

# Fiscal Data for Emergency Response: Guide for COVID-19

Version 1.1



# Fiscal Data for Emergency Response: Guide for COVID-19

**Version 1.1**

August 2020

This Guide has been developed as the product of the collective effort between the stewards and partners of the GIFT network, drawing on their joint experiences to determine the fiscal transparency data requirements in emergency response packages, particularly those responding to COVID-19. The co-creation process in developing this Guide is described in the Methodology section. The Acknowledgements section of this Guide recognizes those key inputs to its development. This Guide has been prepared and led by Lorena Rivero del Paso, Technical, Knowledge and Collaboration Manager of the GIFT Coordination Team, and can be contacted for further information at: [info@fiscaltransparency.net](mailto:info@fiscaltransparency.net).



## Table of contents

<b>1. About this guide</b>	<b>4</b>
1.1. Background	4
1.2. Objective	6
1.3. About the need for data	7
1.4. Target audience for this Guide	9
1.5. Methodology of development	10
1.6. Acknowledgements	12
<b>2. Section 1. User-centered and purpose-oriented approach to fiscal transparency</b>	<b>13</b>
<b>3. Section 2. Identification of the required data</b>	<b>15</b>
3.1. Considerations	15
3.2. Emergency and countercyclical spending	16
3.2.1. Guiding questions	16
3.2.2. Datasets and data fields	17
Adjusted budget and spending	17
Emergency specific funds	18
Efficiency and effectiveness of the measures (indicators)	19
Subsidies, grants and support, identified by vulnerable groups, and eligibility criteria	20
Beneficiaries of subsidies/grants/in-kind support registry	21
Public investments	23
Payroll for medical and related staff positions	24
Procurement	25
Use cases	26
3.3. Tax relief measures and deferrals	27
3.3.1. Guiding questions	27
3.3.2. Datasets and data fields	28
Tax relief measures and deferrals	28
Beneficiaries of tax incentives	28

Use cases .....	30
<b>3.4. Revenue adjustments and additional funding sources.....</b>	<b>31</b>
3.4.1. Guiding questions .....	31
3.4.2. Datasets and data fields .....	32
Revenue estimates and adjustments .....	32
Loans and other debt instruments .....	32
External development and humanitarian resource flows .....	33
Trust Funds.....	35
Contingent tax collection (such as Solidarity surcharges).....	36
Use cases .....	37
<b>3.5. Macroeconomic framework impact .....</b>	<b>38</b>
3.5.1. Guiding questions .....	38
3.5.2. Time Series data.....	38
<b>4. Section 3. Customization of the Guide and prioritization of data .....</b>	<b>39</b>
<b>4.1. Assessing the country position .....</b>	<b>39</b>
<b>4.2. Assessing data availability and its quality .....</b>	<b>41</b>
4.2.1. Data availability.....	41
4.2.2. Data quality.....	42
4.2.2.1. Frequency and timeliness.....	42
4.2.2.2. Coverage .....	43
4.2.2.3. Standardization and accounting .....	44
4.2.2.4. Data consistency .....	45
<b>4.3. Implications of the data availability and quality for FMIS .....</b>	<b>46</b>

## 1. About this guide

### 1.1. Background

Worldwide, governments have launched substantial fiscal policy responses to reduce the potentially catastrophic impact of COVID-19 on the health of their populations and economies. The speed of these adjustments has challenged approaches traditionally used to ensure fiscal transparency, public accountability, and democratic legitimacy. The importance of these elements however remains paramount, even more so now than in times of stability. This has required the public finance community to reflect on the preparedness of current reporting instruments and internal data architecture<sup>1</sup> of governments to monitor rapid adjustments and their impact to inform time-sensitive decision-making, coordination and monitoring. Equally important is the type, disaggregation and format in which such information is required by the public and other external stakeholders to facilitate policy discussion, assist implementation and enforce accountability.

Generating, gathering and publishing quality and timely fiscal information pertaining to emergencies and recovery measures implemented by governments, together with their anticipated objectives is key to facilitating the internal and external monitoring required to dynamically adapt strategies to constantly evolving circumstances in the quest to best attain goals, and to minimize the potential for mismanagement and corruption. Achieving impactful fiscal transparency in this context thus requires the proactive publication of the data underlying the strategic emergency responses, such that what is being done can be assessed in a sufficiently detailed manner, together with the mechanisms adopted, the aims of the strategies adopted, and how the success of the strategies can be measured and thereby assessed and adapted, as required. With this in mind, GIFT presents this Guide to help governments clearly identify the datasets<sup>2</sup> and data fields<sup>3</sup> that should be gathered for internal processes and disclosed to ensure that transparency is embedded in their policy responses.

Fiscal transparency, even when fiscal policies are responding to a health pandemic, requires a broad range of information, not just health sector data. It requires information on government revenues; public debt; and on how all public resources are allocated, invested, and managed. While this data Guide thus contains a

---

<sup>1</sup> Data architecture defines information flows in an organization, and how they are controlled. This includes the models, policies, rules or standards that govern which data is collected, and how it is stored, arranged, integrated, and put to use in data systems and in organizations. (BusinessDictionary <http://www.businessdictionary.com/definition/data-architecture.html>)

<sup>2</sup> Dataset refers to a structured collection of data that is composed of separate elements but can be manipulated as a unit by a computer.

<sup>3</sup> Data field refers to a place where data can be stored, commonly used to refer to a column in a database. A data field definition usually includes field structure (including size of each field and whether it is a date, an integer, or a text field) and field organization (names and locations of data fields within a document record).

practical compilation of datasets required, within the broader context of an emergency policy response and economic recovery, it is particularly applied to the COVID-19 framework considering the pressing needs. It was developed in March-June 2020 as the product of a collective effort between the stewards and partners of the GIFT network, drawing on the joint experiences of representatives of ministries of finance, civil society organizations and specialized agencies (see acknowledgments at the end of this section), and can be used as a reference for these different stakeholders, as well as for oversight agencies.

