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Contribution by China

to the CSTD 2026-2027 priority theme on
"Data Governance for Development: From Asymmetry to Equitable Stewardship"

Response to the Questionnaire for the 30th Annual Session of CSTD

1. Can you share challenges that your country face in building and leveraging data capacities, including issues related to infrastructure, ownership and stewardship, free and trusted cross-border flows, and benefit-sharing? (Please provide examples and, where possible, quantitative evidence or indicators of these challenges and their impacts)

Overall, the next stage of digital development presents a more complex challenge: the shift from a connectivity gap to a data capacity gap. The ability to benefit from data increasingly depends not only on access to infrastructure, but also on data management capabilities, analytical skills, the ability to apply artificial intelligence (AI), data governance expertise and institutional readiness. In 2025, China's total volume of active data reached 1.67 zettabytes (ZB). At this scale, managing, storing and processing data while ensuring their quality and accessibility remains a formidable task.

First, infrastructure development and utilization capabilities need to be further strengthened. Data circulation and utilization continue to be constrained by practical challenges: stakeholders may lack the confidence, willingness or know-how to provide and use data. To address these issues, China is building national data infrastructure, with the core objective of creating a secure and trustworthy environment that eases users' concerns about providing and using data. For example, data sandboxes enable the joint processing of data from multiple sources, with data integration, processing and model training conducted in a controlled sandbox environment and the data destroyed immediately after use. Privacy-preserving computing enables data to be "usable but invisible" without exchanging raw data or exposing users' privacy or sensitive information.

Second, rules on data property rights and stewardship need further refinement. China has introduced a structurally separated data property rights regime—the "separation of three rights," comprising the data holding rights, the data use rights, and the data operation rights. The specific boundaries, rules of exercise

and legal effect of each right, however, need to be further clarified through practice.

Third, cross-border data flows continue to face challenges in regulatory alignment and compliance costs. No unified and universally binding set of rules for cross-border data flow has yet emerged globally. Divergent national compliance requirements raise adaptation costs for enterprises, particularly small and medium-sized enterprises (SMEs). Following the implementation of China's Provisions on Promoting and Regulating Cross-border Data Flow in March 2024, a number of facilitation measures for data export were introduced. The average processing time for security assessments was continuously shortened, and the average monthly numbers of data export security assessments and standard contracts for the cross-border transfer of personal information fell substantially. Pilot free trade zones use negative lists, exempting data not included on the lists from additional filing requirements.

Fourth, benefit-sharing mechanisms are not yet mature. In practice, difficulties remain in measuring contributions to data value, determining fair compensation across the data value chain, and ensuring that benefits reach all participants. In 2025, China's volumes of public data made openly available and placed under authorized operation increased year-on-year by 31.71% and 53.96%, respectively, but corresponding benefit-distribution mechanisms have not kept pace.

2. How are inequalities embedded in the processes through which data is generated, collected and used in your country? In particular, how do biases in data collection and use, such as gender data gap, affect policy making, service delivery and development outcomes? (Please provide examples, evidence and any measures being taken to address these disparities)

Overall, data inequality is reflected not only in disparities in access to digital technologies, but also in how data are generated, who is representative in datasets, who has the capacity to process data, and who is able to benefit from data utilization.

First, disparities exist in data generation and sample representativeness. Older persons, rural residents, low-income groups and some persons with disabilities have relatively limited access to the Internet and smart devices and lower digital literacy. Consequently, they are underrepresented in data generated through mobile payments, online healthcare, online recruitment and digital government services. Where governments or businesses rely primarily on online behavioral data to gauge needs, they may mistake "generating less data" for "having lesser actual demand."

Second, control over data and data-processing capacities are unevenly distributed across different stakeholders. Consumers, platform workers and SMEs continuously generate transaction, location, rating, order and business-operation data, yet large platforms usually control the aggregation, analysis and utilization rights of such data. Large platforms and leading enterprises have stronger computing power, algorithms, talent pools and financial resources. Even where SMEs, local-level institutions and less-developed regions gain access to data, they may not have the capacity to translate them into economic and social value.

Third, sample bias can be inherited and amplified by algorithms. For instance, in the training data for an automated essay-scoring system, urban students made up over 80% of all samples, resulting in frequent misjudgments of local dialects in essays by rural students. One adaptive learning platform also showed significant differences in the creative-thinking content recommended to urban and rural students. Such embedded biases risk leading policymakers and service providers to underestimate the actual needs of groups that are underrepresented within datasets.

To address these issues, China is advancing governance through data infrastructure development, service accessibility and adaptation, and institutional safeguards. By 2025, China had fully achieved the targets of gigabit network connectivity in every county, 5G coverage in every township, and broadband access in every village. All townships and 95% of administrative villages had access to 5G networks; rural broadband subscribers exceeded 200 million; and the digitalization rate of agricultural production surpassed 30%. The number of rural online merchants exceeded 19.5 million, with online retail sales above 2.5 trillion RMB. Mobile phones serve as new farm tools, and data acts as new agricultural inputs. New occupations such as agricultural digitalization technicians and AI data labeler continue to emerge. The Personal Information Protection Law of the People's Republic of China requires automated decision-making to be transparent, fair and impartial, and prohibits unreasonable differential treatment.

