

G20 Data Gaps Initiative

Workplan for the New Data Gaps Initiative



Prepared by the IMF Staff, in close collaboration with the Financial Stability Board (FSB) Secretariat and the Inter-Agency Group on Economic and Financial Statistics (IAG), and with input from the Indonesian and Italian G20 Presidencies and the participating economies.

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¹ Submitted to the Indonesian G20 Presidency on September 26, 2022.

Background

The G20 Finance Ministers and Central Bank Governors (FMCBG), in their July 2021 communiqué,² and the G20, in their October 2021 Leaders Declaration,³ took note of the work done by the International Monetary Fund (IMF), in close cooperation with the Financial Stability Board (FSB) and the Inter-Agency Group on Economic and Financial Statistics (IAG)⁴ to develop a concept note for a possible new Data Gaps Initiative (DGI) and noted that they looked forward to the detailed workplan. Subsequently, the IMF, in close cooperation with the IAG and the FSB as well as the participating economies, developed a workplan for the new DGI.⁵ The Workplan was submitted to the July 2022 Meeting of the G20 FMCBG for their endorsement.

In the July 2022 Chair’s Summary, the FMCBGs noted that they “*welcome the completion of the second phase of the Data Gaps Initiative (DGI-2) and will continue to address the identified remaining challenges. We continue to develop the workplan on the new Data Gaps Initiative (DGI). We ask the IMF, FSB and the Inter-Agency Group on Economic and Financial Statistics (IAG), in close consultation with participating economies, to develop a more fine-tuned workplan, taking into account country circumstances.*”⁶ Subsequently, further work was done to fine-tune the Workplan to take these considerations into account.

The fine-tuned workplan benefited from several rounds of consultation with the participating economies during April to September 2022, to ensure a balance between data needs and statistical capacities of the G20 economies.⁷ As a result of the excellent feedback received during the consultation processes, several changes were introduced to the draft workplan to more clearly reflect: (i) the differences in resources, statistical capacities and levels of development among G20 economies; (ii) the scope of the recommendations and targets; (iii) additional details on the methodologies, statistical frameworks, and data sources required for each recommendation; and (iv) additional flexibility on the targets and timelines. Given the urgency of the data needs in the identified priority areas, the workplan is designed for at least some targets in the recommendations to be achievable within five years after the launch of the new DGI.

The fine-tuned workplan is a high-level document outlining 14 recommendations for endorsement by the G20 FMCBG—at their October 2022 meeting. Once endorsed, the workplan will be further detailed through the development of relevant methodologies where needed, discussions at thematic workshops, and stocktaking exercises etc. As with the previous DGI, it is expected that the targets and timelines will be revisited regularly (e.g., during workshops conducted for that objective), and adjusted as needed, to

² <https://www.mef.gov.it/inevidenza/2021/00045/12.Communique-Third-G20-FMCBG-meeting-9-10-July-2021.pdf>.

³ https://www.gpfi.org/sites/gpfi/files/7_G20%20Rome%20Leaders%27%20Declaration.pdf.

⁴ The IAG member agencies are the Bank for International Settlements (BIS), European Central Bank (ECB), Eurostat, International Monetary Fund (IMF, Chair), Organisation for Economic Co-operation and Development (OECD), United Nations (UN), and World Bank. The FSB Secretariat participates in the IAG meetings.

⁵ The initial draft of the workplan was developed during August 2021 to March 2022 and benefitted from several rounds of consultation.

⁶ <https://g20.org/g20-chairs-summary-third-g20-finance-ministers-and-central-bank-governors-meeting/>

⁷ Further to the feedback received during the November 2021 to March 2022 consultations, during which compilers from the participating economies as well as two key user groups of the G20—the G20 Sustainable Finance Working Group and Global Partnership for Financial Inclusion—provided feedback.

align with the availability of data sources, the development of methodological guidelines, and other developments. The G20 FMCBG will be informed of the progress through annual progress reports.

Workplan and Recommendations

The workplan covers four main statistical and data priorities that were identified during the Italian G20 Presidency: (i) climate change; (ii) household distributional information; (iii) Fintech and financial inclusion; and (iv) access to private sources of data and administrative data, and data sharing. It includes a high-level definition of the scope and timeline for the initiative. The workplan includes carefully formulated targets, taking into account resource implications, timelines, feasibility, and different statistical capacity across the G20 and other participating economies.

The workplan comprises fourteen (14) draft recommendations that consider the following guidelines:

- The scope of the recommendations covers the four priority areas included in the Concept Note.
- The recommendations are policy-oriented and focused on addressing relevant data gaps for economic decision making. Recommendations 1 to 12 address the first three priority areas: climate change; household distributional information; and Fintech and financial inclusion. Recommendations 13 and 14, while of key importance to support and enable recommendations 1 to 12, are aspirational, as they address topics related to access to private and administrative data, and data sharing that depend on the particular national conditions, including legal and institutional arrangements. International best practices in this area support data sharing between statistical agencies across and within economies (usually through memoranda of understanding) to ensure that statistical compilers have access to necessary administrative and private data where available.
- The targets can be derived as “experimental indicators”, in the initial stage, not necessarily as official statistics, due to the relatively short time frame as well as the need to consider differences in statistical capacity, starting points, and legal frameworks across the G20 economies.
- The recommendations leverage or complement other ongoing initiatives at the international level.
- The targets provide the additional flexibility that reflect the different statistical capacities and statistical infrastructures of the participating economies. As such, timelines for implementing the recommendations are indicative; jurisdictions will face individual circumstances that may result in varied implementation timelines.
- The recommendations have an output-oriented approach, as they describe in broad terms the indicators to be developed to close the data gaps that were identified. Some of the recommendations might benefit from micro data (e.g., at the firm or household level). However, this kind of information might not be available, or the level of granularity can be very different, across the participating economies. Consequently, the recommendations are mostly not descriptive as to which sources and data should be used but leave the decision—and the development and exploitation of new sources, including on micro data—at the discretion of the participating economies.

- The workplan acknowledges that economies use various approaches to taxonomy development and implementation as well as a variety of approaches and governance schemes. Some economies are yet to develop such frameworks, and as such, the recommendations included in the workplan should be implemented with available information on a best-effort basis and within the boundaries of country-specific legal frameworks.

Governance and Monitoring

The governance of the new DGI, similar to that of DGI phases 1 and 2 will be characterized by strong support and guidance from the G20, and close collaboration between the participating economies and the international organizations. The new DGI will be coordinated by the IMF, in close cooperation with the IAG and the FSB, and reporting to the G20 FMCBG. The IAG will continue to play the role of global facilitator and coordinator, contributing to the enhancement of the global statistical infrastructure.

For each recommendation, lead and contributing international organizations were identified, according to their mandate and previous contributions in the relevant areas of work. The recommendations establish the role of IAG and participating economies, according to the targets and timelines defined. The IAG will work together and with other stakeholders to ensure that DGI work is coordinated with existing initiatives in order to avoid duplication and leverage synergies. Where available, existing statistical standards and frameworks should serve as the basis for the development of new indicators. Where additional methodological development is needed, the IAG will prioritize efforts to develop and achieve consensus on concepts, definitions, and indicators to allow sufficient time for participating economies to modify existing data collection vehicles or launch new surveys.

The workplan for the new DGI—as with the DGI phases 1 and 2—is not legally binding. While the new DGI is focused on G20 and non-G20 FSB member economies,⁸ it provides other economies with valuable guidance and a visible benchmark to develop climate change, household income and wealth distribution, and Fintech and financial inclusion experimental indicators that are relevant for their economies.

Overall, the objective of the DGI is to encourage economies to provide data to assist policymakers to address the most relevant policy needs. We anticipate that all G20 economies will achieve the targets outlined in the workplan. However, we recognize that there are different levels of statistical development and statistical capacity, legislative constraints, and priorities among the participating economies. This will be reflected in the monitoring framework for the new DGI. Compared to DGI-1 and DGI-2, the proposed monitoring framework for the new DGI affords all participating economies, on an exceptional basis, the flexibility to work towards achieving some targets that are not considered to be an immediate priority for national statistics in the economy’s specific context. The rationale for this use of the flexibility option will be documented and included in the monitoring framework and future annual DGI progress reports.

⁸ Non-G20 FSB Economies participate in the DGI on a voluntary basis and therefore, implement only the recommendations that are deemed relevant for their national context.

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ACRONYMS

| | |
|-----------|--|
| 2008 SNA | System of National Accounts, 2008 |
| BD4 | OECD Benchmark Definition of Foreign Direct Investment, 4 th Edition (BD4) |
| BIS | Bank for International Settlements |
| BPM6 | Balance of Payments and International Investment Position Manual, Sixth Edition |
| CBDC | Central Bank Digital Currencies |
| DAO | Decentralized Autonomous Organization |
| DDI | Data Documentation Initiative |
| DeFi | Decentralized Finance |
| DGI | Data Gaps Initiative |
| EC | European Commission |
| ECB | European Central Bank |
| EG-DFA | Expert Group on Distributional Financial Accounts, ECB |
| EG-DNA | Expert Group on Distributional National Accounts, Eurostat and OECD |
| EU | European Union |
| FDI | Foreign Direct Investment |
| FMCBG | Finance Ministers and Central Bank Governors |
| FSB | Financial Stability Board |
| GDP | Gross Domestic Product |
| GHG | Greenhouse Gas |
| GFSM 2014 | Government Finance Statistics Manual |
| GVC | Global Value Chain |
| HSS | Handbook on Securities Statistics |
| IAG | Inter-Agency Group on Economic and Financial Statistics |
| IEA | International Energy Agency |
| IFC | Irving Fisher Committee on Central Bank Statistics |
| IMF | International Monetary Fund |
| INEXDA | International Network for Exchanging Experience on Statistical Handling of Granular Data |
| MNE | Multinational Enterprise |
| MFSMCG | Monetary and Financial Statistics Manual and Compilation Guide, 2016 |
| NBFI | Non-bank Financial Intermediation |
| NDC | Nationally Determined Contributions |
| NGFS | Network of Central Banks and Supervisors for Greening the Financial System |
| OECD | Organisation for Economic Co-operation and Development |
| PEFA | Physical Energy Flow Accounts |
| SDMX | Statistical Data and Metadata eXchange |
| SEEA | System of Environmental-Economic Accounting |
| SNA | System of National Accounts |
| SPE | Special Purpose Entities |
| TEC | Trade by Enterprise Characteristics |
| TiVA | Trade in Value Added, OECD |
| UNCEEA | United Nations Committee of Experts on Environmental-Economic Accounting |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UN | United Nations |
| UNECE | United Nations Economic Commission for Europe |
| UNSD | United Nations Statistics Department |
| WGSD | Working Group on Securities Databases |

CLIMATE CHANGE

Recommendation 1. Greenhouse Gas Emission Accounts and National Carbon Footprints

Globalized production and consumption patterns require distinguishing two perspectives when assessing greenhouse gas (GHG) emissions by countries (or other geographical entities):

- (1) The production perspective looks at the GHG emissions associated with the production of units that are resident in the economic territory of a given economy.*
- (2) The consumption perspective looks at the GHG emissions associated with the products that are finally used in an economy.*

The two measures provide different perspectives on GHG emissions. For instance, in an economy with export-oriented carbon intensive industries, the production/territory related GHG emissions might be much higher than the consumption-related emissions. Conversely, in a comparably service-dominated economy, the consumption-based emissions might be higher than the production/territory related emissions.

Consumption-based carbon footprints can be developed by leveraging the existing data sources and multi-regional input-output models. This technique requires global data sets (data sets representing the world economy) for the following three statistics:

- (1) National accounts: supply and use tables (alternatively: symmetric input-output tables).*
- (2) Environmental accounts (System of Environmental-Economic Accounting Central Framework, 2012 (SEEA-CF)): air emission accounts for greenhouse gases.*
- (3) Statistics on international trade in goods and services.*

The objective of this recommendation is to generate global datasets for the above-mentioned statistics for the G20 economies.

