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Proposed normative foundations for international data governance: goals and principles

United Nations system contribution to the advancement of international data governance

I. Introduction

1. At its forty-fifth session, held in March 2023, the High-level Committee on Programmes (HLCP) approved a paper entitled "International data governance: pathways to progress",[1] which was subsequently endorsed by the United Nations System Chief Executives Board for Coordination (CEB) in May 2023. The paper provided a vision and steps towards the promotion and protection of data through a multi-stakeholder approach to international data governance that responsibly unlocks the full value of data for the global public good. As a next step, HLCP requested the working group on international data governance to explore the normative foundations of an international data governance framework, with a view towards developing international data governance principles grounded in human rights and sustainable development that promote accountability, agility and fairness.[2] The present document has been prepared in response to that request from HLCP and builds on "International data governance: pathways to progress", which emphasized the urgent need for a values- and principles-based approach to data governance that would ensure the flexibility and adaptability required for a rapidly evolving digital landscape and the diversity of countries' legal, developmental and social contexts.

2. In October 2023, the paper entitled "Draft normative foundations for an international data governance framework: goals and principles" was presented to HLCP for deliberation during its forty-sixth session. At the meeting, the Committee supported the overarching goals of value, trust and equity, as well as the principles contained in the document and the need for global data governance more broadly. There was agreement that the goals and principles were useful for the United Nations system but could also serve as a contribution for the international community more broadly. Reflecting on the changing nature of data and the need for consultations, the

[1] CEB/2023/1/Add.2; the annexes thereto are available at https://unsceb.org/international-data-governance-pathways-progress.
[2] CEB/2023/4, para. 41.

co-leads of the working group were encouraged to leverage other relevant forums for engaging with stakeholders on the proposed goals, values and principles.

3. As suggested by HLCP, the co-leads engaged with relevant forums to discuss the proposed goals, values and principles and contributed to discussions on international data governance at the fifty-fifth session of the Statistical Commission, held from 27 February to 1 March 2024 in New York, and the twenty-seventh session of the Commission on Science and Technology for Development, held in April 2024 in Geneva). Contributions were also made at a number of consultative meetings, including the stakeholder consultations on the Global Digital Compact, held in February 2024, the Global Digital Compact Data Deep Dive, convened by the United Nations University in collaboration with the Economic Commission for Africa in May 2024 in Addis Ababa, and the consultations held by the High-level Advisory Body on Artificial Intelligence in March 2024 in Geneva.

4. Building on those efforts, the present document contains a proposed set of common goals and principles as a normative foundation for international data governance. The aim of the document is not to present universally agreed goals and principles – which could be developed only through large-scale multi-stakeholder consultations – but to provide solid starting blocks for future arrangements on international data governance. The document incorporates comments received during the forty-sixth session of HLCP and in the other forums and meetings noted above. This updated proposal also incorporates some elements of the principles to advance data governance for development proposed by the secretariat of the Commission on Science and Technology for Development.[3]

5. Recognizing the rapidly changing data and digital environment, and under the broad umbrella of data stewardship, the present document seeks to build on the themes and clusters of principles previously identified by the working group by advancing the normative foundations articulated in “International data governance: pathways to progress”.

6. These include considerations that the goals and principles should:

(a) Be forward-thinking and adaptable, while fostering consistency in data governance across international actors and countries;

(b) Be appropriate to the context: in terms of the data type and its use, and ensuring its relevance and effectiveness in diverse settings;

(c) Promote equitable access to data for sustainable development and ensure that data benefit all;

(d) Support, promote and be aligned with globally recognized frameworks and objectives, such as international human rights and the Sustainable Development Goals;

(e) Be aligned with and support shared goals, such as value, trust and equity;

(f) Support the adoption of a multi-stakeholder approach that brings together diverse stakeholders and mobilizes support for complex policy reforms and interventions.