The Guide is set out as follows:

- Section 1 provides a brief introduction to a user-centered and purpose-oriented approach to fiscal transparency in emergency responses, specifically in the COVID-19 context.
- Section 2 presents the required datasets, classified into four dimensions, namely **Emergency and countercyclical spending**, **Tax relief measures and deferrals**, **Revenue adjustments and additional funding sources** and **Macroeconomic framework impact**. Each of the dimensions is presented with a set of guiding questions posed from the point of view of the different hypothetical user types, to assist in identifying the datasets with purpose. For each of the datasets, a compendium of key data fields is identified. It should be borne in mind that country-specific circumstances may require the publication of customized information for fiscal transparency.
- Section 3 has been developed to support the customization of the guide for national contexts, considering the various measures implemented and their effects in different economies as well as key prerequisites for publication, including data availability and quality.

## 1.2. Objective

The objective of the Guide is to **provide a practical tool for practitioners**, to help them **identify the datasets and data fields** that are required for informed internal decision-making processes and for meaningful fiscal transparency in emergency responses, specifically applied to the context of COVID-19. By simplifying the identification, we expect to contribute towards **better financial management data architecture**, easing the process of gathering, organizing and publishing such data in ways that enable its internal and external reuse.

Recognizing that, in abounding cases, the current data-gathering processes and information systems are unprepared to generate all the enlisted data, this Guide can assist in informing a **strategic prioritization** of data to gather and accompany the development of processes and/or systems in the short, medium and longer-term.

This Guide will also feed the "[COVID-19 Data Taxonomy: guidance to open up essential data during a public health crisis](#)" under development by the Open Data Charter. This Taxonomy aims to become a practical resource to identify priority datasets, open standards and data use-cases that stakeholders can focus on in different thematic approaches, as well as privacy and ethical safeguards for data release. The gathering and publication of contextualized data is encouraged to enable more complex and rich analyses.

### 1.3. About the need for data

Policy announcements in the form of press releases, decrees and other similar forms have been commonly used to convey the measures adopted by different governments in responding to the health emergency and economic crisis spiraled by COVID-19. The level of detail contained in these announcements has ranged from being limited to more specific, largely depending on the nature of the measures adopted, the legal systems and frameworks in place, as well as the stage of the pandemic they have been presented in. Generally, while they provide an overview of the measures adopted and, in some cases, their form of implementation, they do not define the details of the mechanisms and processes to be utilized nor the anticipated implications of the measures in the general economic context.

Financial reports, considering the eight key budget documents used to assess the [Open Budget Index](#) will, when subsequently published, present the aggregated information, or the broad picture of the financial position and the general repercussion for public finances. These reports are however presented at particular points in time, with the most frequent being monthly and quarterly reports and are based on the presentation of economic indicators and aggregates that may only provide partial answers.

There are myriad other questions about detailed financial impacts of COVID-19 related government interventions that only high-quality data—and accounting—can provide the full answers to. Granular data provides governments with the ability to trace the real implementation effectiveness, to implement evidence-based improvements and to quickly detect mismanagements, thereby supporting the functions of management and control. This is highly related to internal data architecture, including the characteristics of the Financial Management Information Systems (FMIS)<sup>4</sup>.

Furthermore, when data is made available in machine readable<sup>5</sup> formats to the public, complex models can be developed—including more data sources—facilitating the presentation and analyses of different scenarios. While data visualizations and queries can facilitate the use of data by external users, it is important to note that the publication of data does not necessarily imply a corresponding need to develop and publish platforms and visualizations<sup>6</sup>. The data has a value in itself, as long as its availability, structure and quality allow interested parties to use it. Sophisticated methods for analyzing fiscal data are not only in the purview

---

<sup>4</sup> Regarding the FMIS, it is important to keep in mind that, even though internal systems for gathering data can be in place, the access to the database might be restricted to certain public officials, as well as possible challenges in the internal use of the whole database given the existent predefined roles, reports and data queries.

<sup>5</sup> Information on open data can be found by visiting the Ministry of Finance of Mexico and GIFT Open Data Tutorial [http://www.fiscaltransparency.net/blog\\_open\\_public.php?IdToOpen=6102](http://www.fiscaltransparency.net/blog_open_public.php?IdToOpen=6102).

<sup>6</sup> This is particularly relevant in the context of emergencies when government resources are stretched and focused on the urgent design and implementation of the actual remediation measures, leaving little room for additional developments.

of governments, but they are also widely used in civil society, academia and in the private sector. With the availability of software and the development of capacities for innovative uses of data, monitoring implementation in specific sectors or regions—including proposals for action—can be widely seen outside of governments<sup>7</sup>. This external use fosters better policy implementation and accountability.

Making use of data, whether internally within government or externally, can help build the base at the national and international level to improve the preparedness in emergency responses in the future, as well as trust between governments and an informed citizenry.

---

<sup>7</sup> For more details regarding uses of data by civil society in the context of COVID-19, consult the blog post The role of Civil Society Organizations in ensuring transparency and accountability in emergency policy responses by Juan Pablo Guerrero, Director of GIFT [http://www.fiscaltransparency.net/blog\\_open\\_public.php?IdToOpen=8477](http://www.fiscaltransparency.net/blog_open_public.php?IdToOpen=8477).