Air emission accounts complement GHG inventories by detailing which economic activities generate what types of emissions, using the breakdown fully aligned with the System of National Accounts (SNA). As a result, these accounts have multiple analytical uses including the derivation of emission intensities of economic sectors as well as the calculation of consumption-based estimates, carbon footprints, and emission trade balances. Using the similar structure of the SNA, they allow to link the emission to expenditures as well as environmental taxes and subsidies by economic activity. The air emission accounts compliment the national GHG emission inventories in that they link the air emissions with economic activities (output, expenditures, and value added) across all sectors of the economy (see recommendation 3 and 6) and economic instruments such as taxes and subsidies (see recommendation 5). As such, the recommendation builds upon (and does not duplicate) the United Nations Framework Convention on Climate Change (UNFCCC) GHG inventories and nationally determined contributions (NDCs) agreed to under the Paris Agreement.

While international statistical standards exist for air emission accounts (since 2012, when the SEEA-CF was adopted as a statistical standard), not all G20 economies currently compile them. Air emission accounts can be compiled using the UNFCCC national GHG inventories, in combination with energy accounts/statistics (see recommendation 2) as well as additional information needed to adjust the territory-based principle in the GHG inventories (e.g. international transport data and emission factors) to the resident principle in line with the internationally agreed SEEA-CF standards. Energy accounts can serve as a powerful tool to estimate emission from energy use. Following the SEEA for energy (SEEA-

Energy), emission accounts for energy-related emission can be established by multiplying energy use with relevant emission factors.

The national supply-use tables (input-output tables) together with trade statistics will be integrated into a global multi-regional input-output table. The air emission accounts will be an important input into the multi-regional input-output table to produce statistics of consumption-based emissions, carbon footprints, and similar indicators.

Policy Driver: To monitor progress towards emission targets and the transition towards a low-carbon economy. All G20 economies have updated their NDCs as outlined under the Paris Climate Agreement. Consequently, there will be a need to track progress towards these targets on a regular and timely basis. In order to achieve these targets, G20 economies will need to undergo important industrial and structural reforms. There will be a need to monitor the progress of these reforms and their impact on GHG emissions and carbon footprints.

Lead and Contributing International Organizations: Eurostat, IMF, and UNSD (leads), with OECD

| | Targets, Actions, Timeline |
|--------------------------|---|
| IAG Members' Role | <p>Methodological and compilation guidance for recommendation 1 are already well developed. The concepts, sources, and methods outlined in the SEEA-CF and the SNA will be used to develop the accounts (and relevant indicators) related to recommendation 1.</p> <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ Provide technical advice and assistance in using tools and data that can facilitate the compilation of air emission accounts through workshops, and hands-on training. This includes the restructuring UNFCCC GHG inventories into air emission accounts. ✓ In close consultation with G20 economies, develop reporting templates supporting the dissemination of statistics related to recommendation 1. ✓ In close consultation with G20 economies, develop methods to integrate the statistics developed by G20 (and non-G20 participating economies) into the global multi-regional input-output database and provide GHG consumption-based carbon footprint estimates to participating G20 economies. ✓ Collect air emission accounts from the G20 economies and use them as input in the global multi-regional input output table. ✓ Monitor the implementation of the recommendation. |
| G20 Economies | <p>The Targets allow the G20 economies the flexibility to provide data according to the granularity, periodicity, and timeliness appropriate for their respective economies and take into account their specific levels of statistical development.</p> <p>Target Develop and disseminate supply and use tables (alternatively: symmetric input-output tables) for 2010 to (current year - 3).⁹</p> <p>[Timeline: Fourth Quarter 2023]</p> |

⁹ For example, if the current year is 2024, develop and disseminate supply and use tables (alternatively: symmetric input-output tables) for 2010 up until 2021.

| Targets, Actions, Timeline | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|--|----------------|-------------|----------------|-------------|-------------------------|---|--|--|---------------------|--|---|--|-------------------------------|--|--|--|--|--|--|--|--|--|
| | <p>Develop and disseminate air emission accounts for 2010 to (current year - 3). Air emission accounts can be compiled using UNFCCC national GHG inventories as an input, in combination with energy accounts/statistics as well as additional information (e.g. international transport data, emission factors, international merchandise trade statistics ect.) and supported by international standards and tools. The level of disaggregation will depend on the availability of source data.</p> <p>[Timeline: Fourth Quarter 2023]</p> <p>Disseminate consumption-based carbon footprints.</p> <p>[Timeline: Fourth Quarter 2023]</p> <p>Second-best Target Develop and disseminate supply and use tables (alternatively: symmetric input-output tables) for the available periods between 2010 to (current year - 4).</p> <p>[Timeline: Fourth Quarter 2024]</p> <p>Develop and disseminate Air emission accounts for the available periods between 2010 to (current year - 4). Alternatively, provide UNFCCC GHG emission inventories and work with the lead international organizations to allocate them to ISIC classes i.e. by economic sector. Air emission accounts (based on SEEA-CF concepts and classifications) can be compiled using UNFCCC national GHG inventories, in combination with energy accounts/statistics as well as additional information (e.g. international transport data, emission factors, international merchandise trade statistics etc.). The level of disaggregation and degree of alignment with the SEEA-CF concepts will depend on the availability of source data and country circumstances.</p> <p>[Timeline: Fourth Quarter 2024]</p> <p>Disseminate consumption-based carbon footprints.</p> <p>[Timeline: Fourth Quarter 2024]</p> | | | | | | | | | | | | | | | | | | | | | | |
| Current Status | <p>The methodology (concepts, sources, and methods) required to produce GHG air emission accounts and carbon footprints are already well established in both the System of National Accounts, 2008 (<i>2008 SNA</i>) and the SEEA-CF. Eurostat regularly collects air emission accounts and global preliminary reporting templates have also been developed for air emission accounts (UNSD and OECD).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 16.6%;">In place</th> <th style="width: 16.6%;">In Development</th> <th style="width: 16.6%;">Not Started</th> </tr> </thead> <tbody> <tr> <td>Methodological Guidance</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>Reporting Templates</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td rowspan="3">Main Source Data Requirements</td> <td colspan="3" style="text-align: center;">Annual GHG emissions and UNFCCC national GHG inventories</td> </tr> <tr> <td colspan="3" style="text-align: center;">Annual Supply and Use Tables or Annual Input-Output Tables</td> </tr> <tr> <td colspan="3" style="text-align: center;">International Merchandise¹⁰ Exports and Imports by Product</td> </tr> </tbody> </table> | | In place | In Development | Not Started | Methodological Guidance | X | | | Reporting Templates | | X | | Main Source Data Requirements | Annual GHG emissions and UNFCCC national GHG inventories | | | Annual Supply and Use Tables or Annual Input-Output Tables | | | International Merchandise ¹⁰ Exports and Imports by Product | | |
| | In place | In Development | Not Started | | | | | | | | | | | | | | | | | | | | |
| Methodological Guidance | X | | | | | | | | | | | | | | | | | | | | | | |
| Reporting Templates | | X | | | | | | | | | | | | | | | | | | | | | |
| Main Source Data Requirements | Annual GHG emissions and UNFCCC national GHG inventories | | | | | | | | | | | | | | | | | | | | | | |
| | Annual Supply and Use Tables or Annual Input-Output Tables | | | | | | | | | | | | | | | | | | | | | | |
| | International Merchandise ¹⁰ Exports and Imports by Product | | | | | | | | | | | | | | | | | | | | | | |

¹⁰ International Merchandise Trade Statistics are needed as inputs to develop carbon footprints estimates.

Recommendation 2. Energy Accounts

*To respond to the needs of monitoring energy policies, it is recommended that economies develop **energy accounts**. Energy accounts describe the supply and use of energy by economic activity and energy source. They are constructed either directly from energy statistics or from energy balances, which have a different objective (and therefore also different conventions and scope) from the energy accounts. While energy statistics and balances are useful for understanding the energy sector and the technologies used, they cannot be easily linked to economic information. The SEEA-CF—adopted as an international statistical standard in 2012 on par with the SNA—provides the statistical framework to compile the energy accounts. Furthermore, the SEEA Energy—a subsystem of the SEEA-CF provides further guidance on the concepts, methods, and classifications for compiling energy accounts.*

The objective of this recommendation is to expand the availability of comparable energy accounts for the G20 economies. *G20 economies are asked to prepare energy accounts according to the SEEA-CF. While energy accounts consist of flow accounts and asset accounts in physical and monetary terms, the scope of this recommendation pertains to physical energy flow accounts (PEFA). PEFA link the energy information with the economic information using the same accounting structure as the SNA and extending the supply and use tables to include information on energy.*

PEFAs are already compiled annually by the European Union (EU) economies as part of the European Directive on Environmental Economic Accounting, as well as other non-European economies. Further, Eurostat has developed a PEFA builder tool that allows EU member economies to calculate energy accounts from the Eurostat energy balances. Economies that have additional data can insert them in the PEFA builder to allocate energy use for transport to relevant economic activities and for adjusting for resident and non-resident energy use.

Energy accounts are a priority for many developing economies, and UNSD has developed a tool which allows countries to estimate energy accounts from IEA energy balances, which needs to be further tested. According to the most recent Global Assessment on SEEA implementation (from 2021), currently 45 economies compile a form of energy accounts. From the G20, apart from the EU member states, this includes Australia, Canada, South Africa, Indonesia, and Turkey.

Policy Driver: *The energy accounts can be used to monitor the energy mix (including the share of renewable energy sources) used by economic activities in production, energy transformation and final consumption. As such, they are useful to monitor a wide variety of energy policies. Due to their consistency with the supply and use tables of the national accounts, energy accounts allow for the calculation of energy intensities (by economic activities), calculating multipliers, energy footprints, or performing structural decomposition analysis.*

Energy accounts also underpin the calculation of air emission accounts, regarding emissions due to energy extraction, distribution, storage, and transformation. Combined with information about energy taxes and subsidies, they provide a useful tool for scenario analysis.

Lead and Contributing International Organizations: *UNSD (lead), as Secretariat of the UNCEEA,¹¹ with Eurostat and IMF*

| | Targets, Actions, Timeline |
|--------------------------|---|
| IAG Members' Role | <p>Methodological and compilation guidance for recommendation 2 is already well developed. The concepts, sources and methods outlined in the <i>SEEA-CF</i> will be used to develop the indicators related to recommendation 2.</p> <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ Provide technical support and advice for accounts compilation via workshops and training. ✓ Coordinate the development of reporting templates supporting the dissemination of statistics related to recommendation 2. ✓ Collect, quality assure, and process data from G20 economies and disseminate G20 energy accounts. ✓ Monitor the implementation of the recommendation. |
| G20 Economies | <p>The Targets allow the G20 economies the flexibility to provide data according to the granularity, periodicity, and timeliness appropriate for their respective economies and take into account their specific levels of statistical development.</p> <p>Target Develop and disseminate annual SEEA-CF based energy accounts for 2015 to (current year - 2), expressed in terajoules which include:</p> <ul style="list-style-type: none"> - natural energy inputs (e.g. fossil energy production and renewable production such as hydro, wind, solar, biomass) - energy products (e.g., hard coal; brown coal and peat; crude oil; natural gas; naphtha; transport diesel; heating and other gasoil; residual fuel oil; nuclear fuel; wood and other biomass; electrical energy; and heat), and - residuals (e.g., losses during extraction, distribution, storage and transformation).¹² <p>[Timeline: Third Quarter 2023]</p> <p>Second-best Target Develop and disseminate SEEA-CF based energy accounts for 2018 to (current year - 3), for natural energy inputs, most of the energy products mentioned above, and residuals; for 2015 and from 2021 annually.</p> <p>[Timeline: Third Quarter 2024]</p> |
| Current Status | <p>The methodology (concepts, sources, and methods) required to produce energy accounts are well established in the <i>SEEA-CF</i>. Preliminary reporting templates for Energy Accounts have been developed by the UNCEEA. Furthermore, some G20 economies currently publish Energy Accounts.</p> |
| | Targets, Actions, Timeline |

¹¹ The UNCEEA (UN Committee of Experts on Environmental-Economic Accounting) is the intergovernmental body overseeing the global statistical work program on environmental-economic accounting. It reports to the UN Statistical Commission. The UNCEEA working group on data, Area C, has the mandate to develop SEEA global databases, which are grounded in national data. In particular, it is working on air emission, material flow, energy, water, and land accounts which were identified as priorities. Data templates on air emission and energy accounts are being developed and will be tested in the next couple of months. A global data collection will be launched shortly, whereby data for EU economies will be collected by Eurostat, OECD economies by OECD and remaining economies by UNSD.

