natural resources and that aim to ensure that digital infrastructure and equipment are sustainably designed to address environmental challenges in the context of sustainable

- 37. We recognize that responsible and interoperable data governance is essential to advance development objectives, protect human rights, foster innovation and promote economic growth. The increasing collection, sharing and processing of data, including in artificial intelligence systems, may amplify risks in the absence of effective personal data protection and privacy norms.
- 48. We will promote and support interoperability between national, regional and international data policy frameworks. In this context, we request the Commission on Science and Technology for Development to establish a dedicated working group to engage in a comprehensive and inclusive multi-stakeholder dialogue on data governance at all levels as relevant for development. We encourage the working group to report on its progress to the General Assembly, by no later than the eighty -first session, including on follow-up recommendations towards equitable and interoperable data governance arrangements, which may include fundamental principles of data governance at all levels as relevant for development; proposals to support interoperability between national, regional and international data systems; considerations of sharing the benefits of data; and options to facilitate safe, secure and trusted data flows, including cross-border data flows as relevant for development (all SDGs).
- 53. We recognize the immense potential of artificial intelligence systems to accelerate progress across all the Sustainable Development Goals. We will govern artificial intelligence in the public interest and ensure that the application of artificial intelligence fosters diverse cultures and languages and supports locally generated data for the benefit of countries and communities' development. This includes, in particular, international cooperation to support developing countries in building artificial intelligence capacities as well as efforts to address potential negative impacts of emerging digital technologies on labour and employment and on the environment.
- 58. We call on standards development organizations to collaborate to promote the development and adoption of interoperable artificial intelligence standards that uphold safety, reliability, sustainability and human rights (SDGs 3, 5, 7, 9, 10, 12, 16 and 17).

VII. Please identify publications, reports and other documents by your organisation which you consider can contribute to the work of the review.

- See Section I above

Useful reference links:

Geneva and Tunis outcome documents from WSIS - https://www.itu.int/net/wsis/outcome/booklet/index.html The General Assembly's ten-year review report - https://publicadministration.un.org/wsis10/Portals/5/N1543842.pdf The CSTD ten-year review - https://unctad.org/system/files/officialhttps://unctad.org/system/files/official-document/dtlstict2015d3_en.pdfdocument/dtlstict2015d3_en.pdf

Contributions should be submitted by **15 November 2024** to the CSTD Secretariat at cstd-wsis20@unctad.org. They will be made available on the CSTD website for consideration by the Commission unless contributors specifically request that their submissions should not be published.

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