7. The document also seeks to complement standards and principles already developed and work currently under way across the United Nations system on artificial intelligence (AI). Examples include the Recommendation on the Ethics of Artificial Intelligence and its action area on data policy, adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization

[3] See E/CN.16/2024/2.

in 2021, the Principles for the Ethical Use of Artificial Intelligence in the United Nations System,[4] endorsed by CEB in 2022, the Global Digital Compact annexed to the Pact of the Future, and work under the HLCP Inter-Agency Working Group on Artificial Intelligence. As data are foundational for AI development, data governance is an important component in the responsible development and use of AI and other technologies. Notwithstanding the linkages between data and AI, the current document is not focused on AI and does not address the issue of AI governance. It is nevertheless worth noting that, in as far as is practicable, the principles proposed in the present paper are aligned with the Principles for the Ethical Use of Artificial Intelligence in the United Nations System, which make explicit the link between AI governance and data governance. The High-level Advisory Body on Artificial Intelligence, in its final report entitled *Governing AI for Humanity*,[5] also reaffirmed that link in its guiding principles. Its third principle reads "AI governance should be built in step with data governance and the promotion of data commons". The values and principles presented in the present paper are aligned with the Global Digital Compact, in which Member States reiterated that they would continue discussions in the United Nations, building on the outcomes of the Global Digital Compact and recognizing the ongoing work of other relevant bodies and stakeholders, including the Statistical Commission, in their efforts to pursue common understandings for data governance at all levels, as relevant for development.[6]

8. Advancing the normative grounding of international data governance is timely, as techniques to realize economic and social value from data are evolving at a rapid pace, in particular in the private sector. Advances in AI, for example, pair potential opportunities for growth and inclusive development with the risks of creating new forms of exclusion and inequality or exacerbating existing ones.[7] The ability to harness these techniques for inclusive development in a way that addresses data protection and privacy concerns and enables oversight and transparency depends on the availability of representative data to develop solutions fit to function and serve populations across the globe. Conversely, lack of data gives rise to a lack of solutions or solutions that work less well for some, usually those already at risk of being left behind. For example, emerging techniques for data processing have the potential to widen existing inequalities. International data governance sets one of the necessary foundations to unlock value from unused data and to responsibly leverage emerging techniques to accelerate inclusive development, address future challenges and further the realization of human rights.

9. The why, what and how of international data governance were extensively covered in "International data governance: pathways to progress", with the understanding that this remains a field that continues to evolve in response to technology advancements and societal changes. In the same paper, international initiatives and intergovernmental forums relevant to data governance were documented. The aim of the present document is to put forward a set of universal principles that could form a normative basis for starting discussions on an international architecture for data governance. The principles proposed herein reflect the body of literature that is building up from the many data governance initiatives documented in "International data governance: pathways to progress".

[4] See CEB/2022/2/Add.1.

[5] *Governing AI for Humanity* (United Nations publication, 2024).

[6] General Assembly resolution 79/1, annex I, para. 49.

[7] Kaushikkumar Patel, "Ethical reflections on data-centric AI: balancing benefits and risks", *International Journal of Artificial Intelligence Research and Development*, vol. 2, No. 1 (January 2024); and Stephanie A. Bell and Anton Korinek, "AI's economic peril", *Journal of Democracy*, vol. 34, No. 4 (October 2023).

II. Normative foundations for international data governance

A. Goals

10. The proposed normative structure and principles articulated below set out the foundations for data governance under three overarching goals: value, trust and equity. These goals apply across the full data life cycle (from collection, extraction, storage, processing, analysis, sharing, dissemination, use, archiving, deletion and disposal) and at the international, national, regional and organizational levels, as follows:

(a) *Value.* Maximize the value of data across all data domains (e.g. sustainable and inclusive development, peace and security, human rights, and humanitarian assistance) through increased responsible data use and reuse. This can be done by fostering a culture of data quality and appreciation, as well as promoting data flows and technical interoperability, both within and across borders. It also involves identifying, assessing and managing, rather than avoiding, the risks inherent to data production and dissemination, mindful of the need to maximize the benefit and minimize the risks of data. Harmonizing definitions, classifications and standards (for example, through thematic taxonomies) across stakeholders and data assets is essential to achieve interoperability and enable the effective use and reuse of data;

(b) *Trust.* Enable trust by ensuring secure environments for data across the data life cycle and by protecting individuals and groups from the risks and harms arising from data misuse. Establishing trust requires adopting a human rights-based approach to data governance; prioritizing safeguarding and personal data protection and privacy; and ensuring responsible data practices that involve enhancing transparency, accountability, data quality and the security of data and data infrastructure;

(c) *Equity.* Ensure equitable distribution of benefits from increased and responsible access, use and reuse of data. In the case of personal data, engage in efforts to return the benefits of data use to the people that the data are from and about. Promoting equity includes the representation and participation of individuals and communities, including vulnerable and marginalized groups; preventing bias and discrimination in data collection, analysis and use; and respecting the agency, rights, interests and preferences of individuals and communities throughout the data life cycle. A balance must be struck between individual and collective needs by empowering data subjects to access their personal data and control their use, where appropriate. The aspiration of equity involves responsible data stewardship, including the ethical use and reuse of data for the public good and evidence-informed decision-making.