¹² Issues of confidentiality or non-availability of data for certain fuel types can be expressed through metadata.

| | In place | In Development | Not Started |
|--------------------------|-------------------|----------------|-------------|
| Methodological Guidance | X | | |
| Reporting Templates | | X | |
| Source Data Requirements | Energy Statistics | | |
| | Energy Accounts | | |
| | Energy Balances | | |

Recommendation 3. Carbon Footprint of Foreign Direct Investment (FDI)

FDI could be a channel to help address climate change if foreign-controlled firms use less carbon-intensive technology than domestic producers, and if FDI serves as a channel for the transfer of low-carbon technology across borders. However, FDI can also allow firms to circumvent tighter emissions standards by locating more carbon-intensive stages of production in economies with less stringent standards (e.g. carbon leakage) and then exporting the final production to other economies. Understanding these trends requires an additional dimension, that of ownership to be added to the carbon footprints developed under Recommendation 1.

This ownership dimension can be added to the global datasets created under recommendation 1 by using existing guidance and templates for reporting statistics on FDI, the activities of Multinational Enterprises (MNEs), and trade by enterprise characteristics. The indicators would provide information on the carbon emissions in the host economy from both capital formation financed by FDI, and from the operations of foreign-controlled firms.¹³

This recommendation draws upon the global datasets developed under Recommendation 1 (Air Emission Accounts, UNFCCC GHG Inventories, Input-Output Multipliers) to reflect the role of foreign-controlled firms operating in host economies, on the carbon emissions of those economies. This would require G20 economies to:

- (1) Disseminate information on FDI positions and flows by economy consistent with OECD Benchmark Definition of Foreign Direct Investment, 4th Edition (BD4) and the Balance of Payments and International Investment Position Manual, sixth edition (BPM6) and by industry consistent with the OECD BD4.*
- (2) Disseminate data on the activities of foreign-controlled enterprises in the reporting economies and on the overseas activities of MNEs in relatively low-income countries if possible.*

For economies where Special Purpose Entities (SPEs) are significant, FDI information could include the proposed enhancements including separate reporting on foreign-controlled resident SPEs and non-SPEs, on a strictly voluntary basis. The information on SPEs will be used to better identify the amount of FDI inflows that are having an impact in the host economy, including the financing of capital formation. While international statistical standards and reporting templates exist for the above statistics, not all G20 economies disseminate these statistics.

Policy driver: *To monitor the offshoring of emissions through trade, investment, and global value chains (GVCs). Additional information on FDI, MNEs, and GVCs would help analysts better understand where CO₂ emissions are generated, who owns the enterprises generating them, and where the associated goods and services are consumed. These measures provide the host economies with additional information to understand the source of carbon emissions.*

¹³ Examples of the FDI indicators that can be constructed from this information are available in the IMF’s Climate Change Indicators Dashboard: Cross-border indicators. A methodology for the FDI-related indicators is available [here](#).

Lead and Contributing International Organizations: IMF (lead), with OECD

| | Targets, Actions, Timeline | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|--|-----------------------|--------------------|-----------------------|--------------------|-------------------------|---|--|--|---------------------|---|--|--|--------------------------|--------------------------------------|--|--|---|--|--|------------------------------|--|--|--|--|--|
| IAG Members' Role | <p>Methodological and compilation guidance for recommendation 3 are already well developed. The concepts, sources and methods outlined in the <i>BD4</i> and <i>BPM6</i> will be used to develop the indicators for recommendation 3.</p> <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ Provide technical support and advice for compilation via workshops and training. ✓ Coordinate the development of reporting templates supporting the dissemination of statistics related to recommendation 3. ✓ Collect, quality assure, and process data from G20 economies and disseminate G20 estimates of the Carbon Footprint of MNEs. ✓ Integrate the statistics delivered by G20 economies into the global multi-regional input-output database and provide estimates of the carbon footprint of MNEs. ✓ Monitor the implementation of the recommendation. | | | | | | | | | | | | | | | | | | | | | | | | | |
| G20 Economies | <p>The Targets allow the G20 economies the flexibility to provide data at a level of detail that is appropriate for their respective economies and take into account their specific levels of statistical development.</p> <p>Target</p> <p>Develop and disseminate annual FDI positions and flows data by economy consistent with <i>BD4</i> and <i>BPM6</i> and by industry consistent with <i>BD4</i>.</p> <p>Develop and disseminate data on the activities of foreign-controlled firms in the reporting economy and on the overseas activities of MNEs.</p> <p>Develop and disseminate imports and exports by enterprise characteristics differentiating exports and imports of goods (movement of goods basis) and services (change of ownership basis) by ownership.</p> <p>Disseminate estimates of carbon emissions of MNEs by ownership.</p> <p>[Timeline: Fourth Quarter 2024]</p> <p>Second-best Target:</p> <p>Develop and disseminate annual FDI positions and flows data consistent with <i>BPM6</i>, with the option of reporting partial industry detail.</p> <p>[Timeline: Fourth Quarter 2025]</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| Current Status | <p>The methodology (concepts, sources, and methods) required to produce FDI statistics are outlined in <i>BD4</i> and <i>BPM6</i>.</p> <table border="1"> <thead> <tr> <th></th> <th>In place</th> <th>In Development</th> <th>Not Started</th> </tr> </thead> <tbody> <tr> <td>Methodological Guidance</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Reporting Templates</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td rowspan="4">Source Data Requirements</td> <td colspan="3">Foreign Direct Investment Statistics</td> </tr> <tr> <td colspan="3">International Trade Statistics by Enterprise Characteristic</td> </tr> <tr> <td colspan="3">Activities of MNE statistics</td> </tr> <tr> <td colspan="3">Carbon emission intensities by industry and use (obtained from recommendation 1)</td> </tr> </tbody> </table> | | In place | In Development | Not Started | Methodological Guidance | X | | | Reporting Templates | X | | | Source Data Requirements | Foreign Direct Investment Statistics | | | International Trade Statistics by Enterprise Characteristic | | | Activities of MNE statistics | | | Carbon emission intensities by industry and use (obtained from recommendation 1) | | |
| | In place | In Development | Not Started | | | | | | | | | | | | | | | | | | | | | | | |
| Methodological Guidance | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reporting Templates | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source Data Requirements | Foreign Direct Investment Statistics | | | | | | | | | | | | | | | | | | | | | | | | | |
| | International Trade Statistics by Enterprise Characteristic | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Activities of MNE statistics | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Carbon emission intensities by industry and use (obtained from recommendation 1) | | | | | | | | | | | | | | | | | | | | | | | | | |

Recommendation 4. Climate Finance (Green Debt and Equity Securities Financing)

To monitor the transition to a low GHG-emission economy, it is important to identify the sources of funds and their use in supporting this transition. However, so far there has been a lack of reliable and comparable indicators for tracking the growth in “green” financing via debt securities and equity instruments across the G20 economies.

The objective of this recommendation is to address this data gap through the development of methodological guidance to produce more comparable indicators of green financing (as part of sustainable financing) via debt and, as much as possible, equity securities.

The work will cover (i) the reporting of data on green debt securities and (when possible) listed shares by G20 economies using common reporting templates (to be completed on the basis of individual statistical capacity and self-commitments), including a stocktaking of the methodologies of national compilation approaches; and (ii) the development of methodological guidance to ensure greater interoperability and comparability of data reported across economies in the future, particularly for green equity for which no international conceptual guidance yet exists, with the consideration of the benefits/costs involved. In doing so, the recommendation specifically does not provide a definition of “green” in this context, as this definition may differ depending on the frameworks applied across jurisdictions. The objective is also to promote the collection and use of security-by-security data on green debt securities and listed shares, which will be key for assessing firms’ and banks’ role in the transition process.

Using adequate and effective common data reporting templates, G20 economies will be encouraged to:

- (1) Provide (preferably on a quarterly frequency) experimental data on issuances and holdings of green debt securities and listed shares securities to the BIS, based on self-commitments and consistent as much as possible with the Handbook on Securities Statistics (HSS), and any other specific guidance developed in the context of the recommendation, and provide documentation on the compilation methodology.*
- (2) Work together with other economies and the relevant international organizations and in cooperation with the other recommendations to develop methodological guidance to support greater interoperability and comparability of approaches for the statistical recording of green debt securities and listed shares across the G20 economies.*

This recommendation will also help to better address the specificities of financial institutions’ impact on greenhouse gas (GHG) emissions (e.g. carbon emissions). A key reason is the need to complement the analysis of the footprints directly related to their own operations by also considering the indirect impact through their financing of external activities. Hence the recommendation will also support the assessment of emission footprints of the securities portfolios of financial institutions in order to shed more light on (i) the financing of carbon intensive activities and (ii) the related risks posed to the financial sector. Such information would also help to inform the GHG intensity of cross-border portfolio flows (which could be easier to assess as a first step in some jurisdictions—link to recommendations 1 and 3).

Policy Driver: *In view of the economic and financial implications of climate change, green financing is considered globally as a key instrument to support the transition to a more resilient economy. There are several ongoing policy initiatives being developed by policymakers and financial authorities around the globe, as they work towards putting in place policies that incentivize investments in green projects and activities and that can contribute to climate change adaptation and mitigation. This recommendation is thus part of the general efforts to promote a more balanced society regarding environmental, social and governance (ESG) aspects, but with an immediate focus on green finance specifically.*

Lead and Contributing International Organizations: *BIS and ECB (leads), with the work to be led by the BIS-ECB-IMF Working Group on Securities Databases (WGSD); with IMF (as member of WGSD), FSB (user perspective), and OECD. Workshops organized in the context of this recommendation as well as related distribution lists would also include representatives of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), in order to ensure a close exchange and cooperation between the work on this recommendation and the NGFS.*

| | Targets, Actions, Timeline |
|--------------------------|---|
| IAG Members' Role | <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ Coordinate the development of methodological guidance on recording information on green debt securities and delineate the concept of green equity financing in coordination with recommendations 1 and 3; integrate this guidance in the next revision of the HSS. ✓ Provide technical support and advice for compilation via workshops and training. ✓ Coordinate the preparation of reporting templates to be agreed with the G20 economies supporting the publication of statistics related to recommendation 4. The reporting templates will be designed to allow for definitions / taxonomies for green debt securities and (when possible) listed shares used across jurisdictions. The IAG is committed to ensuring that all G20 economies are included in the development of these templates and that economy-specific circumstances across the G20 economies will be considered through the use of self-commitments. ✓ Collect, quality assure, and process data from G20 economies and disseminate G20 estimates green debt and equity securities financing. ✓ Monitor the implementation of the recommendation. <p>In undertaking this work, the lead and contributing agencies recognize and will consider that:</p> <ul style="list-style-type: none"> ✓ There are currently different approaches for defining and estimating green finance across G20 economies and there are ongoing initiatives related to this area such as the work by the FSB. ✓ There is no internationally agreed classification/taxonomy for green finance, particularly for equity, and that convergence to a single compilation approach is expected to be difficult at least in the medium-term. ✓ Hence, the primary purpose of the work will be to develop guidance on how to present national approaches to maximize international comparability. It will be conducted on a best-effort basis (e.g. based on countries' self-commitments to be agreed) so as to deal with differences in national legal frameworks / practices across jurisdictions. |
| G20 Economies | <p>The Target allows the G20 economies the flexibility to provide data according to national classification frameworks and at a level of detail appropriate for their respective economies and considers their specific levels of statistical developments.</p> <p>Target: Develop and disseminate estimates of issuances and holdings of green debt securities and listed shares, including analyzing the feasibility to provide information related to GHG emissions footprints of the securities portfolios of financial institutions both for resident and cross-border counterparts, to the BIS for public dissemination:</p> <ul style="list-style-type: none"> - Given the lack of internationally agreed classifications / taxonomies, the classification of green debt securities and listed shares should be initially based on national classification frameworks (e.g., use of legally mandatory taxonomies, market-driven taxonomies, ESG ratings).¹⁴ |