## 1.4. Target audience for this Guide

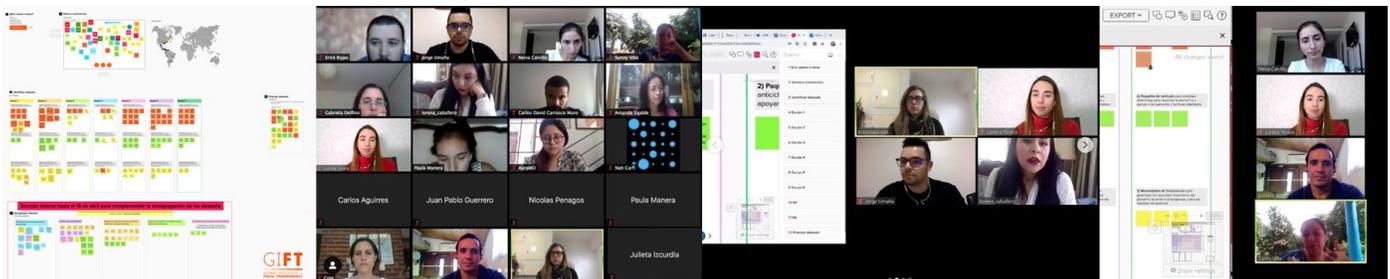
- **Ministries of finance** (or equivalent)- to support the development of a stronger **data architecture** that allows responding to emergencies with informed decision-making and institutional coordination along the government agencies, as well as to assist the process of identifying what data to **publish** to enable transparency and oversight.
- **Civil society/advocacy groups**- to simplify the process of **prioritizing data needs** that will enable tracking (follow the money), analyses, and informed participation.
- **Oversight institutions**- to contribute to the task of **identifying the data sources required** to develop diverse analysis, oversight and auditing.

## 1.5. Methodology of development

GIFT is a network integrated by stewards and partners from ministries of finance—or equivalent—, civil society organizations (CSOs), expert agencies and international financial institutions. As part of the dialogue, peer-learning and knowledge exchange within the network, this Guide has been developed as the product of global consultations and collective work with experts in the fiscal, open data and open government arenas. Its structure observes a user-centered and purpose-oriented approach.

The process for developing the present Guide began with the publication (March 19<sup>th</sup>) of a framing blog on [Fiscal Transparency in Times of Emergency Response: Reflections for COVID-19](#), including some initial questions to guide the identification of relevant data. GIFT then hosted the [webinar titled budget management adjustments for COVID-19](#), in which experts reflected on measures to make the most of the available resources, including necessary normative, management, classifications and systems adjustments and how open government methods can support better-decision-making during the emergency and post-emergency response by engaging the community through online and offline channels.

With that background, GIFT hosted two co-creation workshops<sup>8</sup> in which more than 30 experts from governments, CSOs and international organizations participated to define the required datasets and identify the initial data fields for some of those datasets (the image below shows the first workshop dashboard and break out groups). Based on the inputs from the participants, in the first co-creation workshop, the datasets were categorized into three dimensions, and one more dimension was added in the second workshop<sup>9</sup>. These four dimensions for the datasets are presented in this Guide<sup>10</sup>.



Based on the above, the GIFT coordination team put together a draft Guide, taking also into account the ongoing fiscal transparency efforts, the structure of FMIS, related data standards, and technical and practical

<sup>8</sup> One in Spanish and one in English, with different participants.

<sup>9</sup> The dashboards of datasets and data fields have been uploaded to GIFT's website and can be viewed [here](#).

<sup>10</sup> Titles and descriptions of the dimensions vary from those used in the workshops to better reflect the contents.

publications from international financial institutions in the context of COVID-19<sup>11</sup>. This led, in some cases, to the consolidation of initially separate datasets, as well as the incorporation of additional ones—owing to similarities and differences in the structure, fields and sources of data—in an attempt to bring relevant data together where appropriate as well as to eliminate overlaps and duplication. Additionally, the disaggregation of the data fields was further developed and reviewed in a way that encourages linking datasets to enable contextual and complex data analysis. The draft version of the Guide was made available for comments to the participants of the previous steps and GIFT partners<sup>12</sup>.

The second draft version—incorporating the comments—was thus presented as Version 1.0 for public comments, open from May 20 to June 30, 2020.

The inputs received have been incorporated into this document, constituting a Version 1.1<sup>13</sup>. Changes from the previous version include a complete restructuring of section 3, now denominated “Customization of the Guide and Prioritization of Data”, including further clarifications for customizing and prioritizing datasets and data fields based on the country contexts and data availability and quality. The only dataset with major changes is that of “External development and humanitarian resource flow”<sup>14</sup>, due to the close and valuable involvement of the International Aid Transparency Initiative (IATI). Some additions were also included to the “Public investments” dataset based on suggestions made by representatives of the Construction Sector Transparency Initiative (CoST) considering the link to the Open Contracting for Infrastructure Data Standards. Finally, for each dimension of the datasets, use cases have been included to provide tools to answer the guiding questions. In this context, the present Guide has been developed using a user-centered development process, in which 9 ministries of finance<sup>15</sup>, 16 civil society organizations and 12 international organizations participated. It has also been conceived as an iterative process, with the possibility of presenting updated versions, as required, to keep it current.

---

<sup>11</sup> The Special Series notes on COVID-19 produced by IMF experts were particularly useful: <https://www.imf.org/en/Publications/SPROLLS/covid19-special-notes>

<sup>12</sup> A total of 50 persons were included in this stage of the process.

<sup>13</sup> Version is changing to 1.1 as the inputs received during public consultation did not transform the structure of the guide by changing the dimensions or adding datasets, however they helped refine specific datasets (development assistance and investment projects) and contributed to clarifications and exemplifications added throughout the different sections of the Guide.

<sup>14</sup> In version 1.0 dataset “Aid, donor and humanitarian assistance”.

<sup>15</sup> 8 national ministries or equivalent and 1 local.