B. Principles towards achieving these goals

11. The principles below seek to advance the overarching goals of value, trust and equity for sustainable outcomes through a multi-stakeholder approach.[8] They provide the foundation for international data governance grounded in international law, including international human rights law. These principles provide practical and

[8] "'Multistakeholderism' is an approach to data governance, not an end in itself. It is intended to facilitate better, more sustainable outcomes by enabling all stakeholders to undertake their roles in a coordinated manner." World Bank, "Institutions for data governance: building trust through collective action" in *World Development Report 2021: Data for Better Lives* (Washington, D.C., 2021).

ethical guidelines and serve as guidance for the design and development of future global data governance, and for evaluating its effectiveness.

1. Value

12. Maximizing the value of data requires:

(a) *An enabling environment for data use and reuse*. Foster a culture and systems (i.e. processes, methods and tools) that value and promote appropriate access and responsible use and reuse of data (e.g. with the adoption of responsible open data standards). This principle includes providing equal access to the benefits of data and the related technologies, devices and tools. This principle also envisages educating and empowering individuals, communities and organizations to produce or co-create, work with, inform decisions with, derive benefits from and understand data effectively;

(b) *Interoperability*. Promote data interoperability and portability by adopting standardized and open formats, common metadata elements that enable data transfer and reuse, protocols, taxonomies and interfaces. This principle can contribute to improved consistency and integration across different systems, both to enable effective data collaboration and sharing and to simplify the extraction and compilation of data from multiple sources;

(c) *Mutuality and solidarity*. Encourage data governance approaches that prioritize mutual benefit and solidarity for people across geography and generations so that data can be used for the greater good of society, considering both individual and collective needs, interests and responsibilities.

2. Trust

13. Enabling trust requires:

(a) *A human rights-based approach to data*. Respect, protect and promote human rights and fundamental freedoms, as defined in international human rights law. This should apply across all elements of data governance, including data protection and privacy, in particular for children or other vulnerable groups who may not be in a position to make determinations for themselves and must rely on others to act in their best interests. This principle emphasizes the need for a fair and legitimate approach to processing, purpose specification, proportionality and necessity, retention, accuracy, confidentiality, security, transparency, transfers and accountability;

(b) *Accountability*. Articulate clear accountabilities, roles and responsibilities over data assets and processes, including assigning responsibility to explain outcomes and to ensure that individuals can access and control their data. Appropriate oversight, impact assessment, audit and due diligence mechanisms should be put in place to ensure accountability. In addition, data subjects must have clear rights of redress to ensure accountability. Governance structures should enhance ethical and legal responsibility and accountability at every stage of the data life cycle;

(c) *Data quality*. Take the measures necessary to ensure data quality throughout the data life cycle. This involves treating data in context (i.e. using them with an understanding of the context and conditions in which they were produced),[9] ensuring that accurate, reliable, timely data and metadata are available, and promoting

[9] Data are influenced by the conditions in which they are produced. To make fair decisions using data, it is important to understand the political, cultural, social and economic context and limitations (e.g. legal frameworks, data infrastructure and data type).

data governance practices that maintain data integrity and prevent data corruption, manipulation or distortion;

(d) *Data security and infrastructure protection*. Safeguard the infrastructure and systems for data over the entire life cycle, from design and collection to use, transfer and sharing, dissemination, and archiving and destruction to ensure the security and integrity of data and data flows. This principle involves implementing appropriate organizational and technical safeguards, procedures and systems to prevent, mitigate, report and respond to security breaches or misuse of data (including unauthorized or inappropriate internal access or manipulation, accidental disclosure, damage, alteration, loss and other security risks related to data management).