¹⁴ The proposed Recommendation focuses on green finance. Collecting data on transition finance could be a future objective.

| Targets, Actions, Timeline | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|--|----------------|-------------|----------------|-------------|-------------------------|--|---|--|---------------------|--|---|--|--------------------------|--|--|--|--------------------------------------|--|--|
| | <ul style="list-style-type: none"> - The data should be, as much as possible, consistent with the <i>HSS</i> and if possible, be on a quarterly frequency. - Data could cover information on issuances and holdings of green debt securities and listed shares, broken down by issuer/holder sector, and potentially other securities features. In addition, methodological guidance could be developed to ensure that data reported on a residency basis could be complemented by information provided on a nationality basis, on a best effort basis.¹⁵ - Targets for data delivery should be defined in a set of reporting templates (specific breakdowns would build on the breakdowns developed for debt securities in the context of the preceding DGI Recommendation II.7). - Economies should provide self-commitments and deadlines on the implementation of the agreed reporting templates, which will be used to assess progress, and which will allow economies to set their own national targets in line with their statistical capacities. <p>G20 economies to contribute to preparation of transparent methodological documentation on national compilation approaches and to development of guidance to support the future statistical recording of more comparable data on green debt securities and listed shares financing.</p> <p>Timelines:</p> <p>Fourth Quarter 2023: provide self-commitments on the reporting of statistics on green debt securities and listed shares financing.</p> <p>Fourth Quarter 2024: set up plans (including regarding the type of data sources and compilation approach envisaged) to achieve the intermediate and final targets.</p> <p>Fourth Quarter 2025: intermediate reporting for basic breakdowns on issuances of green debt securities.</p> <p>Fourth Quarter 2027: final reporting for breakdowns on issuances and holdings of green debt securities and listed shares.</p> | | | | | | | | | | | | | | | | | | | |
| Current Status | <p>The methodological and compilation guidance outlined in the <i>HSS</i>, and the DGI-2 Securities reporting template form the basis for the methodological guidance and reporting template for recommendation 4.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 16.6%;">In place</th> <th style="width: 16.6%;">In Development</th> <th style="width: 16.6%;">Not Started</th> </tr> </thead> <tbody> <tr> <td>Methodological Guidance</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>Reporting Templates</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td rowspan="2">Source Data Requirements</td> <td colspan="3" style="text-align: center;">Debt Securities Issuances and Holdings</td> </tr> <tr> <td colspan="3" style="text-align: center;">Listed shares issuances and holdings</td> </tr> </tbody> </table> | | In place | In Development | Not Started | Methodological Guidance | | X | | Reporting Templates | | X | | Source Data Requirements | Debt Securities Issuances and Holdings | | | Listed shares issuances and holdings | | |
| | In place | In Development | Not Started | | | | | | | | | | | | | | | | | |
| Methodological Guidance | | X | | | | | | | | | | | | | | | | | | |
| Reporting Templates | | X | | | | | | | | | | | | | | | | | | |
| Source Data Requirements | Debt Securities Issuances and Holdings | | | | | | | | | | | | | | | | | | | |
| | Listed shares issuances and holdings | | | | | | | | | | | | | | | | | | | |

¹⁵ The proposed Recommendation focuses on data for green debt securities and listed shares. The collection of data on green loans and green unlisted shares, for which data is typically less readily available, is not in its scope but could be a future objective.

Recommendation 5. Forward-Looking Physical and Transition Risk Indicators

Physical and transition risk indicators are of high importance to understand both the effects and the risks related to climate change on the economy and the financial system. **Physical risks** arise from the potential impacts of climate change on population, the economy and the financial system. These risks can impact in two ways: acutely and chronically. Acute impacts, from more frequently occurring short-duration extreme weather events such as storms and floods. Chronic impacts, longer-term and pervasive risks such as droughts or sea level rise due to global warming, will deprive economic sectors (e.g., agriculture) in certain regions of the world. **Transition risks** emerge from the potential impacts of climate policy on economic performance and specifically the stability of corporates and the financial system. The economic transformation brings uncertainties about the structural pathways. These include technological developments, job loss and creation, modified consumer preferences, and policy and regulation adjustments, affecting businesses, households, and the broader economy. The identification of forward-looking indicators for both types of risk and the feasibility of regional or sectoral breakdowns will, in part, be guided by the availability of data sources. However, new data sources might need to be developed for some of the indicators.

The objective of this recommendation is to develop forward-looking physical and transition risk indicators for the G20 economies to monitor the impact of climate change on the economy and the financial system.

Policy Driver: Given the potential impacts of climate change hazards (such as floods, drought, and wildfires) and climate policy changes on populations, national wealth, and firms' profitability and stability, it is important to monitor them. Nonlinearity in the climate change trends necessitate identification and development of forward-looking indicators to support policy development and analysis. Climate scenarios developed (e.g., by the NGFS) would be used to quantify risks. The baseline for an assessment of the future impacts of hazards and policy changes would also provide information on current exposures.

Lead and Contributing International Organizations: IMF (lead), with World Bank, ECB, OECD, FSB, and BIS/Irving Fisher Committee on Central Bank Statistics (IFC). Workshops organized in the context of this recommendation as well as related distribution lists would also include representatives of the NGFS, in order to ensure a close exchange and cooperation between the work on this recommendation and the NGFS.

| | Targets, Actions, Timeline |
|--------------------------|---|
| IAG Members' Role | <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ Coordinate the development of guidance (by 2024), to be agreed with G20 economies, outlining the concepts, methods, general assumptions, and public and private data sources to develop forward-looking climate-related physical and transition risk indicators. ✓ Provide technical support and advice via workshops and training. ✓ Coordinate the preparation of reporting templates to be agreed with the G20 economies, supporting the publication of statistics related to recommendation 5. ✓ Collect, quality assure, and process data from G20 economies and disseminate G20 climate change related physical and transition risk indicators. ✓ Monitor the implementation of the recommendation. |
| G20 Economies | <p>The Targets allow the G20 economies the flexibility to provide data according to a level of detail and timeline appropriate for their respective economies and take into account their specific levels of statistical developments. The Targets are conditional upon the</p> |

| | Targets, Actions, Timeline | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|--|-----------------------|--------------------|--|-----------------|-----------------------|--------------------|-------------------------|--|---|--|---------------------|--|--|---|--------------------------|---|--|--|---|--|--|
| | <p>successful development of a methodological framework agreed by the G20 economies for forward-looking climate change related physical and transition risk indicators.</p> <p>Targets: Develop and disseminate climate change related forward-looking physical risk indicators with significant geographic/sectoral breakdowns (i.e. forward-looking indicators quantifying populations, economic sectors and assets materially exposed to climate-related risks, both for acute and chronic impacts). Develop and disseminate climate change related forward-looking transition risk indicators with significant geographic/sectoral breakdowns (i.e. forward-looking indicators quantifying firms materially exposed to climate change related transition risks). [Timeline: Fourth Quarter 2025]</p> <p>Second-best Targets: Develop and disseminate climate change related forward-looking physical risk indicators with no or limited geographic/sectoral breakdown. Develop and disseminate climate change related forward-looking transition risk indicators with no or limited geographic/ sectoral breakdown. [Timeline: Fourth Quarter 2026]</p> | | | | | | | | | | | | | | | | | | | | | |
| Current Status | <p>Ongoing methodological work being developed by the NGFS and the analytical work by the FSB related to climate-related financial risks will form the basis for the methodological guidance and reporting template for recommendation 5.</p> <table border="1"> <thead> <tr> <th></th> <th>In place</th> <th>In Development</th> <th>Not Started</th> </tr> </thead> <tbody> <tr> <td>Methodological Guidance</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>Reporting Templates</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td rowspan="2">Source Data Requirements</td> <td colspan="3">Geographically coded population estimates</td> </tr> <tr> <td colspan="3">Geographically coded estimates of firm revenues, output, value added, produced assets</td> </tr> </tbody> </table> | | | | In place | In Development | Not Started | Methodological Guidance | | X | | Reporting Templates | | | X | Source Data Requirements | Geographically coded population estimates | | | Geographically coded estimates of firm revenues, output, value added, produced assets | | |
| | In place | In Development | Not Started | | | | | | | | | | | | | | | | | | | |
| Methodological Guidance | | X | | | | | | | | | | | | | | | | | | | | |
| Reporting Templates | | | X | | | | | | | | | | | | | | | | | | | |
| Source Data Requirements | Geographically coded population estimates | | | | | | | | | | | | | | | | | | | | | |
| | Geographically coded estimates of firm revenues, output, value added, produced assets | | | | | | | | | | | | | | | | | | | | | |

Recommendation 6. Government Climate-Impacting Subsidies

Governments can provide incentives to producers and consumers to either mitigate or exacerbate the effects of production and consumption on the climate. Subsidies are one of the government policy tools available to tackle climate change, including through reducing subsidies to discourage activities that have a negative impact on the environment, and/or introducing or increasing subsidies to encourage activities that have a less harmful or even positive impact on the environment.

The objective of this recommendation is to develop comparable indicators on climate-sustaining and climate-damaging government subsidies. The starting point will be the definition of subsidies and environmental subsidies in existing statistical standards such as the SNA, the Government Finance Statistics Manual, 2014 (GFSM 2014), and the SEEA-CF. The G20 economies will be encouraged to report the total annual value of both climate-sustaining and climate-damaging government subsidies in percent of the Gross Domestic Product (GDP) and in percent of total government expenditure. G20 economies will also be encouraged to provide metadata which identifies the individual subsidy schemes and the related government expenditure.

