



Task Force 2:
Our Common Digital Future: Affordable, Accessible
and Inclusive Digital Public Infrastructure



USING DATA TO ADVANCE THE 2030 AGENDA: RECOMMENDATIONS FOR THE G20

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Abstract




Ahead of the G20 Leaders' Summit in Bali in November 2022, India pledged that the principle of 'data for development' (D4D) would be integral to its G20 presidency. At its first meeting in December 2022 as India assumed the Presidency, the G20 Development Working Group stated that it would focus on the collection, sharing and analysis of D4D to support efforts to achieve the SDGs. This Policy Brief notes that the data landscape across the G20 remains highly uneven, with some countries doing better than others in leveraging data for the achievement of the Development Agenda. There are


three main obstacles to current D4D efforts: (i) The prevalence of marked data divides between the Global North and South, and within countries; (ii) The difficulties posed by issues of data privacy, security, interoperability, and sharing; and (iii) The need for greater technical and institutional capacity, particularly to rejuvenate legacy datasets by applying emerging and disruptive technologies (EDTs) and to produce next-generation datasets using EDTs. The brief proposes eight strategic actions that G20 member states could jointly undertake to address these challenges, promote D4D, and advance the 2030 Agenda.



The Challenge



1



In November 2022, prior to India’s assumption of the G20 Presidency, Prime Minister Narendra Modi announced that the principle of data for development (D4D) would be integral to India’s tenure.¹ The G20 Bali Leaders’ Declaration echoed his statement by reaffirming the role of data for development in promoting economic growth and social well-being.² Indeed, this approach has steadily gained traction within the G20 since 2014, and there is now a broad consensus that quality development data is the “foundation for meaningful policymaking, efficient resource allocation, and effective public service delivery.”³

The consideration of data as a digital public good (DPG) is often linked to the discourse on D4D. Building on the UN’s identification of open data as a DPG,⁴ and its broader assertion that data must be harnessed to meet the Sustainable Development Goals (SDGs),⁵ the multistakeholder Digital Public Goods Alliance has defined DPGs as “open-source software, open data, open AI models, open standards, and open

content that adhere to privacy and other applicable laws and best practices, do no harm by design, and help attain the SDGs.”⁶ Concomitantly, the Alliance has developed nine indicators and requirements to determine whether or not an entity is a DPG.⁷ In many cases, datasets may not actually qualify as DPGs—they may not use an approved open license, for instance—but their application and use nonetheless contribute towards development efforts. Figure 1 illustrates a few of the myriad ways in which data—and its agglomeration into large, complex datasets, also known as Big Data—could generate insights which, in turn, can help shape concrete on-ground actions to advance the 2030 Agenda.

Despite the G20’s recognition of D4D as a necessary approach, the international data landscape within the grouping remains highly uneven, with some member countries performing better than others in utilising data for development. The following paragraphs outline the key challenges to executing D4D initiatives:

Figure 1: Potential of Big Data to Help Push the SDGs



Source: UN's *Big Data for Sustainable Development*⁸

Data divides and inequalities: There is a marked “data divide” between countries of the Global North and those of the South, and even among different population segments within countries.^a While some of the latter lack access to even basic digital infrastructure, making

it difficult to capture data that might benefit them (or for them to access digital data), other target populations often contribute to a ‘data deluge’ that adversely impacts the quality of insights extracted.⁹

a Data divides are of several kinds. It could refer to the divide between people or communities who have the means to access data, on the one hand, and those who lack adequate resources to access data or are otherwise prevented from using data constructively to make decisions, on the other. It could also refer to the tendency of certain groups, communities or institutions to remain invisible to data collection processes, and therefore to be excluded from development datasets. Finally, as a study by the Atlantic Council, *The Data Divide* (2022) observes, the data capabilities of the Global North tend to be significantly more evolved (with China as an exception), leading to a North-South data divide as well.



Privacy, security and interoperability:

There are significant disparities in the state of robustness of national data protection regimes.¹⁰ Not all G20 member states have sufficiently strong regulatory frameworks and laws governing data privacy and security, and this could undermine personal and institutional trust in data-driven initiatives. Moreover, digital information systems often tend to lack interoperability, leading to data silos that impede the potential data exchanges that could strengthen development actions.¹¹ Finally, while the advocacy of cross-border data flows by several G7 and G20 countries has helped produce some related policies and processes,¹² the lack of data interoperability continues to pose a crucial challenge,

and mechanisms to support the pooling of development data within the G20 (for research and policymaking) are yet to be put in place.