## 1.6. Acknowledgements

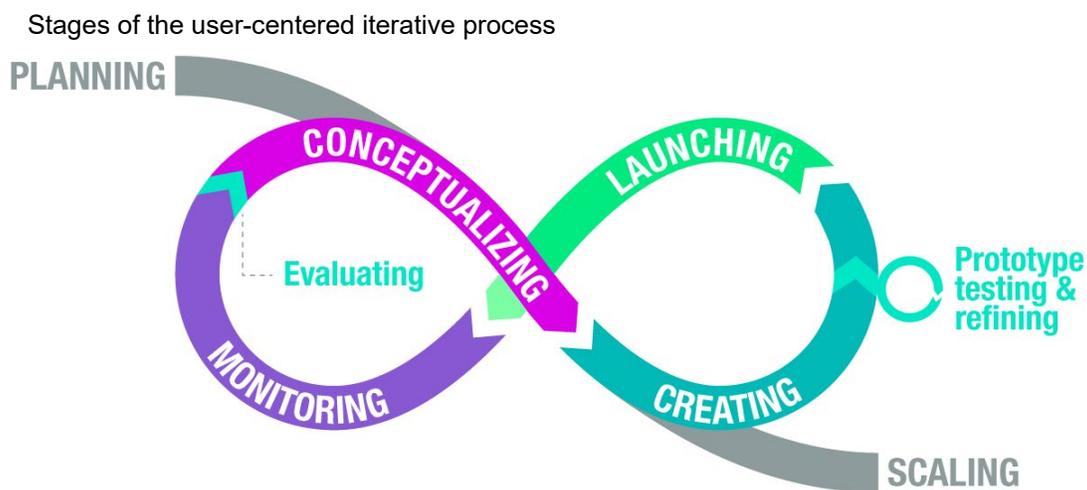
As previously mentioned, this Guide is the product of a co-creation effort between GIFT Stewards and partners, each contributing by bringing their expertise in public finances, transparency, open data and open government fields. We are particularly thankful to the organizations and their representatives who participated in the process. The development of the Guide was supported by the Open Government Partnership (OGP) Multi-Donor Trust Fund managed by the World Bank.

- Argentina- Asociación Civil por la Igualdad y la Justicia (ACIJ)- Julieta Izcurdia
  - Argentina- Ministry of Economy- Gustavo Merino
  - Brazil- Inesc- Carmela Zigoni
  - Cameroon & Central Africa- AfroLeadership, Charlie Martial NGOUNOU
  - Chile- Observatorio del Gasto Fiscal- Carlos Carrasco and Manuel Henríquez
  - Costa Rica- Ministry of Finance- Erick Rojas Villalobos and Carlos Aguirres
  - Costa Rica- Laboratorio Colaborativo de Innovación Pública, Innovaap UCR- Jorge Umaña
  - Costa Rica- Observatorio Ciudadano de Transparencia Fiscal- Amanda Ugalde and Jimmy Bolaños
  - Croatia- Institute of Public Finance- Mihaela Bronic
  - Georgia- Europe Foundation- Viktor Baramia
  - India- National Campaign on Dalit Human Rights- Beena Pallical
  - India- CivicDataLab- Preethi Govindarajan
  - India- Centre for Budget and Governance Accountability- Simonti Chakraborty
  - Kenya- iFollow the Money, Kenya- Evelyn Mathai
  - Mexico- Centro de Investigación Económica y Presupuestaria (CIEP)- Sunny Arely Villa Juárez
  - Mexico- Ministry of Finance and Public Credit- Lorena Caballero and Nadia Lora
  - Mexico- Mexico City- Agencia Digital- Neiva Calvillo
  - Mexico- Ubicuo- Aura Martínez
  - Mongolia- Consultants for the Ministry of Finance- Ganchimeg.Ts and Naranzul Tsaschikher
  - Nigeria- Ministry of Finance, Budget and National Planning- Dr. Anne Nzegwu
  - South Africa- Public Service Accountability Monitor and Imali Yethu- Zukiswa Kota
  - South Africa- National Treasury- Prudence Cele
  - South Africa- Studies in Poverty and Inequality Institute (SPII)- Sacha Knox
  - The Philippines- Department of Budget and Management- Claire Bautista
  - Uruguay- Office of Budget and Planning- Paula Manera and Gabriela Delfino
- Regional and international organizations:**
- Accountability Lab- Blair Glencorse
  - CABRI- Neil Cole
  - CoST- John Hawkins
  - GIZ (Benin)- Quentin Gouzien
  - IATI Secretariat
  - International Budget Partnership- Jason Lakin, María José Eva, Sally Torbert and Suad Hasan
  - International Monetary Fund- Sailendra Pattanayak
  - Open Contracting Partnership- Lindsey Marchessault, Nicolás Penagos and James McKinney
  - Open Data Charter- Natalia Carfi and Agustina De Luca
  - OGP- Rosario Pavese and Ivy Ong
  - PEFA Secretariat- Julia Dhimitri
  - World Bank- OGP-MDTF Team

This Guide was led and elaborated by Lorena Rivero del Paso, Technical, Knowledge and Collaboration Manager of GIFT. It also benefited from the inputs and support of Raquel Ferreira and Tarick Gracida of the GIFT Coordination Team. Juan Pablo Guerrero, GIFT Network Director, is responsible for this publication.

## 2. Section 1. User-centered and purpose-oriented approach to fiscal transparency

Digital projects within governments can be considered as investments towards internal management, service delivery and/or communication with the population. Governments that are focused more on processes than results, however, tend to minimize the importance of considering what users want or need<sup>16</sup>. A user-centered approach to fiscal transparency is an iterative method meant to improve the quality of publication by focusing on addressing the information needs of the final users, by involving them in the different stages of the process to better understand their needs, interests and capacities.



A simplified view of potential groups of audiences was presented in the previously mentioned framing blog post as follows:

- those **part of the response to the outbreak** (e.g. different government agencies, aid organizations, international financial institutions),
- those **facing an emergency themselves** (e.g. infected individuals and their families, businesses affected by bans, quarantines or similar restrictions),
- those **external actors with vested interests** (e.g. investors, credit agencies) or
- those **oversight of government decisions** (e.g. legislatures, audit institutions, civil society organizations, journalists).

Within this user-centered approach, to drive the iterations, it is important to adopt a purpose-oriented view that enables planning through understanding the potential of the data and its context, as well as to establish

<sup>16</sup> For example, read Romero León, J., de la Mora, D. and Ruiz, L. (2016). How are Governments Disclosing Fiscal Information Online? [online] International Budget Partnership. International Budget Partnership. Available at: <https://www.internationalbudget.org/publications/digital-budgets-how-are-governments-disclosing-fiscal-information-online/>

measurements of results. Challenges in consolidating data and updating sustainability should be considered, as a purpose-oriented publication with defined audiences will allow for the enhanced prioritization of which data to gather and publish in different iterations.