Policy Driver: *Collecting data in this area will provide policymakers with summary information on to what extent government subsidy regimes are conducive to tackling climate change.*

Lead and Contributing International Organizations: *IMF, OECD, and UNSD (leads) with EUROSTAT.*

| | Targets, Actions, Timeline | | | | | | | | | | | | | | | | |
|--------------------------|---|-----------------------|--------------------|-----------------------|--------------------|-------------------------|--|---|--|---------------------|--|---|--|--------------------------|---|--|--|
| IAG Members' Role | <p>The methodological and compilation guidance outlined in the <i>SNA, GFSM 2014</i>, and the <i>SEEA-CF</i> will form the basis for the methodological guidance and reporting template for recommendation 6.</p> <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ In conjunction with the G20 economies, develop and agree on the concept of subsidies to be used in the context of the reporting under this recommendation, by 2023. ✓ Coordinate the development of a handbook outlining the concepts, sources, and methods to estimate climate-sustaining and climate-damaging subsidies by 2024. ✓ Provide technical support and advice via workshops and training. ✓ Coordinate the development of reporting templates to support the dissemination of climate impacting subsidies by 2024. ✓ Collect, quality assure and process data from G20 economies and disseminate G20 estimates of climate impacting subsidies. ✓ Monitor the implementation of the recommendation. | | | | | | | | | | | | | | | | |
| G20 Economies | <p>The Targets allow the G20 economies the flexibility to provide data according to a timeline that is appropriate for their respective economies and take into account their specific levels of statistical development.</p> <p>Target</p> <p>Develop and disseminate annual estimates of general government and central government climate-impacting subsidies in percent of GDP and in percent of government expenditure within 12 months of the reference period.</p> <p>[Timeline: End-2025 estimates for 2015 onwards]</p> <p>Second-best Target</p> <p>Develop and disseminate annual estimates of central government climate-impacting subsidies in percent of GDP and in percent of government expenditure within 18 months of the reference period.</p> <p>[Timeline: End-2025 for 2020 onwards]</p> | | | | | | | | | | | | | | | | |
| Current Status | <p>The methodological and compilation guidance outlined in the <i>SNA, GFSM 2014</i>, and the <i>SEEA-CF</i> will form the basis for the methodological guidance and reporting template for recommendation 6.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>In place</th> <th>In Development</th> <th>Not Started</th> </tr> </thead> <tbody> <tr> <td>Methodological Guidance</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>Reporting Templates</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>Source Data Requirements</td> <td colspan="3" style="text-align: center;">Government Subsidies by type of program</td> </tr> </tbody> </table> | | In place | In Development | Not Started | Methodological Guidance | | X | | Reporting Templates | | X | | Source Data Requirements | Government Subsidies by type of program | | |
| | In place | In Development | Not Started | | | | | | | | | | | | | | |
| Methodological Guidance | | X | | | | | | | | | | | | | | | |
| Reporting Templates | | X | | | | | | | | | | | | | | | |
| Source Data Requirements | Government Subsidies by type of program | | | | | | | | | | | | | | | | |

Recommendation 7. Climate Change Mitigation and Adaptation Current and Capital Expenditures

Governments, corporations, and households will need to make substantial current and capital expenditures to mitigate the pace of climate change and adapt to the effects of climate change. This would include, inter-alia, investment in non-carbon emitting energy systems and the construction of climate adapting infrastructure such as sea walls, dikes, and levees.

The objective of this recommendation is to develop first estimates of current and capital expenditures on domestic and national climate change mitigation and adaptation. G20 economies will seek to produce estimates of domestic and national current and capital expenditure on climate change mitigation and adaptation, broken down by:

- (1) Purpose, at a minimum: split between mitigation and adaptation (while correlated it is useful to provide the split)
- (2) Type of expenditure, at a minimum: split between current expenditure and investments, with investment broken down into type of non-carbon emitting energy systems (e.g., wind, solar, water)
- (3) Institutional sector, at a minimum: data for central government and non-financial corporations

Policy Driver: The Paris Climate agreement represents a key global effort to reduce greenhouse gas emissions and adapt to a changing climate. Other regional initiatives are also underway. These statistics can be used to track the level of expenditures incurred across G20 economies to mitigate and adapt to the effects of climate change. These estimates are compatible with the physical measures outlined in recommendation 1 (GHG emissions), recommendation 2 (energy accounts) and recommendation 4 (green debt and equity securities financing). The recommendation would also leverage efforts to track current and capital expenditure on climate change adaptation and mitigation in national budgets and to make available (harmonized granular) information on green government expenditure and green investments.

Lead and Contributing International Organizations: IMF and UNSD (leads), with Eurostat, World Bank, and OECD

| | Targets, Actions, Timeline |
|--------------------------|--|
| IAG Members' Role | <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ Draw upon the definitions provided by the UNFCCC and other international agencies. ✓ Draw upon existing classification activities related to the update of the ISIC, CPC, and Classification of Environmental Activities. ✓ Coordinate the development of a compilation guide outlining the concepts, sources and methods, classifications to estimate climate change mitigation and adaptation expenditures. ✓ Provide technical support and advice via workshops and training via workshops and training. ✓ Coordinate the development of reporting templates to support the dissemination of climate change mitigation and adaptation expenditures. |

| | Targets, Actions, Timeline | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|--|-----------------------|--------------------|-----------------------|--------------------|-------------------------|--|---|--|---------------------|--|---|--|--------------------------|---|--|--|--|--|--|--|--|--|
| | <ul style="list-style-type: none"> ✓ Collect, quality assure, and process data from G20 economies and disseminate G20 estimates of climate change mitigation and adaptation expenditures. ✓ Monitor the implementation of the recommendation. | | | | | | | | | | | | | | | | | | | | | | |
| G20 Economies | <p>The Targets allow the G20 economies the flexibility to provide the level of detail that is appropriate for their respective economies and take into account their specific levels of statistical development.</p> <p>Target</p> <p>Develop and disseminate estimates of climate mitigation current and capital expenditures and climate adaptation current and capital expenditures.</p> <p>Timeline:</p> <p>Fourth Quarter 2023: Develop and disseminate climate change mitigation capital expenditures.</p> <p>Fourth Quarter 2024: Develop and disseminate climate change adaptation capital expenditures.</p> <p>Fourth Quarter 2025: Develop and disseminate climate change mitigation current expenditures.</p> <p>Fourth Quarter 2026: Develop and disseminate climate change adaptation current expenditures.</p> <p>Second-best Target</p> <p>Develop and disseminate estimates of climate mitigation current and capital expenditures or climate adaptation current and capital expenditures.</p> <p>Timeline:</p> <p>Fourth Quarter 2024: Develop and disseminate climate change mitigation capital expenditures or climate change adaptation capital expenditures.</p> <p>Fourth Quarter 2025: Develop and disseminate climate change mitigation current expenditures or climate change adaptation current expenditures.</p> | | | | | | | | | | | | | | | | | | | | | | |
| Current Status | <p>The methodological and compilation guidance outlined in the <i>SEEA-CF</i>, the <i>GFSSM 2014</i>, the SNA and the Classification of Environmental Activities will form the basis for the methodological guidance and reporting template for recommendation 7.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 16.6%; text-align: center;">In place</th> <th style="width: 16.6%; text-align: center;">In Development</th> <th style="width: 16.6%; text-align: center;">Not Started</th> </tr> </thead> <tbody> <tr> <td>Methodological Guidance</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>Reporting Templates</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td rowspan="3">Source Data Requirements</td> <td colspan="3" style="text-align: center;">Government Expenditures and private investments by Function</td> </tr> <tr> <td colspan="3" style="text-align: center;">Environmental Goods and Services Account</td> </tr> <tr> <td colspan="3" style="text-align: center;">SUTs / input-output tables with significant product detail</td> </tr> </tbody> </table> | | In place | In Development | Not Started | Methodological Guidance | | X | | Reporting Templates | | X | | Source Data Requirements | Government Expenditures and private investments by Function | | | Environmental Goods and Services Account | | | SUTs / input-output tables with significant product detail | | |
| | In place | In Development | Not Started | | | | | | | | | | | | | | | | | | | | |
| Methodological Guidance | | X | | | | | | | | | | | | | | | | | | | | | |
| Reporting Templates | | X | | | | | | | | | | | | | | | | | | | | | |
| Source Data Requirements | Government Expenditures and private investments by Function | | | | | | | | | | | | | | | | | | | | | | |
| | Environmental Goods and Services Account | | | | | | | | | | | | | | | | | | | | | | |
| | SUTs / input-output tables with significant product detail | | | | | | | | | | | | | | | | | | | | | | |

HOUSEHOLD DISTRIBUTIONAL INFORMATION

Recommendation 8. Income, Consumption, and Saving Distribution

*There is a strong need for high quality information on how different household groups in society are faring. Shocks such as the Global Financial Crisis and the COVID-19 pandemic have stressed the importance of having better information on distributions of income, consumption and wealth across social groups, as key input to design policies and to foster inclusive growth. The distribution of **income, consumption, and saving across households** aligned to important macroeconomic aggregates such as GDP, household disposable income, and household saving are crucial in this regard, providing insight in key dimensions of material well-being across household groups.*

The compilation of these results involves combining distributional information from microdata sources with macroeconomic information on income, consumption, and saving to arrive at comprehensive and consistent macroeconomic estimates for different household groups that capture elements that may be missing from microdata and are comparable over time and across countries. For periods where microdata are not available (e.g. between two surveys or after the latest available survey) modelling techniques (e.g. nowcasting) may be used.

The past years have seen several initiatives to estimate distributional results on income, consumption, and saving, aligning microdata and national accounts totals. For example, as part of DGI Phases 1 and 2 (Recommendations I.16 and II.9), Eurostat and the OECD have developed guidance to estimate distributional results on income, consumption, and savings under the Expert Group on Distributional National Accounts (EG DNA), with experimental results already available for a range of economies. Furthermore, work has been initiated to improve the quality and consistency of the underlying microdata which is providing an important impetus for the quality of the distributional results. In this regard, Eurostat and the OECD have developed methodological guidance to produce joint income, consumption, and wealth distributions (EG ICW), which has resulted in experimental joint micro distributions for the EU and several non-EU OECD economies.

***The objective of this recommendation is to expand the economy coverage, as well as the frequency, timeliness, and granularity of results, therewith strengthening the capacity to closely monitor households' material well-being, inequalities, and vulnerabilities, as well as assessing the impact of policies.** The recommendation will also aim to better align the concepts of micro and macro statistics in order to improve the quality and comparability of the results, and to enable the publication of more granular breakdowns. This can be achieved by further aligning the standards for household surveys and macroeconomic statistics, by assisting countries in developing and/or further improving relevant surveys and exploring additional microdata sources that may be used in the work (e.g., administrative data sources), and by further analyzing the quality of the micro and macro results for the household sector.*

***Policy driver:** Distributional results provide relevant insights into how different household groups are faring. They show how different groups might have been affected by specific events (such as the Global Financial Crisis and the COVID-19 pandemic), who is benefiting from economic growth, and how inequality develops over time. Whereas national accounts' results provide relevant insights into aggregate and average trends, they conceal very relevant information on differences between household groups. Regular, timely, and granular distributional results in line with macroeconomic totals (e.g., adjusted disposable income, household consumption, and saving) will help policymakers in developing policies that are targeted towards specific household groups, to assess the distributional impact of specific policies and events, and to foster inclusive growth.*

Lead and Contributing International Organizations: *OECD (lead), with Eurostat, UNSD, World Bank, and IMF.*

| | Targets, Actions, Timeline |
|--------------------------|--|
| IAG Members' Role | <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ Coordinate updated compilation guidance with regard to specific topics (e.g., imputation for items missing in the microdata; reconciliation of micro and macro data; nowcasting results for Target annual estimates if microdata is not available), also assessing second-best solutions. ✓ Provide technical support and advice via workshops and training. ✓ Coordinate the development of reporting templates to support the dissemination of the distribution of income, consumption and saving across households. ✓ Collect, quality assure and process data from G20 economies and disseminate G20 estimates of the distribution of income, consumption and saving across G20 households. ✓ Monitor the implementation of the recommendation. |
| G20 Economies | <p>The Targets allow the G20 economies the flexibility to provide the level of detail, periodicity, and timeline appropriate for their respective economies and take into account their specific levels of statistical development.</p> <p>Target Develop and disseminate annual estimates of the distribution of household income, consumption, and saving in line with national accounts totals, according to internationally agreed upon templates and methodology.</p> <p>Timeline: Fourth quarter-2024: Results for 2021, 2022 and/or 2023 estimates at income quintile level.</p> <p>Fourth Quarter 2026: Results – if possible, for distributions of income, consumption and saving, but at least for income distributions – published between 1 year and 18 months after the reference period; with breakdowns by income decile and, if possible, according to the main source of income and by household type.</p> <p>Second-best Target Develop and disseminate every 3 years if possible, but at least every 5 years, estimates of the distribution of household income, consumption, and saving in line with national accounts totals, with breakdowns by income quintile, according to internationally agreed templates and methodology.</p> <p>Timeline: Fourth Quarter 2026: Results published within 4 years after the reference period.</p> |
| Current Status | <p>The methodological and compilation guidance outlined by the EG DNA and by the ISWGNA Well-being and Sustainability Task Team will form the basis for the methodological guidance and reporting template for recommendation 8.</p> |

| | Targets, Actions, Timeline | | |
|--------------------------|--|----------------|-------------|
| | In place | In Development | Not Started |
| Methodological Guidance | X | | |
| Reporting Templates | | X | |
| Source Data Requirements | Household Sector Accounts | | |
| | Household Survey or Administrative data on incomes and consumption | | |

Recommendation 9. Wealth Distribution

Whereas distributional information on income, consumption, and saving aligned to macroeconomic totals are essential to obtain a better understanding of how household groups are faring, it is important to broaden this work to include the wealth dimension, to provide insight into the three main dimensions of material well-being, that is, income, consumption, and wealth. This allows policymakers to have a comprehensive overview of the economic situation of different household groups and to better attune policies to their specific needs.