Technical expertise and institutional capacities:


Government and non-government institutions in developing countries sometimes lack the required capacities to optimise the use of ICTs—particularly emerging and disruptive technologies (EDTs)—to collect, process, analyse and act on data for development. In particular, capacities to (a) power the shift from data to public value intelligence by applying Big Data analytics and AI to legacy datasets, and (b) to build wholly new datasets using EDTs, need to be strengthened.



The Role of the G20

2






The potential of D4D has been recognised by the G20 Leaders since at least 2014. In the Brisbane Action Plan adopted under the 2014 Australian G20 Presidency, the leaders committed to “maximise the potential of data and technology to drive growth, create jobs, and improve public services.”¹³ Since then, the G20 has consistently sought to conceptualise and drive international cooperation on expanding the D4D agenda, while emphasising the need for robust data protection measures. Broadly, the G20’s efforts have focused on helping strengthen data privacy and security; ensuring data availability, quality and accessibility; and supporting initiatives that use data for sustainable development.

In terms of sectoral interventions, for instance, the G20 adapted the 2009 Data Gaps Initiative (DGI) in 2015 to accommodate the concept of D4D in its second phase (DGI-2) to improve data availability across sectors such as infrastructure, trade and environmental sustainability.¹⁴ Moreover, expanding on the 2016 Blueprint on Innovative Growth and the vision of the G20 Digital Economy Task Force (DETF), the 2019 G20 Osaka Leaders’ Declaration drew attention to the need for targeted data-

driven programmes across critical sectors such as health, agriculture, climate change and energy, and displacement and migration.¹⁵ More recently, in 2020, the G20 also stressed on leveraging data to design sustainable cities and promote smart mobility.

The global data landscape had expanded to 59 zettabytes (ZB) by 2020-21, and the G20 countries are the largest stakeholders in global data production, consumption and storage.¹⁶ Accounting for over two-thirds of the global population, the G20 is the largest bank of data endpoints.¹⁷ Additionally, over 69 percent of the global data servers and cloud centres are located in the G20 countries.¹⁸ Therefore, resource pooling and the use of data, and the creation of development datasets as DPGs by and across the G20, have significant potential for enhancing sustainable development for all. Besides, the G20’s influence on the global economy and over regional and multilateral development banks (MDBs) to offer financial support for expanding data-driven development initiatives could play a critical role in shaping the D4D agenda, and accelerating efforts to achieve the SDGs by 2030.



The G20 has recognised that the increased need for data for development and international trade has generated concerns about data privacy, security and interoperability. Consequently, the G20's proposal for Data Free Flow with Trust (DFFT) in 2019 under the Osaka Track sought to build consensus around “cross-border data free flow with trust to harness the opportunities of the digital economy” and work towards developing a common data governance framework.¹⁹ Subsequently, the Riyadh G20 Leaders' Declaration (2020) acknowledged the importance of DFFT and cross-border data flows, reaffirmed the role of D4D, and highlighted the need to “address the challenges related to privacy, data protection.”²⁰

The Rome G20 Leaders' Declaration (2021) endorsed that the G20 shall remain committed to ensuring “privacy, data protection, security and intellectual property rights” of the most vulnerable, while enabling DFFT to foster interoperability in the future.²¹ The G20 has worked to streamline global best practices for managing and mitigating security risks associated with D4D and adopted high-level principles for specific use cases. In addition, the G20 Leaders' Summit in Bali and the G20 Finance Ministers and Central Bank Governors (FMCBGs) meeting endorsed the need

for operational improvements in access to the private sector and administrative data and data sharing across borders enabled by the G20 DFFT framework.²²


India, in particular, has developed expertise in data-use efficiency for sustainable development, and launched several transformative D4D initiatives in the run-up to its G20 presidency. For instance, the National Data and Analytics Platform (NDAP) was launched to democratise data delivery by integrating public data and making it openly accessible.²³ A draft National Data Governance Framework Policy that seeks to make a large corpus of anonymised datasets publicly available,²⁴ and the Digital Personal Data Protection Bill,²⁵ were also introduced in 2022. Furthermore, the first meeting of the G20 Development Working Group under the Indian Presidency focused on how legacy development datasets could be rejuvenated using EDTs; and how new datasets could be generated using EDTs. Given that the present G20 Troika is composed entirely of developing nations, it is a particularly consequential moment for India to help mainstream the idea of D4D into the G20 digital agenda, and to actively promote Global-South-focused collaborations in the space.