This Guide does not discuss the reasons behind a user-centered and purpose-oriented approach, or how to develop such implementation. This section should only serve as a reminder of the importance of having a general segmentation of potential users—and that users are both internal and external—as well as of understanding the context and potential of the data. The Tutorial on Fiscal Transparency Portals: A User-Centered Development<sup>17</sup> should be consulted in this regard. Further in this Guide, to address this point, each of the dimension sub-sections is accompanied by a set of questions posed by potential users considering probable analysis. Each dataset is also accompanied by a purpose statement reflecting on its potential and assisting in identifying the data fields necessary to answer the questions posed.

---

<sup>17</sup> For a detailed implementation of this user-centered approach, see the Tutorial on Fiscal Transparency Portals, GIFT, 2019, Tarick Gracida and Lorena Rivero <http://bit.ly/PortalsTutorial>

### 3. Section 2. Identification of the required data

Considering the public finance implications and measures being implemented in response to COVID-19, during the “unpacking guides” workshops, the data has been categorized in four main dimensions: [Emergency and countercyclical spending](#), [Tax relief and deferral measures](#), [Revenue adjustments and additional funding sources](#) and [Macroeconomic framework impact](#). Each of the dimensions is composed of different datasets, with each dataset being further disaggregated into data fields.

#### 3.1. Considerations

The following considerations must be taken into account:

1. The aim was to list **all of the relevant data sets, not country specific sets**. This means that some datasets or data fields might not apply to certain countries—depending on the measures taken and administration specificities--.
2. Some **datasets or data fields listed might not yet be gathered or published in certain countries**. It is however important to list all data fields required to guide and promote better data collection and publication. An additional section has been added at the end of this Guide to assist governments and civil society actors to assess and map the data availability in their respective countries.
3. Some **datasets might already be public** as part of regular processes of proactive transparency. As such, it is possible that only a reference or metadata is needed to indicate how to analyze the data in this context, seeking to avoid duplication and dispersion of publication.
4. **Data priorities may vary from country to country**. When ultimately selecting the data to gather and publish, there is a need to prioritize considering the cost-benefit of gathering certain data fields or certain disaggregated forms thereof.
5. Collection of **data may require intra and inter-sector coordination**. The data required will be sourced from different areas within the ministries of finance, including the tax or revenue service, such that coordination with other sectors may be required.

In light of the aforementioned considerations, users of this guide will face the need to customize and prioritize data collection and publication according to the country context and specific objectives. Implementers that do not currently collect the comprehensive list of data fields listed below should not feel deterred from initiating implementation and taking a strategic approach to improve data architecture and use capacities. To aid this strategic process, in this version of the Guide we have added a third section “Customization of the Guide and prioritization of data”, meant to support implementers, advocacy groups and oversight institutions.

## 3.2. Emergency and countercyclical spending

The emergency spending in the COVID-19 context refers to the allocations required to prevent, detect, control, treat and contain the virus, including to provide the necessary support for people and businesses to enable the implementation of physical distancing measures. In this sense, it is much broader than merely the allocations to health related budgets, as containing the virus has encompassed the need to transition to online schooling, for increased hospital security, targeted preventive communication, providing food security support and unemployment benefits, to name a few.

Additionally, as noted before, this particular health emergency was aggravated by a global economic downturn, with implications in the macroeconomic spectrum that affect spending ceilings and simultaneously point to the need to reprioritize spending to avoid falling into deeper recessions.

It is worth noting that most datasets in this fiscal transparency dimension presented below can be gathered and published by the central government, as well as by subnational governments with fairly similar structures and data fields. This is an important consideration as during the co-creation workshops the publication of the spending data of subnational governments was repeatedly mentioned and highlighted as one of the priorities.

### 3.2.1. Guiding questions

As datasets are identified in a user-centered and purpose-oriented approach, it is important to keep in mind the questions that the potential users from within and outside government will want to address with the data, for example:

- On reallocations: Are the resources originally allocated to the health sector enough? Which are the budget lines/programs affected by cuts or reallocations? How are reallocations prioritized and what are the trade-offs in terms of policy objectives?
- On off-budget resources: Are there donor funds or contingency funds being managed off-budget? Where and how will they be used to ensure complementarity and avoid overlap?
- On non-financial performance: Are the resources being spent efficiently and effectively to overcome the emergency and continue with the country's medium and longer term plans?
- On the specific government support and grants: What are the available resources to support individuals and businesses?
- On the beneficiaries: Who is benefitting from the subsidies and grants? Are they well directed to support vulnerable groups?

- On the management of public investments: What are the latest investments in the health sector and other affected sectors (i.e. transition to online education)? Will other sectors investment projects be affected by the reallocations? Will new investments projects arise with the stimulus plans?
- On the availability of medical staff: Is the government hiring additional personnel to provide health services? Will these positions be permanent?
- On contracting goods and services and procuring for investment projects: How will emergency procurements be managed for health and other sectors? Which providers are receiving contracts? Are the purchase prices reasonable under the market circumstances and maintained throughout the contract implementation?

### 3.2.2. Datasets and data fields

Dataset	Description	Purpose	Specific data fields
<b>Adjusted budget and spending</b>	<p>Accounting for all budget allocations according to the enacted budget, as well as any adjustments implemented.</p> <p>For the dataset to fulfill its purpose, the enacted, adjusted and stages of the transaction must be included in the same dataset.</p> <p>It is recommended to include all the fields of the <a href="#">Open Fiscal Data Package</a> specification. The principal difference is the addition of the field “reason for adjustment” and a possible additional identifier that relates an allocation with COVID-19.</p>	<p>Identify specific allocations for facing prevention, detection, control, treatment and containment of the virus, as well as possible budget reallocations from other sectors or items derived from the actions mentioned above or by the derived economic constraints.</p> <p>It is important to consider the whole budget and not only the health related portion, as it will also allow analyzing implications for security purposes, shifts to online education, allocations to research and development, among others.</p>	Administrative classification with code and description - all levels
			Economic classification and/or object classification with code and description- all levels
			Functional classification with code and description - all levels
			Program classification with code and description – all levels
			Specific source of funding – lowest disaggregation available, including extra-budgetary funds
			Geographical distribution- all levels available
			Investments or construction project identifier- if any
			Approved budget
			Adjusted budget