The compilation of these results involves combining distributional information from microdata sources with macroeconomic information on financial and non-financial wealth to produce comprehensive and consistent results in line with national accounts balance sheet totals, capturing elements that may be missing from microdata and are comparable over time and across countries. As with Recommendation 8, for periods where microdata are not available (e.g., between surveys or after the latest available survey) modelling techniques (e.g., nowcasting) may be used.

The ECB Expert Group on Distributional Financial Accounts (EG DFA) has already done extensive work on developing distributional financial and non-financial balance sheets for the household sector in the euro area and EU economies. Other G20 economies have also begun to develop distributional results on wealth, with a few economies already publishing results. At the same time, Eurostat and the OECD have developed methodological guidance to produce joint income, consumption, and wealth distributions at the micro level (EG ICW), adding to the consistency of the results across the three domains and therewith providing an important impetus for the quality of the overall results.

The objective of this recommendation is to develop internationally comparable results on the distribution of wealth, to be integrated with results on income, consumption, and saving.

As with Recommendation 8, Recommendation 9 will also aim to better align the concepts of micro and macro statistics in order to improve the quality and comparability of the results, and to enable the publication of more granular breakdowns.

Policy driver: *Distributional results provide relevant insights into how different household groups are faring. They show how different groups might have been affected by specific events (such as the Global Financial Crisis and the COVID-19 pandemic), who is benefiting from economic growth, and how inequality develops over time. Whereas national accounts results provide relevant insights into the aggregate and average trends, and cover household wealth exhaustively, they conceal very relevant information on differences between household groups. Regular, timely, and granular distributional results in line with macroeconomic totals (e.g., total assets, net worth, indebtedness, or saving) will help policymakers in developing policies that are targeted towards specific household groups, to assess the distributional impact of specific policies and events, and to foster inclusive growth.*

Lead and Contributing International Organizations: OECD (lead), with ECB, Eurostat, and UNSD

| | Targets, Actions, Timeline | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|-----------------------|--------------------|--|-----------------|-----------------------|--------------------|-------------------------|--|---|--|---------------------|--|--|---|--------------------------|--------------------------|--|--|---|--|--|
| IAG Members' Role | <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ Coordinate updated compilation guidance (e.g., imputation for items missing in the microdata; reconciliation of micro and macro data including underlying concepts; nowcasting results for Target annual estimates if microdata is not available), also assessing second-best solutions. ✓ Provide technical support and advice via workshops and training. ✓ Coordinate the development of reporting templates to support the dissemination of the distribution of wealth across households. ✓ Collect, quality assure and process data from G20 economies and disseminate G20 estimates of the distribution of wealth across households. ✓ Monitor the implementation of the recommendation. | | | | | | | | | | | | | | | | | | | | | |
| G20 Economies | <p>The Targets allow the G20 economies the flexibility to provide the level of detail, periodicity, and timeline that is appropriate for their respective economies and take into account their specific levels of statistical development.</p> <p>Target Develop and disseminate annual estimates of the distribution of wealth across households in line with national accounts balance sheet totals, according to internationally agreed templates and methodology.</p> <p>Timeline: Fourth Quarter 2024: Results for 2021, 2022, and/or 2023 at wealth quintile level. Fourth Quarter 2026: Results published within 18 months year after the reference period, with breakdowns at wealth decile level, and, if possible, according to income decile and household type.</p> <p>Second-best target: Develop and disseminate every 3 years if possible, but at least every 5 years, estimates of the distribution of wealth across households, in line with national accounts balance sheet totals, with breakdowns by wealth quintile, according to internationally agreed templates and methodology.</p> <p>Timeline: Fourth Quarter 2026: Results published within 4 years after the reference period.</p> | | | | | | | | | | | | | | | | | | | | | |
| Current Status | <p>The methodological and compilation guidance outlined by the <i>EG DFA</i> and by the ISWGNA Well-being and Sustainability Task Team will form the basis for the methodological guidance and reporting template for recommendation 9.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">In place</th> <th style="text-align: center;">In Development</th> <th style="text-align: center;">Not Started</th> </tr> </thead> <tbody> <tr> <td>Methodological Guidance</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>Reporting Templates</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td rowspan="2">Source Data Requirements</td> <td colspan="3" style="text-align: center;">Household Balance Sheets</td> </tr> <tr> <td colspan="3" style="text-align: center;">Household Survey or Administrative Data on Wealth</td> </tr> </tbody> </table> | | | | In place | In Development | Not Started | Methodological Guidance | | X | | Reporting Templates | | | X | Source Data Requirements | Household Balance Sheets | | | Household Survey or Administrative Data on Wealth | | |
| | In place | In Development | Not Started | | | | | | | | | | | | | | | | | | | |
| Methodological Guidance | | X | | | | | | | | | | | | | | | | | | | | |
| Reporting Templates | | | X | | | | | | | | | | | | | | | | | | | |
| Source Data Requirements | Household Balance Sheets | | | | | | | | | | | | | | | | | | | | | |
| | Household Survey or Administrative Data on Wealth | | | | | | | | | | | | | | | | | | | | | |

FINTECH AND FINANCIAL INCLUSION

Recommendation 10. Fintech Credit

In the context of decentralization of financial instruments, services, and infrastructure, Fintech credit can be broadly defined to include all types of lending facilitated by electronic platforms, such as peer-to-peer lending and BigTech or other platform-based direct lending that may not be currently captured within traditional measures of lending. Collection of comparable national aggregated data across jurisdictions and sectors would help authorities in understanding the access and usage of such Fintech credit services and any build-up of risks to financial stability, especially if such data are based on an adequately detailed and standardized Fintech taxonomy agreed at the international level in the context of the ongoing revisions in international classification standards and statistical manuals.

The objective of this recommendation is to review the potential for collecting data on non-bank Fintech credit as part of FSB’s annual monitoring of global trends, vulnerabilities, and innovations in non-bank financial intermediation (NBFi). This would also complement the picture already available (to some extent at least) on related activities by banks.

In the context of the annual NBFi monitoring exercise, the FSB will consider the potential for such data collection on Fintech credit, which may include consideration of a conceptual framework to complement the FSB’s existing NBFi monitoring framework, taking into account the work on the International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 4 and ESCB suggestions for the Central Product Classification. The work can build on past work such as the [FSB \(2019\) FSB and CGFS \(2017\)](#) and [Cornelli et al \(2020\)](#), as well as other national/international initiatives and may benefit from contributions from BIS/IFC¹⁶ and forthcoming work in the ESCB.¹⁷ Fintech credit may include credit facilitated by banks but originated through platforms that are not operated by banks, and for which risks and rewards are not borne by banks.

The FSB’s annual NBFi monitoring exercise assesses global trends and vulnerabilities, as well as innovations in NBFi, and can help shape more-focused monitoring of specific NBFi activities and inform potential policy development. Reviewing the potential for collecting data on Fintech credit (as generally defined above) as granted by non-bank entities at a global level would be a step towards providing authorities with information to understand global trends and vulnerabilities. Such review can take place during 2022–2024.

Policy driver: *Authorities need more comprehensive information to understand the global trends and vulnerabilities of such financial innovation and its impact on the financial system. Such understanding may help potential policy development to address the identified vulnerabilities.*

Lead and Contributing International Organizations: *FSB (lead), with BIS/IFC and ECB*

| | Targets, Actions, Timeline |
|--------------------------|---|
| IAG Members’ Role | Lead and contributing agencies will: ✓ Assess the potential for using the annual FSB monitoring exercise on NBFi to collect data aggregated to the jurisdiction-level on Fintech credit. |

¹⁶ Final Report of IFC Working Group of Fintech Data Issues, https://www.bis.org/ifc/publ/ifc_report_monitoring_financial_innovation.pdf.

¹⁷ Ulf von Kalckreuth and Norman Wilson, Deutsche Bundesbank, Celestino Giron and Urszula Kochanska, ECB, Enzo Buthiot and Yann Wicky, Bank of France, Luis Ángel Maza and Román Santos, Bank of Spain, Fintech in statistical classifications: suggestions and tentative figures in a central bank context. Paper presented at the 11th Biennial IFC Conference “Post-pandemic landscape for central bank statistics”, BIS, Basel, 25-26 August 2022.

| | Targets, Actions, Timeline | | | | | | | | | | | | | | | | |
|--------------------------|---|-----------------------|--------------------|-----------------------|--------------------|-------------------------|--|--|---|---------------------|--|--|---|--------------------------|---------------------------------|--|--|
| | <ul style="list-style-type: none"> ✓ Coordinate the development of a reporting template (or updates to existing templates), including definitions of data elements to be collected for collecting comparable national aggregates on Fintech credit to derive meaningful aggregates for monitoring financial stability risks. ✓ If reporting is deemed feasible, collect, quality assure, and process data from G20 economies and disseminate G20 estimates of Fintech credit. ✓ Monitor the implementation of the recommendation. | | | | | | | | | | | | | | | | |
| G20 Economies | <p>The Targets allow the G20 economies the flexibility to provide the level of detail, periodicity, and timeline appropriate for their respective economies and take into account their specific levels of statistical development. Targets are conditional on a positive assessment that the annual FSB monitoring exercise on NBFIs to collect data on Fintech credit.</p> <p>Target Report Fintech credit data to the annual FSB monitoring exercise on NBFIs based on the agreed framework, if the review finds the data collection feasible</p> <p>[Timeline: Fourth Quarter 2024]</p> <p>Second-Best Target If the assessment finds global data collection by end-2024 infeasible, participating economies could report Fintech credit data to the annual FSB monitoring exercise on NBFIs based on the agreed framework, but on a best-efforts basis. Full reporting would be aimed for in subsequent years as access to data improves.</p> <p>[Timeline: Fourth Quarter 2025]</p> | | | | | | | | | | | | | | | | |
| Current Status | <p>The methodological and compilation guidance outlined in the annual FSB NBFIs exercise will form the basis for the methodological guidance and reporting template for recommendation 10.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>In place</th> <th>In Development</th> <th>Not Started</th> </tr> </thead> <tbody> <tr> <td>Methodological Guidance</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>Reporting Templates</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>Source Data Requirements</td> <td colspan="3" style="text-align: center;">Fintech credit flows and stocks</td> </tr> </tbody> </table> | | In place | In Development | Not Started | Methodological Guidance | | | X | Reporting Templates | | | X | Source Data Requirements | Fintech credit flows and stocks | | |
| | In place | In Development | Not Started | | | | | | | | | | | | | | |
| Methodological Guidance | | | X | | | | | | | | | | | | | | |
| Reporting Templates | | | X | | | | | | | | | | | | | | |
| Source Data Requirements | Fintech credit flows and stocks | | | | | | | | | | | | | | | | |

Recommendation 11. Digital Money

Central banks and private entities in G20 economies are leading efforts to develop central bank digital currencies (CBDCs) and monitor developments in global stablecoins and other types of crypto-assets. It is, therefore, desirable that proposed regulations in these economies include macroeconomic statistics requirements, especially for monetary and external sector statistics, to enable relevant data collection in the future.

The objective of this recommendation is to develop a framework and collect test data on new forms of digital money and crypto-assets used as a means of payment enabled by Fintech, including CBDCs, global stablecoins, and other types of crypto-assets used as a means of payment to improve measurement of money and liquidity aggregates as well as cross-border transactions using digital money.