Recommendations

3





Given the prevalence of data divides within and among countries, and existing challenges to the generation and sharing of development data, the following eight actions may be taken by G20 member states.

1. Evolve a common minimum framework for G20 member states to protect and secure development data.


The UN has emphasised the need to collect and analyse disaggregated data, and to “generate more data relevant to the SDGs”.²⁶ In order to build trust and secure the support of institutions and individuals with respect to data collection and processing, G20 member states could co-design a common minimum framework (CMF) for protecting development data. The framework should encourage four tiers of action. First, G20 nations must evaluate whether their data protection laws and provisions adequately address the requirements of D4D; and if not, consider amendments or the inclusion of policy guidelines to govern the management of development data. Second, G20 nations must create guidelines to strengthen the roles

of institutional data controllers (who ensure the compliance of third-party data processors), and to enhance the capacities of data processors to anonymise datasets across the data processing ecosystem.²⁷

Third, cybersecurity measures must be strengthened to ensure data security and confidentiality, and a list of essential security measures drawn up for stakeholders. Fourth, knowledge about data protection and security must be mainstreamed into development education and continuous learning programmes for stakeholders. The creation and oversight of the CMF could be led jointly by the G20’s Development Working Group (DWG) and Digital Economy Working Group (DEWG).

2. Facilitate cross-border flows of development data to enable research, innovation, and policymaking.

There is growing recognition within the G20 that cross-border data flows and data free flow with trust (DFFT) could greatly benefit international development. In thematic areas of the 2030 Agenda where development impacts are typically transnational or regional—including climate change



and action; health; migration; energy and food security; and the sustainable use of oceans, seas and terrestrial ecosystems—pooling data could support research and policymaking in multiple ways. Several complementary approaches could be operationalised by the G20.


For instance, member states could craft model contractual clauses to be put in place between entities seeking to exchange development data across borders. Second, G20 countries could build on ongoing standard-setting efforts with the G7 and G20, and work towards creating global standards for particular classes of data.^b Third, they could work collaboratively to develop arrangements that promote interoperability among the privacy instruments of member states. Indeed, this could be an initial step towards the eventual creation of a framework to harmonise data governance among G20 nations that would enable the free flow of development data (as well as other kinds of data) between them.²⁸

Finally, the G20 could set up data-sharing platforms that allow countries to share specific types of development data (such as climate or health data) in a secure and controlled environment.

3. Develop an actionable manifesto to promote the use of open data.

The UN, the World Economic Forum, and a wide range of international bodies and national governments now recognise the importance of open data for steering development interventions. As the Digital Public Goods Alliance (DPGA) observes, “By using open data, societies can find new ways to foster economic and human development integral to the attainment of the SDGs.”²⁹ The G20 could consider launching a new Engagement Group called the Data20 (D20) consisting of data scientists, D4D practitioners, and tech policymakers. The D20 would formally collaborate with institutions like the DPGA, UN Global Pulse and data.org to develop a G20 Open Data Manifesto.

b These could include standards for data collection, storage, analysis, dissemination, and privacy and security.



The Manifesto's aim would be to outline a roadmap for promoting the use of open data across the G20 by: raising awareness about its benefits; building the technical capacities required to develop open datasets as certified DPGs; creating the necessary digital infrastructures to make open datasets publicly accessible; and facilitating knowledge transfers from lighthouse projects such as India's Open Government Data (OGD) Platform and the EU's Open Data Portal. The D20 would act as the nodal body steering the implementation of the Open Data Manifesto.


4. Create a G20 repository for sharing open development datasets.

The G20 could jointly build and maintain a repository of open development datasets sourced from member states. As a first step, G20 member states should be encouraged and supported to build their own national-level repositories of development data, such as India's OGD Platform, the NDAP, and the massive platform for anonymised datasets soon to be made available under the National Data Governance Framework Policy.³⁰ As a second step, datasets from member states'

repositories should be made accessible through or hosted within a central G20 Institutional Digital Repository (GIDR). The GIDR would be a valuable tool for enabling access to development data across borders, and promoting the use of D4D by making datasets openly available to the research, development, startup and AI communities.