3. Equity

14. Promoting equity in data governance requires:

(a) *Digital self-determination*. Recognize the principle of digital self-determination,[10] empowering individuals and communities to have control over their personal data and its uses. This principle involves enabling individuals to make informed decisions about their data and to exercise their right to access, correct, delete and agree to the purposes of data processing and use;

(b) *Fairness and non-discrimination*. Reduce data poverty and correct for bias and discrimination throughout the data life cycle, and take measures to promote the fair distribution of data benefits and avoid the unfair distribution of data risks. This principle includes responsible open and equal access to data, as well as improved disaggregation, where relevant, to describe and understand specific characteristics, leaving no one behind;

(c) *People-centred*. Ensure that people are at the centre of data governance decision-making. Empower people to access, analyse and use data through inclusive and participatory decision-making and better assess the risks and implications of data issues. Consultation should be meaningful, identifying and testing underlying assumptions, determining benefits, capacities, risks, harms and adverse impacts, and adopting prevention and mitigation measures;

(d) *Data stewardship*. Establish and resource responsible data stewardship frameworks (with appropriately skilled capacities) to properly manage, curate and protect data and to maximize data use and reuse for the public good.

III. Steps moving forward: towards the operationalization of the principles

15. The proposed goals and principles for international data governance, set out above, are aimed at addressing the need to minimize fragmentation, update existing frameworks to incorporate shared values and ensure relevance in a rapidly changing data and digital ecosystem, including artificial intelligence. By adopting goals focused on value, trust and equity, this work is aimed at fostering a multi-stakeholder approach to effective data governance, promoting fairness, and promoting and protecting the rights of individuals and communities. These goals and principles are intended to inform ongoing intergovernmental deliberations and processes, including follow-up to the outcomes of the Summit of the Future. However, the recognition of these principles as universal, their consideration and uptake in intergovernmental

[10] See Stefaan G. Velhust, “Operationalizing digital self-determination”, *Data and Policy*, vol. 5 (2023). DOI: https://doi.org/10.1017/dap.2023.11.

discussions and, finally, their practical implementation would require multiple actions and actors outside HLCP, including:

(a) *Participatory consultative processes*. To create buy-in for these goals and principles, and for data governance more generally, additional and wider consultation and multi-stakeholder engagement is required. This includes engaging policymakers, businesses, academia, non-governmental organizations, technical communities, civil society and other relevant groups. Public consultations and feedback processes should be implemented to obtain valuable insights that can inform international data governance;

(b) *Communities of practice*. Foster collaboration and learning between organizations, including with the private sector. Such forums can be used to leverage governance frameworks, as well as the principles guiding the development of data governance frameworks and systems;

(c) *Visible leadership*. To drive positive change, visible support and leadership from the United Nations system will be required, including the vital importance of including data governance in discussions on digital transformation, AI and AI governance;

(d) *Harmonization of meanings*. To operationalize the goals and principles effectively, it will be necessary to harmonize the terms and definitions that give meaning to the principles across countries, sectors and organizations, while recognizing national and cultural autonomy;

(e) *Provision of practical guidance*. To implement the principles, specific and actionable guidance is needed for policymakers and data producers and users to align their practices with the principles. This would include data standards, taxonomies and mechanisms for implementation, including provisions on monitoring, enforcement and redress. A comprehensive assessment of readiness in terms of the infrastructural, technical, legal, regulatory, economic and other relevant dimensions, using the available tools and methodologies, would help to identify gaps that need to be addressed to align policies and practices with these principles;

(f) *Investment in data and data systems*. To operationalize data governance and improve data systems, investments are needed in data and technological infrastructure, and in skilled workforces capable of collecting, processing, analysing, storing and transferring data safely and securely. Data should be treated as an asset;

(g) *A stepwise, multilayered approach*. With common principles, the United Nations system could support and facilitate a multi-stakeholder approach towards an international data governance architecture in different ways, working towards an internal governance framework and supporting international data governance initiatives. In terms of international data governance approaches, Member States started to deliberate on this issue within the context of the Global Digital Compact.[11] As also envisaged in the Global Digital Compact,[12] the United Nations system stands ready to support Member States in the implementation of the Global Digital Compact and other intergovernmental and multi-stakeholder processes on data governance at all levels, including within the context of the Statistical Commission, the Commission on Science and Technology and the Broadband Commission for Sustainable Development.[13]

[11] The first iteration of the present paper, presented to HLCP at its session in October 2023, and the work of the HLCP working group on international data governance were instrumental in developing the United Nations-coordinated input to the first draft of the Global Digital Compact.

[12] General Assembly resolution 79/1, annex I, paras. 48 and 49.

[13] See https://www.broadbandcommission.org/working-groups/data-governance/.

IV. Conclusion

16. HLCP, at its forty-eighth session in October 2024, approved the set of proposed goals and principles that are set out herein as a normative foundation for international data governance.