3. Has your country implemented national strategies, regulatory frameworks or policy instruments to promote equitable and interoperable data governance? What are the lessons learned? (Please describe any specific challenges, failures or successes encountered during implementation)

Overall, China has established a policy framework guided by basic data systems, focused on the development and utilization of public data resources and the construction of a national integrated data market, and supported by trustworthy data infrastructure. The basic data systems established four foundational systems: data property rights, data circulation and trading, revenue distribution, and security governance.

With respect to data property rights and market development, China has further clarified, through glossary explanations and policy interpretation, the rules for the separation of the three rights—the data holding rights, the data use rights, and the data operation rights—and issued the Guidelines on Data Property Rights Registration (Trial) to enhance the validity of registration certificates. It has also clarified the respective roles of three categories of market participants: data circulation service platform enterprises, data brokers, and data exchange center, encouraging them to leverage their respective strengths and develop in coordination.

With respect to the development and utilization of public data, the Opinions on Accelerating the Development and Utilization of Public Data Resources were issued at the end of 2024, followed by three supporting policies on registration, authorized operation and pricing, together forming a "1+3" policy framework. These policies specify three modes of supply—government data sharing, open public data and authorized operation—and tailor measures to actual demands and the characteristics of the data concerned.

With respect to trustworthy data circulation and interoperability, China issued the Action Plan for Trustworthy Data Space Development (2024–2028). In 2025, the first batch of 63 pilot projects was selected, comprising 13 city-level, 22 industrial and 28 enterprise Trustworthy Data Spaces. In addition, privacy-preserving computing enables data to be "usable but invisible" without exchanging raw data or exposing users' privacy or sensitive information.

Practice shows that effective implementation is more important than the promulgation of policies. Current challenges include local protectionism,

inconsistent regulatory standards and insufficient engineering capabilities to corporate compliance. Further efforts are therefore needed to strengthen the full implementation chain.

4. Can you share your country's experience in reducing asymmetries and promoting more equitable data stewardship in development sectors such as public services, education, health and agriculture? (Please provide examples, lessons learned and remaining challenges where possible)

Overall, China's basic approach is to integrate data governance with digital government development and equal access to public services, and to promote the orderly sharing of data across levels of government, regions, systems, departments and sectors.

In education, the Smart Education of China platform reaches more than 200 countries and regions, with total visits exceeding 72.6 billion. It has achieved interconnection with education authorities in 32 provinces and more than 1,000 higher education institutions. This practice helps address the uneven distribution of high-quality education resources across urban and rural areas, regions and schools.

In healthcare and medical security, China uses the China Healthcare Security platform, Electronic Certificate for National Basic Medical Insurance and direct settlement for cross-provincial medical treatment to improve service accessibility through unified standards and cross-regional data coordination. Internet hospitals in China deliver more than 100 million service visits annually; the national medical insurance code has more than 1.2 billion users; and direct settlement for cross-provincial medical treatment has benefited over 600 million patient visits.

In agriculture and rural development, China has integrated remote-sensing monitoring, agricultural product market information, quality and safety traceability, rural e-commerce, and socialized agricultural services into digital countryside development scenarios, helping smallholder farmers and other market participants reduce information asymmetries.

In industry and urban governance, China Southern Power Grid applied an energy-sector Trustworthy Data Space to the integration of renewable energy, combining data on real-time grid operations, weather forecasts and power generation companies to develop data products for hosting-capacity calculations, site-selection benefit assessments, grid-connection assessments and power-generation forecasts. This increased investment returns for renewable energy enterprises by 45% and reduced the solar curtailment rate by 1%. Wenzhou city Trustworthy Data Space connected business systems across

481 municipal and county-level departments and created 10 dedicated data zones.

Experience shows that equitable data stewardship requires not only platforms, but also standards, offline services, data-quality maintenance and grassroots digital literacy. Current challenges include regional disparities in capacity, inconsistent data standards, high costs of interdepartmental coordination, and complex boundaries of security responsibilities.

5. What mechanisms or institutional arrangements are in place in your country to foster collaboration around data governance for development among different stakeholders (e.g., university-industry, public-private, or multi-stakeholder initiatives)?

Overall, China has established a multi-stakeholder participation mechanism characterized by government coordination, market-entity participation, support from universities and research institutions, and collaboration with industry organizations. The National Data Administration coordinates the development of basic systems for data and the integration, sharing, development and utilization of data resources, providing organizational safeguards for cross-departmental and cross-industrial collaboration.

First, China has established a government-enterprise collaboration mechanism for the authorized operation of public data. China has issued three supporting policies on the registration, authorized operation and pricing of public data resources. Together with the Opinions on Accelerating the Development and Utilization of Public Data Resources, China forms a "1+3" policy framework. Professional operators are introduced under this framework to develop data products and services.