Dataset	Description	Purpose	Specific data fields
	An example of publication of data of the approved and adjusted annual budget can be seen in the open fiscal data package of <a href="#">South Africa</a> , as well as motivations for <a href="#">virements in the budget</a> <sup>18</sup> --although the latter is not published as structured data—and an example for specific COVID-19 additional classification for the overall budget is the case of <a href="#">Brazil</a> .		<p>Reason for adjustment. In case of transfers between entities or items identify the entity from which the resources were reallocated</p> <p>Stages of the transaction:</p> <ul style="list-style-type: none"> <li>· Reservation</li> <li>· Commitment</li> <li>· Verification (or certification)</li> <li>· Payment order</li> <li>· Payment</li> </ul> <p>If related to a procurement process, identifier<sup>19</sup></p> <p>If transfer to a different level of government, code and description of the involved level and sub-level of government</p>
<b>Emergency specific funds</b>	<p>Expenditures of any off-budget funds specifically established or activated for the current emergency. These extra-budgetary funds include trust funds, sovereign wealth funds and external development and humanitarian resource flows.</p> <p>If emergency funds follow the same public sector</p>	Allow a consolidated picture of the public expenditures to cover the emergency.	<p>Source of funding- code and description (this catalogue should be the same one that will be used on the revenue side dataset of Trust funds and External development and humanitarian resource flows)</p> <p>Type of funding- to categorize similar sources (if it is a trust, donor...)</p> <p>Agency/department in charge of authorizing spending</p> <p>Sector related to the spending objective</p> <p>Objective</p>

<sup>18</sup> Vulekamali includes a dataset of the [adjustments in the budget](#) with a classification reasons for adjustments, however the “motivation” is only included in the Virements in the Budget non-structured file which displays a greater level of detail, this is the reason why it was selected as an example for this Guide.

<sup>19</sup> If available, the identifier should be the Open Contracting ID (ocid), a globally unique identifier used to join up data on all stages of a contracting process <https://standard.open-contracting.org/latest/en/schema/identifiers/>

Dataset	Description	Purpose	Specific data fields
	accounting standards (International Public Sector Accounting Standards or national standards), the reporting would be more effective <sup>20</sup> .		<p>Economic classification and/or object classification with code and description- all levels</p> <p>If related to a specific project, code and description</p> <p>Stages of the transaction:</p> <ul style="list-style-type: none"> <li>· Reservation</li> <li>· Commitment</li> <li>· Verification (or certification)</li> <li>· Payment order</li> <li>· Payment</li> </ul> <p>If related to a procurement process, identifier<sup>21</sup></p> <p>If transfer to a different level of government, code and description of the involved level and sub-level of government</p>
<b>Efficiency and effectiveness of the measures (indicators)</b>	<p>This dataset should consolidate all non-financial targets related to the budget, including any changes in targets due to reallocations to face the emergency, derived from less revenues or macro-fiscal adjustments such as currency exchange rates, among others.</p> <p>Whenever possible, the targets and</p>	<p>It should allow identifying the impact of COVID-19 and the economic crisis in the attainment of social, economic or environmental targets.</p> <p>There should be an attempt to explain in simple terms:</p> <ul style="list-style-type: none"> <li>• why new money needs to be spent</li> <li>• projected # of beneficiaries</li> <li>• expected results<sup>22</sup></li> </ul> <p>Whenever possible, the targets should relate to the Sustainable Development Goals (SDGs).</p>	<p>Administrative classification- if possible, disaggregate to service delivery facility</p> <p>Program classification- if existent and related to targets</p> <p>Related SDG and target</p> <p>Indicator</p> <p>Type of indicator</p> <p>Methodology of the indicator</p> <p>Initial or approved target</p> <p>Adjusted target</p>

<sup>20</sup> Further recommendations in the World Bank blog posts “Advancing accountability for special emergency funds to address COVID-19” Suraiya Zannath and Srinivas Gurazada [https://blogs.worldbank.org/governance/advancing-accountability-special-emergency-funds-address-covid-19?cid=EXT\\_WBBlogTweetableShare\\_D\\_EXT](https://blogs.worldbank.org/governance/advancing-accountability-special-emergency-funds-address-covid-19?cid=EXT_WBBlogTweetableShare_D_EXT)

<sup>21</sup> If available, the identifier should be the Open Contracting ID (ocid), a globally unique identifier used to join up data on all stages of a contracting process <https://standard.open-contracting.org/latest/en/schema/identifiers/>

<sup>22</sup> More insights on developing indicators ad hoc for the COVID-19 crisis can be found in Jason Lakin’s presentation to the webinar “Reflections and recommendations for fiscal openness in times of emergency: Budget management adjustments for COVID-19”, which can be downloaded here: [http://fiscaltransparency.net/presentations/Lakin\\_IBP\\_presentation.pptx](http://fiscaltransparency.net/presentations/Lakin_IBP_presentation.pptx)

Dataset	Description	Purpose	Specific data fields
	<p>progress should be granular to the service delivery facility level, which may require connecting to administrative registries of the relevant sectors, to avoid duplicity.</p> <p>An example of publication of open data of program performance targets is the case of <a href="#">Mexico</a>, the dataset includes approved and adjusted targets, with reasons for adjustments published monthly.</p>	<p>It should also allow estimating the cost of care through anonymized data on infections and use of resources –while this is a very specific trait, as mentioned several times by participants in the workshops.</p>	<p>Reason for adjustment</p> <p>Measurement frequency</p> <p>Baseline</p> <p>Progress</p> <p>Means of verification (with link to source)</p>
<p><b>Subsidies, grants and support, identified by vulnerable groups, and eligibility criteria</b></p>	<p>Compendium of subsidies, grants and support –monetary or in-kind– available to natural or legal persons, organizations.</p> <p>An example of this dataset can be consulted in the <a href="#">Government Grants Intelligent Search Platform</a> of Mexico.</p>	<p>Provide a consolidated view of possible means to support vulnerable populations – including genders, ethnical minorities, disabilities– and sectors –such as farming or small and medium enterprises.</p>	<p>Administrative classification- at least sector level</p> <p>Programmatic classification</p> <p>Description of the grant/ benefit</p> <p>Type of benefit/grant/subsidy type (in kind, monetary)</p> <p>Objective of the benefit, grant or subsidy</p> <p>Target population or focus area- if possible, also include potential population and served population</p> <p>Demographics of the targeted population – at least considering, genders, location, disability and other targeted vulnerabilities</p> <p>Restrictions</p>