5. Rejuvenate legacy datasets to generate public value intelligence.

Legacy datasets such as OGD and other conventional development datasets residing in institutional repositories are built using a wide variety of approaches, and are generally considered as reliable and scalable. Using these legacy datasets to generate public value *intelligence* by applying data analytics and other tools could improve service delivery across sectors. Under the aegis of the DEWG, G20 member states could facilitate the creation of a consortium (including tech companies and government departments as members). The consortium will work towards identifying datasets that if processed creatively, could unlock new opportunities for sustainable development.




The consortium will also act as a bridge to the Startup20 (a new G20 Engagement Group recently launched during the Indian Presidency³¹) which will provide access to the G20's startup community. The latter could be a crucial ally for developing a new generation of D4D applications, and using EDTs to analyse and use legacy datasets in new ways. The consortium should also work towards improving data literacy by helping evolve newer kinds of data training and education programs in collaboration with the G20's Youth20 Engagement Group.

6. Invest in the creation of new datasets by harnessing emerging and disruptive technologies (EDTs).

The G20 should strive to expand the open-data landscape by creating greenfield datasets using EDTs. Countries like India have already started to rely on EDTs to obtain valuable real-time data across sectors such as agriculture and health. For example, *Fasal*, a precision AI-powered platform capturing land data, has helped farmers across India, particularly in Karnataka, Madhya Pradesh and Maharashtra, bring down their crop disease management and irrigation costs by almost 50 percent.³² AI-powered drones

are changing the agri-tech landscape—aiding sanitation, surveillance and cost reductions at the same time. A global research report by PwC estimates that EDTs will enable 80 percent of all data to be geospatial by 2025, generating a global economic impact of approximately US\$ 11.1 trillion.³³ In consonance with the G20 Principles for Trustworthy AI, the G20 DEWG could prepare a document highlighting the Best Practices and Specific Use-cases of EDTs for Creation of Greenfield Datasets.

As the third phase of the G20 Data Gaps Initiative (DGI-3) ventures into newer domains of climate change-related and household distributional information data gaps, leveraging the true potential of the EDTs will be crucial.³⁴ As a core component of the DGI-3 and for preserving continuity in subsequent phases, the G20 should collaborate to build an International Network for Creation of Greenfield Databases (INCGD), consisting of “data institutes” that support the production and storage of these new datasets and enable their efficient processing and analysis. The datasets produced by these data institutes should eventually, feed into the central GIDR proposed earlier.



7. Establish and coordinate funding mechanisms to build robust data ecosystems.

The G20 countries can focus on four priority areas to unlock funding for a robust data ecosystem. First, at the national level, the G20 should focus on public sector investments or incentivise private sector participation in setting up critical data infrastructures. Second, the G20 can also foster innovation by investing in research and development, providing funding for startups and small businesses, and creating policies that promote the development and adoption of emerging technologies to create and maintain robust data ecosystems. Third, the G20 can develop a Menu of Funding Mechanisms for Data Ecosystems that highlight existing grants, loans and tax incentives from across the G20 that are in operation or can be tailored to encourage investment in new datasets built from EDTs. Fourth, at the apex,

the G20 members can work together to conceptualise and identify mechanisms to sustain a Global Data Innovation Fund that will complement the Data Gaps Initiative (DGI-3). These strategies could help reduce the financial risks associated with such investments and promote innovation and growth.

8. Convene an annual G20 stocktaking conference to develop and measure progress against D4D targets.


An annual stocktaking conference could be held by G20 member states to set targets, create roadmaps, and assess progress against the goals members set themselves with respect to their D4D infrastructures and interventions. The conference could take place on the sidelines of the annual G20 Leaders' Summit, and can potentially establish itself as a premier international convention on D4D.



Conclusion

4





If the use of D4D is to become a mainstream developmental approach across the G20, several joint actions—such as those proposed in this brief—will need to be operationalised. Within the G20, there is already considerable interest and momentum around D4D, consensus about its benefits, and several ongoing initiatives in the space. The authors’ recommendations build on these trends. To be sure, political


intent will be crucial for actualising the suggested interventions. It is also important to perceive the existing data capabilities of the North, and tech innovations and scalable solutions of emerging economies as complementary strengths. That is likely to make for more organic international cooperation across the Global North and South, and a stronger collective effort to achieve the 2030 Agenda.

Attribution: Anirban Sarma and Debosmita Sarkar, “Using Data to Advance the 2030 Agenda: Recommendations for the G20,” *T20 Policy Brief*, May 2023.

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