Second, Trustworthy Data Spaces and industry alliances promote joint development by multiple stakeholders. The Action Plan for Trustworthy Data Space Development (2024–2028) advances enterprise, industrial, city-level, personal and cross-border Trustworthy Data Spaces by category. The Trustworthy Data Space Development Alliance now has more than 800 members.

Third, build a government-industry-university-research-user collaborative mechanism based on practical application scenarios.. In Beijing, hospitals, pharmaceutical companies, contract research organizations, AI companies, trading platforms and regulatory authorities work together through a collaboration framework covering data governance coordination, annotation services, data circulation and trading, benefit incentives, and trustworthy technologies.

Practice shows that the key to multi-stakeholder collaboration is to clearly delineate rights and responsibilities throughout the data lifecycle and to support this with ethical review, compliance assessment and mutual recognition of standards.

6. What major bilateral, regional, or international partnerships has your country engaged in to foster equitable and interoperable data governance? (Please describe the benefits of participating in these partnerships, as well as any challenges related to coordination, capacity, trust, interoperability or benefit-sharing)

Overall, China has developed a multi-tiered cooperation framework comprising global multilateral governance, regional economic and trade rules, South-South cooperation, bilateral regulatory dialogue and specialized international organizations.

China participated in the consultations on and implementation of the United Nations Global Digital Compact and participates in the Working Group on Data Governance (WGDG) established by CSTD, formulating follow-up recommendations for equitable and interoperable data governance arrangements. China is advancing international cooperation in the data field, promoting institutionalized digital economy cooperation under multilateral platforms including the Shanghai Cooperation Organisation (SCO), BRICS and the Belt and Road Initiative, holding APEC Digital Week 2026, and establishing the China-SCO Digital Economy Cooperation Platform, which has been well received by participating countries. China also gives full play to the role of bilateral mechanisms, including the China-Singapore Digital Policy Dialogue, to deepen mutual understanding and consensus on digital ecosystems and data policies, facilitating cross-border operations of enterprises of the two countries. China has signed Memoranda of Understanding on Strengthening Digital Economy Cooperation with over 30 countries, including Brazil and Malaysia, yielding practical results in physical connectivity of data infrastructure, institutional connectivity of data rules, and people-to-people connectivity in digital economy cooperation.

Through multilateral and bilateral arrangements such as the Regional Comprehensive Economic Partnership (RCEP), the China-ASEAN Free Trade Area 3.0, BRICS cooperation, and the China-EU communication mechanism on cross-border data flows, China is strengthening the alignment of digital rules and regulatory mutual trust, reducing the costs of cross-border business operations.

7. How can international cooperation strengthen equitable and interoperable data governance to ensure that data contributes to shared prosperity and sustainable development? In what ways can the UN CSTD contribute to this effort?

Overall, international cooperation is an important pathway for strengthening equitable and interoperable data governance *and unlocking the developmental value of data.* Given the fragmentation of global data governance rules and differences among institutional frameworks, all parties should uphold multilateralism and pursue common development and work together to refrain from data protectionism and technical barriers, and prevent the digital capacity divide among countries from widening.

First, strengthen capacity-building for developing countries. International cooperation should support developing countries in enhancing data infrastructure, data governance capacity, talent development and standards-setting. Cooperation can start with small-scale, actionable projects and gradually develop shared governance arrangements that promote development. It should fully take account of countries' different stages of development and institutional contexts, and foster inclusive and adaptive regulatory frameworks.

Second, advance open and compatible standards and interoperability frameworks. Reconcile the aspirations of all countries as well as international bodies including ISO, ITU and UNCTAD, and advance the development of a compatible roadmap for data standards. Countries, enterprises and research institutions could also be supported in cooperating on data semantic encoding, technical interfaces and trustworthy data circulation standards through open-source tools and approaches based on openness, joint development and shared use.

Third, use concrete projects to translate cooperation into tangible outcomes. Under existing laws and bilateral and multilateral frameworks, enterprises could explore cooperation based on "technological reciprocity and two-way compliance". A mechanism that is government-guided, enterprise-led, research-supported and open to multi-stakeholder participation could be established to conduct cross-border technical training, personnel exchanges and the development of practical application scenarios.

Fourth, establish a standing coordination mechanism for data governance*.* Building on the work of the WGDG, a sustained platform for

intergovernmental and multi-stakeholder discussion should be provided for global data governance, with systematic follow-up on the implementation of the report's recommendations and responses to emerging challenges. The division of labor and coordination with relevant United Nations entities and international standards organizations should also be strengthened, and engage specialized bodies such as the World Data Organization, industrial alliances and research institutions in the delivery of specific projects.

Looking ahead, China supports the improvement of regular dialogue and coordination mechanisms within the UN framework to sustain intergovernmental and multi-stakeholder deliberations, and follow up on the implementation of relevant recommendations.