Policy driver: *The growing presence of new forms of digital money and crypto-assets used as a means of payment poses the potential for various policy issues such as cross-border usage and currency*

substitution. Establishing a data collection framework and collecting data on digital money will help policymakers to monitor these developments and any associated risks in the future, including on use of foreign CBDCs, stablecoins, and other types of crypto-assets used as means of payment to ensure the proper coverage of monetary aggregates and international capital flows.

Lead and Contributing International Organizations: IMF (lead), with BIS/IFC, ECB, and FSB (user perspective)

| | Targets, Actions, Timeline |
|--------------------------|--|
| IAG Members' Role | <p>Statistics experts from the ECB, IMF, and OECD are currently working on developing methodology on the treatment of digital money and crypto-assets used as a means of payment including CBDCs, global stablecoins and other types of crypto-assets used as a means of payment in the context of the SNA/BPM6 updates.</p> <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ Draw on methodological guidance developed in the context of the update of the 2008 SNA/BPM6. ✓ Coordinate the development of a data collection and data sharing framework that can be used to compile and disseminate estimates of digital money, liquidity aggregates, and cross-border transactions using digital money. This work will take into consideration ongoing work at the BIS and FSB, Euro system's strategy for CBDCs, and will be adjusted as new types of CBDCs emerge. ✓ Coordinate the development of methodological instructions for the data collection and data sharing framework outlining the main concepts, definitions, sources, methods, and relevant indicators. ✓ Collect, quality assure, process and share (as relevant) data from G20 economies, and disseminate G20 estimates of digital money, liquidity aggregates, and cross-border transactions using digital money, as relevant. ✓ Monitor the implementation of the recommendation. |
| G20 Economies | <p>Collaborate on the development of a data collection framework for digital money and crypto-assets used as a means of payment, including the relevant templates. Start with a stocktaking of existing data sources, and collection frameworks and practices. The framework will potentially differentiate between data collection for CBDCs versus stablecoins and other types of crypto-assets used as a means of payment, as they involve different types of issuing agents (or no issuer) and different complexities.</p> <p>The framework for data collection should focus on both positions and transactions, including cross-border transactions, with two key breakdowns (counterpart economy and institutional sector); identification of relevant data providers (e.g., e-wallets, service providers, exchanges) and their data provision capabilities considering privacy and other limitations of crypto-assets.¹⁸</p> <p>Promote awareness that national regulations should include requirements to collect relevant statistical information for different policy objectives including financial and external sector analysis using the framework developed under this recommendation.</p> <p>The frequency and timeliness of the data collection and possible data sharing to be agreed, once the overall framework is developed, by end-2023, taking into consideration the limitations or capacity constraints of data providers. The proposal on the data collection and data sharing is to take into account use cases of new forms of digital money and</p> |

¹⁸ These limitations include: crypto assets used in decentralized autonomous organizations (DAOs); counterparty information that relies on self-reporting unless reliable communication channels are in place; and peer-to-peer transactions where no intermediaries (i.e., data providers) are involved.

| | Targets, Actions, Timeline | | | | | | | | | | | | | | | | |
|--------------------------|--|----------------|-------------|----------------|-------------|-------------------------|--|---|--|---------------------|--|--|---|--------------------------|--|--|--|
| | <p>crypto-assets used as a means of payment for policy formulation or digital economy measures.</p> <p>The Targets allow the G20 economies the flexibility to provide the agreed set of indicators that are most appropriate for their respective economies and consider their specific levels of statistical developments. The Targets are conditional upon the development of an agreed data collection framework for digital money. The methodological guidance is currently subject to extensive discussion, and the data collection framework will require coordination with country authorities.</p> <p>Target: Develop a common data collection framework.</p> <p>Carry out a data collection exercise to test the developed data collection framework in economies with significant exposure to digital money covering most of the data components. [Timeline: Fourth Quarter 2024]</p> <p>Second-best Target Develop a common data collection framework.</p> <p>Carry out a data collection exercise to test the developed data collection framework in economies with significant exposure to digital money for only selected data components. [Timeline: Fourth Quarter 2025]</p> | | | | | | | | | | | | | | | | |
| Current Status | <p>The methodological and compilation guidance on the treatment of digital money and crypto-assets used as a means of payment including CBDCs, global stablecoins and other types of crypto-assets used as a means of payment in the context of the <i>2008 SNA/BPM6</i> updates being developed by experts from the ECB, IMF, and OECD will form the basis for the methodological guidance and data collection framework for recommendation 11.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 16.6%;">In place</th> <th style="width: 16.6%;">In Development</th> <th style="width: 16.6%;">Not Started</th> </tr> </thead> <tbody> <tr> <td>Methodological Guidance</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>Reporting Templates</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>Source Data Requirements</td> <td colspan="3" style="text-align: center;">Estimates of the transactions and stocks of digital money by counterpart institutional unit and by country</td> </tr> </tbody> </table> | | In place | In Development | Not Started | Methodological Guidance | | X | | Reporting Templates | | | X | Source Data Requirements | Estimates of the transactions and stocks of digital money by counterpart institutional unit and by country | | |
| | In place | In Development | Not Started | | | | | | | | | | | | | | |
| Methodological Guidance | | X | | | | | | | | | | | | | | | |
| Reporting Templates | | | X | | | | | | | | | | | | | | |
| Source Data Requirements | Estimates of the transactions and stocks of digital money by counterpart institutional unit and by country | | | | | | | | | | | | | | | | |

Recommendation 12. Fintech-enabled Financial Inclusion

There is increasing interest in and urgency for new and more granular information on financial inclusion, notably to gauge the impact of fintech in terms of expanding financial inclusion via new technologies and instruments. In this context, it is also necessary to develop data sources to support the monitoring of the impact of fintech-enabled financial inclusion in general and for different population groups, especially the most vulnerable and financial underserved groups, as also highlighted by the G20 High-Level Principles for Digital Financial Inclusion.

The objective of this recommendation is to improve the availability of information to assess fintech-enabled financial inclusion, including access to and usage of digital financial instruments and services.

Policy driver: Financial inclusion is critical for sustainable and inclusive growth. Digitalization and fintech are having enormous impact on financial inclusion and access; yet the data are very scarce. Enhanced indicators on access to and usage of digital financial services, such as mobile payments, internet banking, and alternative financing platforms is key to monitoring the impact of financial innovation on financial inclusion of individuals, especially for the most vulnerable and financially underserved groups.

Lead and Contributing International Organizations: World Bank and IMF (joint leads), with BIS/IFC, and OECD

| | Targets, Actions, Timeline |
|--------------------------|--|
| IAG Members' Role | <p>Lead and contributing agencies will:</p> <ul style="list-style-type: none"> ✓ Coordinate the development of methodological guidance outlining the main concepts, definitions, sources, methods, and indicators related to Fintech enabled financial inclusion, in the context of the data collection exercise under this recommendation. This work will include a cost and benefit analysis of expanding the granularity of the World Bank's Global Findex data dissemination that includes variables on access, use, and quality of digital financial services, along gender and age dimensions for individuals. ✓ Assess the possibility to periodically collect data on financial literacy and capability, also in relation to digital financial services (by 2024).¹⁹ ✓ Organize a workshop to identify the set of indicators, including but not limited to mobile and internet banking, fintech enabled products, and decentralized finance (DeFi) to be used to measure fintech-enabled financial inclusion, including for different income groups, women, and possibly their intersection. The specifics to be agreed based on the discussions at the workshop. The workshop will benefit from the participation of the Global Partnership for Financial Inclusion (GPMI), which will provide the users' perspective. ✓ Coordinate the development of a data collection framework, based on the workshop outcomes, that can be used to collect and disseminate data on Fintech enabled financial inclusion. ✓ Collect, quality assure and process data from G20 economies and disseminate G20 estimates of Fintech enabled financial inclusion. ✓ Monitor the implementation of the recommendation. |
| G20 Economies | <p>G20 economies to collaborate on the development of a data collection framework for the indicators that are identified to measure fintech-enabled financial inclusion through the 2023 workshop, taking into consideration the limitations or capacity constraints of data providers. Ahead of the workshop, start stocktaking of existing data sources and collection practices for mobile/e-wallets, mobile and internet banking, and other fintech services and products relevant for the economy. Any issues related to data collection, data availability, and methodological considerations will be discussed at the time of the workshop.</p> |

¹⁹ For instance, with an update of the IFC stock-take of central banks' experience during the previous DGI. The OECD has also been conducting surveys on Financial Literacy, which could be leveraged.

| Targets, Actions, Timeline | | | | | | | | | | | | | | | | | |
|-----------------------------------|--|----------------|-------------|----------------|-------------|-------------------------|--|--|---|---------------------|--|--|---|--------------------------|---------------------------------|--|--|
| | <p>The Targets allow the G20 economies the flexibility to provide a set of agreed indicators that are most appropriate for their respective economies and consider their specific levels of statistical developments.</p> <p>Targets: Develop and disseminate statistics on mobile/e-wallets, mobile and internet banking transactions (value and volume), mobile and internet banking accounts, and other relevant indicators as outlined in the agreed data collection framework, based on the outcomes of the workshop.</p> <p>[Timeline: Fourth Quarter 2024]</p> <p>Develop and disseminate statistics disaggregated by income groups and/or gender for the agreed indicators, on a best effort basis, based on the outcomes of the workshop.</p> <p>[Timeline: Fourth Quarter 2025]</p> <p>Second-best target: Develop and disseminate statistics on mobile and internet banking transactions (value and volume), mobile/e-wallets, or other indicators relevant for their countries.</p> <p>[Timeline: Fourth Quarter 2025]</p> | | | | | | | | | | | | | | | | |
| Current Status | <p>The methodological and compilation guidance and the data collection framework on Fintech and financial inclusion will draw on the general principles of the 2016 Monetary and Financial Statistics Manual and Compilation Guide (<i>MFSMCG 2016</i>) methodology and the work on fintech related issues in the context of the update of the international statistical standards.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 15%; text-align: center;">In place</th> <th style="width: 15%; text-align: center;">In Development</th> <th style="width: 10%; text-align: center;">Not Started</th> </tr> </thead> <tbody> <tr> <td>Methodological Guidance</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>Reporting Templates</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>Source Data Requirements</td> <td colspan="3" style="text-align: center;">To be discussed at the Workshop</td> </tr> </tbody> </table> | | In place | In Development | Not Started | Methodological Guidance | | | X | Reporting Templates | | | X | Source Data Requirements | To be discussed at the Workshop | | |
| | In place | In Development | Not Started | | | | | | | | | | | | | | |
| Methodological Guidance | | | X | | | | | | | | | | | | | | |
| Reporting Templates | | | X | | | | | | | | | | | | | | |
| Source Data Requirements | To be discussed at the Workshop | | | | | | | | | | | | | | | | |

ACCESS TO PRIVATE AND ADMINISTRATIVE DATA, AND DATA SHARING

Recommendation 13. Access to Private and Administrative Data

The new G20 DGI will aim to promote access to private and administrative data by statistical authorities, leveraging the various existing initiatives in order to avoid duplication, while preserving data confidentiality and privacy.

The overarching objective of this recommendation is to increase access to private and administrative data for the production of official statistics. This may extend to policymakers for relevant data to assess and design economic policies, provided that confidentiality is preserved, and official statistics are not jeopardized. With regard to the access to private data, a set of principles, and tools will be developed which would allow the creation of transparent public and private sector partnerships to leverage the potential of private data while preserving privacy and confidentiality. Separate principles and tools may be developed for access to administrative data.