Dataset	Description	Purpose	Specific data fields
			Frequency
			Duration
			Form of access – identify if it requires registration or is automatic meeting criteria
			(If any) Intermediaries for access (who: local governments, institutions, trusts, organizations)
			Link to official operating rules/legal framework
<b>Beneficiaries of subsidies/grants/in-kind support registry</b>	<p>The dataset is the registry of all natural or legal persons that receive government grants, subsidies or in-kind support related to the budget, including the type of benefit and quantity/amount of the support.</p> <p>The dataset should also allow identifying if the beneficiary belongs to any vulnerable group, such as women and other genders, ethnic minorities or disadvantaged groups, with disabilities and seniors, among others.</p> <p>The data can be anonymized to avoid disclosing personal data, specially</p>	<p>Identify if the beneficiaries (whether natural or legal persons) fit the eligibility criteria, make distributions analysis to evaluate delivery, track the delivery of the benefit.</p>	Code of beneficiary- Unique identifier that allows persons to be anonymized when necessary
			Type of beneficiary – natural or legal person, family, organization or other (some data fields will only be applicable to certain types of beneficiaries)
			Name of beneficiary (regardless of type of beneficiary)
			Initial registration date – to assess whether it is a new beneficiary
			Budget related administrative classification
			Budget related program classification (to identify if the benefit was created for the emergency)
			Type of benefit- monetary, in-kind, training and others (it is recommended to use categories that will allow analysis)

Dataset	Description	Purpose	Specific data fields
	<p>related to vulnerable groups. This will depend on country specific rules of personal data protection as well.</p> <p>This dataset, focused on the budget side, is different from the tax benefits dataset, as the structure, fields and processes differ.</p> <p>An example of publication in open data of the beneficiaries is the <a href="#">support to entrepreneurs</a> of Croatia, which has its own API to enable reuse.</p>		<p>Specific benefit- description of the benefit</p> <p>Measurement unit of the benefit (e.g. monetary/currency, kilograms, hours ...)</p> <p>Age</p> <p>Genders (non-binary)</p> <p>Ethnicity</p> <p>Basis for eligibility</p> <p>If any, identify type of vulnerability –disabilities, poverty lines, unemployment, among others.</p> <p>Place of residence – to municipal level or equivalent</p> <p>In the case of legal persons, field that identifies they are up to date on their taxes and have no prior sanctions</p> <p>(If any) Responsible for monitoring / validation of delivery</p> <p>Quality variable - beneficiary satisfaction</p> <p>Date of last disbursement/delivery</p> <p>If applicable, means of verification (photographs, signed listings -anonymized- etc.)</p>

Dataset	Description	Purpose	Specific data fields
<b>Public investments</b>	<p>Dataset related to public investments management. Considering the context it will be particularly related to health infrastructure, however other sectors will also be affected and require additional investments (i.e. security, education) and others in contrast will be negatively impacted due to their relative decreased importance during the emergency.</p> <p>The dataset should also be maintained after the emergency in case investment projects are implemented as part of the stimulus plans.</p> <p>The data fields are based on the Infrastructure Transparency Initiative (CoST) <a href="#">Infrastructure Data Standard</a>.</p> <p>Particularly relevant in this dataset is maintaining the project unique identifiers that will allow connecting to the budget and</p>	<p>Ability to identify investments made in the health sector in the past to understand the preparedness, as well as additional investments derived from the health emergency.</p> <p>It is also important to see the broader picture to identify investments between sectors and further implications in investment management during the emergency and recovery, considering how stimulus resources will be directed this way.</p>	Unique project identifier- which should be shared through the contracting process (i.e. through the OC4IDS) and the budget dataset to allow linking data
			Project name
			Project description
			Purpose
			Administrative classification of sector, agency and department in charge
			Project scope (main output)
			Location (latitude-longitude)
			Approved budget
			Funding sources
			Project budget approval date
			Completion cost (projected)
			Status of the project (current)-planned, in progress, suspended, concluded
			Financial progress-Stages of transaction (historical and current)
			Completion date (projected)
Physical progress- percentage against targets			
Procurement identifiers for all related contracts <sup>23</sup>			
Reasons for project changes			

<sup>23</sup> If available, the identifier should be the Open Contracting ID (ocid), a globally unique identifier used to join up data on all stages of a contracting process <https://standard.open-contracting.org/latest/en/schema/identifiers/>

Dataset	Description	Purpose	Specific data fields
	<p>spending dataset and the procurement process. The CoST initiative, together with the Open Contracting Partnership have developed the <a href="#">Open Contracting for Infrastructure Data Standard</a> (OC4IDS), that can guide the standardized publication, whether the source is a system or from manual input.</p>		<p>Links to cost-benefit analysis or similar pre-investment studies</p> <p>Environmental impact</p> <p>Land and settlement impact</p> <p>Contact details</p>
<p><b>Payroll for medical and related staff positions</b></p>	<p>Data of the current payroll for medical and related staff, as well as new recruited staff to face the emergency.</p> <p>An example of <a href="#">payroll dataset</a> from the government of New York.</p>	<p>The dataset will provide information on where medical staff are being placed and whether this is consistent with objectives and targets.</p> <p>It should particularly allow identifying additional positions related to the COVID-19 pandemic response.</p>	<p>Administrative classification</p> <p>Position type – identify specialty from catalogue</p> <p>Number of positions (quantity)</p> <p>Temporality- permanent or temporary</p> <p>Work Location Borough-Geographical classification</p> <p>Specific care unit, clinic or hospital</p> <p>Salary</p> <p>Compensations package- disaggregate as possible</p> <p>Additional compensation for risk – if possible, identify if it is newly established risk compensation due to COVID-19</p>