In more practical terms, the recommendation would aim to:
G20 DGI-3 Workplan Welcomed by the FMCBG–October 2022

(1) *Establish an active forum:*

- *to engage with private data holders to define a set of principles that should be observed to make private data accessible for official statistics and economic policy use while taking into account existing data access frameworks and initiatives in order to maximize synergies and avoid duplications and preserving the trust of the various stakeholders and their data rights, while building on what has already been done by different actors and in different fora.²⁰*
- *to develop a taxonomy of the characteristics of private data sources and intermediate outputs of potential interest to help define data models able to facilitate access and sharing, taking into account the legal specificities of jurisdictions and the features of the underlying data.*
- *building on these data models, to promote among statistical authorities (national statistical institutes, national central banks, and other institutions responsible for official statistics) a coordinated approach to data access. This would imply maximizing commonalities, where possible (e.g., the legal frameworks for dealing with individual data may be different across jurisdictions but economies could agree on data models for the more relevant statistical aggregates so to reduce burden on the data holders) and thereby simplifying extension to other jurisdictions.*
- *to promote exchange on methods and techniques to access private and administrative data while preserving data protection and privacy, including the potential of anonymization techniques.*
- *to analyze and promote the benefits of the use of administrative data for producing official statistics, including development of good principles for access.*
- *to encourage administrative data holders about the benefits of administrative data that can be used to produce official statistics, as the use of administrative data will have a lower cost than conducting a survey or census.*

(2) *Establish a customizable framework for accessing private and administrative data, building on the above principles, recognizing that jurisdictions should choose their own approach when dealing with private data holders, depending on their legal frameworks on data protection and privacy and their own preferences.*

Policy Driver: *G20 Finance Ministers and Central Bank Governors (FMCBGs) recognized that “improving data availability and provision, including on environmental issues, and harnessing the wealth of data produced by digitalization, while ensuring compliance with legal frameworks on data protection and privacy, will be critical to better inform [their] decisions.”*

Lead International Organizations: *IAG*

| | Target, Actions, Timeline |
|--------------------------|---|
| IAG Members’ Role | IAG members will: <ul style="list-style-type: none">✓ Organize a workshop in 2023 to review existing frameworks and initiatives to access private and administrative data, start the work on broad principles and start engaging effectively with private data holders. |

²⁰ For instance, the stocktaking exercise published by the IFC in 2021 on the related data governance aspects.

| | Target, Actions, Timeline |
|----------------------|--|
| | <ul style="list-style-type: none"> ✓ Prepare a taxonomy of the characteristics of private data sources and intermediate outputs of potential interest and define data models able to facilitate access and sharing (by 2023). ✓ Facilitate coordination of approaches, exchange of best practices (on an ongoing basis), whilst coordinating with work on data sharing (Recommendation 14). |
| G20 Economies | <p>G20 economies should:</p> <p>Work toward the setup of national, regional, and global frameworks, as appropriate, for access to private and administrative data for official statistics and for policy use (by end-2025).</p> <p>Maintain, while taking into account national specificities, a coordinated approach where needed and possible (e.g., data model, methodology, standards).</p> <p>Target:</p> <p>Memorandum of Understanding(s) between national statistical compilers and other national government agencies and private sector firms.</p> |

Recommendation 14. Data Access and Data Sharing, including the Possible Development of an International Microdata Standard

This recommendation is closely related to Recommendation 13 and as the latter it is broad/horizontal and not relating to particular datasets. The term “microdata” refers primarily to record-level data. The following activities can be foreseen at international level:

- *Recommendations for tools and methods assuring privacy and security (particularly cybersecurity) to ensure that data sharing may be undertaken securely.*
- *Analysis of national (and international) legal issues relating to the exchange of confidential information, including assessment and definition of confidential data.*
- *Developing data reuse modalities and criteria for choosing the appropriate ones (e.g., aspects related to quality of data, use of standards, level of data aggregation).*
- *Establishing the need for data reuse and reaching agreement with private data holders concerning operational aspects with regards to all safeguards and dispute resolve mechanisms.*
- *Developing data sharing principles to ensure the safety of data sharing.*

*The main feedback from the G20 DGI-2 Workshop on Recommendation II.20, “Promotion of Data Sharing” supported “the launching of follow-up work on developing an **international microdata standard**, to investigate what is feasible.”*

An international microdata standard would cover principles, enablers, use cases of best practice data sharing (e.g., access for research purposes, cooperation between public and private sectors, open data initiatives, and good practices from non-statistical examples of data sharing), and measures of success.

The G20 DGI-2 Workshop on Recommendation II.20 “Promotion of Data Sharing” identified the following conditions to set up an international microdata standard:

- *Assure privacy and security (particularly cybersecurity), taking into consideration that security and cybersecurity are only a sub-set of privacy protection.*

- Promote the use of new architecture, tools and the development of staff skills to facilitate the use and sharing of microdata (potentially through different models, for example privacy-preserving techniques and new encryption techniques) and to promote efficiency.
- Review National (and international) legal issues relating to the exchange of confidential information.
- Encourage self-commitment by economies to share microdata which could follow the well-established procedures of IMF data standards.

In conducting the work on a possible microdata standard, close cooperation should be kept with existing groups working on data sharing, including the International Network for Exchanging Experience on Statistical Handling of Granular Data (INEXDA), and in the follow-up work to the UNECE report guided by the Conference of European Statisticians, as well as with the ongoing development of the Statistical Data and Metadata eXchange (SDMX) standard (especially for microdata) sponsored by the IAG organizations and other relevant work at international level such as linked open statistical data initiatives, classifications and the Data Documentation Initiative (DDI). An important principle for the work will be that there is no duplication of effort introduced and cross-referencing to existing work will be made to assure this. Existing standards shall be carefully assessed.

Lead and Contributing International Organizations: Eurostat and ECB (leads) with World Bank, and other IAG members.

| | Target, Actions, Timeline |
|--------------------------|--|
| IAG Members' Role | <p>Eurostat and ECB will lead a discussion that will take place in 2023 to identify how a microdata standard could be taken forward, to encompass some or all of the activities identified.</p> <p>In function of the outcome of this discussion, Eurostat and ECB will then work with other interested IAG members, with a view to complete the work by end-2023.</p> |
| G20 Economies | <p>Statistical authorities of G20 economies can be invited to join the work on preparing a standard, either as part of a group or in an initial role of lead drafters.</p> <p>Target: Provide feedback on emerging proposals</p> <p>[Timeline: end-2023]</p> |

Annex I. Tentative List of Workshops for 2023–2025

| Timelines for Thematic Workshops (TBD) | Recommendations | Lead Agencies | Objectives of the Workshop |
|---|--|-------------------------|--|
| 2023 (TBD) | <p>Recommendations 1 - Greenhouse Gas Emission Accounts</p> <p>Recommendation 2: Energy Accounts</p> <p>and Recommendation 3 - Carbon Footprint of Foreign Direct Investment</p> | UNSD, Eurostat, and IMF | <p>(i) Further refine the scope of the recommendations including providing an update on the relevant methodological guidance;</p> <p>(ii) Agree on reporting templates and flexibilities afforded to countries;</p> <p>(iii) Discuss the tools, existing methodological guidance, and using the GHG inventories in combination with energy accounts to compile air emission accounts;</p> <p>(iv) Discuss and agree on the level of aggregation required for rec. 2;</p> <p>(v) Agree on plans to support countries through training and technical assistance.</p> |
| 2023/2024 (TBD) | <p>Recommendation 4: Green Debt and Equity Securities Financing</p> | BIS and ECB | <p>(i) Present and agree on the templates (developed in coordination with the economies) to be used to collect data on green debt and equity securities financing;</p> <p>(ii) Specify economy-specific reporting self-commitments as a follow-up to the Workshop;</p> <p>(iii) Discuss plans to support economies via training and methodological guidance;</p> <p>(iv) Present the way forward to develop further guidance for supporting greater interoperability and comparability of compilation approaches across economies.</p> |

| Timelines for Thematic Workshops (TBD) | Recommendations | Lead Agencies | Objectives of the Workshop |
|---|--|----------------------|--|
| <p>Initial Workshop in 2023 (TBD)</p> <p>Workshop on Methodology in 2024 (TBD)</p> <p>Workshop on Compilation practices – 2025 (TBD)</p> | <p>Recommendation 5: Forward-Looking Physical and Transitional Risk Indicators</p> | <p>IMF</p> | <p>(i) Present and discuss concepts, methods, general assumptions, and public and private data sources to estimate forward-looking climate-related physical risk indicators as well as the population and assets materially exposed to these risks.</p> <p>(ii) Present and discuss concepts, methods, general assumptions, and public and private data sources to estimate forward-looking climate-related transition risk indicators as well as the population and assets materially exposed to these risks.</p> <p>(iii) Agree on action plan and timelines for lead agencies to develop methodological guidance on estimating physical and transition risk indicators.</p> |
| <p>2023 (TBD)</p> | <p>Recommendation 6: Government Climate-Impacting Subsidies</p> <p>And</p> <p>Recommendation 7: Mitigation and Adaptation Current and Capital Expenditures</p> | <p>IMF and OECD</p> | <p>(i) Further refine the recommendations and discuss scope, definitions, and compilation practices;</p> <p>(ii) Provide update and way forward for the development and publishing of a handbook on compiling national climate mitigation and climate adaptation expenditures;</p> <p>(iii) Present action plan to support the implementation of the recommendations including TA and Training.</p> |
| <p>2023 (TBD)</p> | <p>Recommendation 8 - Income, Consumption, and Saving Distribution</p> <p>And</p> <p>Recommendation 9 - Wealth Distribution</p> | <p>OECD</p> | <p>(i) Provide relevant methodological guidance practical compilation guidance on improving the availability, quality, and timeliness of data on household distributional data on income, consumption, and saving and wealth;</p> <p>(ii) Establish templates for the Target and Second-best Target requirements on the basis of existing EG DNA and EG DFA templates.</p> |

| Timelines for Thematic Workshops (TBD) | Recommendations | Lead Agencies | Objectives of the Workshop |
|--|---|--------------------------|---|
| 2023 (TBD) | <p>Recommendation 10: Fintech Credit</p> <p>And</p> <p>Recommendation 12: Fintech-enabled Financial Inclusion</p> | FSB, IMF, and World Bank | <p>Regarding Rec.10 - FSB will lay out the framework / present the results of the stock taking of existing available data on Fintech credit (ii) agree on the definition and scope of fintech credit, and (iii) design the conceptual framework for collecting / reporting comparable data on fintech credit.</p> <p>Regarding Rec.12 – The Workshop (TBD - early 2023) should identify the set of indicators, including but not limited to mobile and internet banking, fintech enabled products, and decentralized finance (DeFi), to be used to measure fintech-enabled financial inclusion, including for different income groups, women, and possibly their intersection. The specifics to be agreed based on the discussions at the workshop. The workshop will benefit from the participation of the Global Partnership for Financial Inclusion (GPII), which will provide the users’ perspective.</p> <p>Based on the workshop outcomes, IAG members to develop brief methodological guidance and data collection framework for the compilation of identified indicators by end-2023.</p> |

| Timelines for Thematic Workshops (TBD) | Recommendations | Lead Agencies | Objectives of the Workshop |
|--|----------------------------------|------------------------|---|
| 2023 (TBD) | Recommendation 11: Digital Money | IMF | <p>(i) Agree on the way forward for the development of a data collection framework (and relevant templates) for digital money including crypto-assets used as a means of payment.</p> <p>(ii) Present the stocktaking of existing data sources, and collection frameworks and practices.</p> <p>(iii) Agree on timelines, relevant guidance, etc. for participating economies to carry out data collection exercise.</p> <p>(iv) Agree on which economies will participate in the collection of these data.</p> |
| 2023 (TBD) | Recommendations 13 and 14 | IAG, Eurostat, and ECB | <p>(i) Review existing frameworks and initiatives to access private and administrative data, start the work on broad principles and start engaging effectively with private data holders.</p> <p>(ii) Discuss the taxonomy of the characteristics of private data sources and intermediate outputs of potential interest and define data models able to facilitate access and sharing.</p> |