Dataset	Description	Purpose	Specific data fields
<b>Procurement</b>	Open Contracting Partnership has identified some <a href="#">key data fields</a> for each stage of the procurement process (planning, tender, award, contract and implementation), based on the <a href="#">Open Contracting Data Standard</a> (OCDS) <sup>24</sup> .	<p>Enable analysis of which agencies are procuring goods and services, what items are being procured, when, and how much is being spent, which suppliers are providing the goods and services, the type of procurement process as well as information on competitive bids.</p> <p>Corruption in procurement during COVID-19 is at the center of the national and international debate and involves all stakeholders. This dataset should allow the flagging of possible mismanagement and corruption in procurement processes.</p> <p>Exploring the networks of suppliers to see not only who the biggest providers are, but also to identify possible risks in the supply chain.</p> <p>More guidance on how to use data to monitor COVID-19 emergency procurement can be found <a href="#">here</a>.</p>	<p><b>Planning</b> Budget amount <i>Note: In emergency situations, budget planning at a contracts level might not happen</i></p>
			<p><b>Tender</b> Tender title Tender description Tender status Procuring entity Items to be procured Tender value Procurement method Tender period start and end date Number of tenderers Tenderers</p>
			<p><b>Award</b> Award title Award description Award status Award value Award date Suppliers Award items description Award items value</p>
			<p><b>Contract</b> Contract title Contract description Contract period start and end date Contract value Items contracted Amendments</p>
			<p><b>Implementation</b> Transactions<sup>25</sup> Status of contract implementation Milestones</p>

<sup>24</sup> For more specific information on transparency of COVID-19 emergency procurement, consult the Open Contracting Partnership: <https://www.open-contracting.org/Covid19>

<sup>25</sup> OCDS describes some of the metadata of a transaction. To link it to more detailed transaction data like the stages of the transaction, use the OCDS Budget and Spend extension to link to the Open Fiscal Data Package.

## Use cases

The following use cases are included in this Guide as examples, including of the tools and other measures that have been implemented, to answer the guiding questions posed at the beginning of each dimension.

### Gender differentiated impacts of COVID-19<sup>26</sup>

UN Women has analyzed the differentiated effects on women arising from [past health emergencies](#), finding that women face secondary health impacts in terms of increased maternal mortality and reduced access to sexual and reproductive health services. Additionally, women are overrepresented in high-risk sectors and are among the hardest hit by job losses in the current pandemic, with access to sexual and reproductive health services potentially disrupted as resources are diverted to respond to the health emergency. Despite the gendered implications of pandemics and health emergencies, gender experts tend to be excluded from public health interventions. A gender-aware response to the economic shock resulting from COVID-19 requires, as a base, data of beneficiaries disaggregated by gender, including in respect of virements in budget allocations, together with indicators to monitor the effectiveness of the measures taken.

### Red flags to identify corruption in procurement

Paraguay was an early champion of open contracting. When the COVID-19 emergency hit, the National Department for Public Contracts (DNCP) quickly moved to ensure greater emergency procurement flexibility and accountability promptly publishing their OCDS data in easily searchable forms, with support from the OCDS Helpdesk. Together with the Inter-American Development Bank they created a dedicated [COVID-19 investment map](#) linking budget, indicators and contracting data. This enabled journalists to start identifying and reporting on irregular procurement in the media, including a case where a state owned enterprise purchased large volumes of tonic water at 5x the market price due to its alleged protection against the coronavirus. As a result, the DNCP issued a new [requirement](#) that reference prices be published for emergency purchases. Researchers are also further analyzing the COVID-19 purchases to give further feedback to the DNCP as to how inefficiencies and corruption can be prevented and detected. The Centro de Desarrollo Sostenible, a Paraguayan organization, has also recently won an [Empatia grant](#) to use the country's and the Colombian OCDS data for a red flags analysis using outlier detection machine learning techniques.

### Expenditure reviews for COVID-19

Expenditure reviews are great tools to support governments in identifying key constraints to efficient and effective public spending, pointing to ways to improve spending quality, thereby contributing to achieve development objectives. The World Bank with the Ministry of Finance of Indonesia have performed a [Public Expenditure Review](#) (PER) with a particular component analyzing the constraints and effects generated by COVID-19<sup>27</sup>.

Additionally, as part of the findings, the review specifically emphasizes the need for data to measure the impact of public spending (inputs) on service delivery and development outcomes. A special chapter on [Data for Better Policy Making](#) was included as part of this PER.

### Monitoring grants and subsidies

When the pandemic hit Ghana, PFAG (Peasant Farmers Association), SEND (a national CSO) and the International Budget Partnership (IBP) sprang into action and mobilized a coalition of 23 farmer-based organizations to assure their voices were heard and their needs incorporated in public spending. One of the main asks was for the government to expand the number of poor farmers who receive subsidized fertilizers, increasing the 2020 target from 1.2 million to 1.5 million. This ask was accepted, and the cost of this expansion was included in the government's supplementary budget approved by the parliament. These organizations are now working to monitor the use of these funds and delivery of fertilizer to eligible farmers<sup>28</sup>.

<sup>26</sup> Ginette Azcona and Antra Bhatt (UN Women), and Sara E. Davies (Griffith University), Sophie Harman (Queen Mary University of London), Julia Smith (Simon Fraser University) and Clare Wenham (London School of Economics and Political Science): Will the Pandemic Derail Hard-Won Progress on Gender Equality? (UN Women, 2020) <https://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2020/spotlight-on-gender-covid-19-and-the-sdgs-en.pdf?la=en&vs=5013>.

<sup>27</sup> Other PER with COVID-19 focus can be consulted for [Kenya](#). [South Africa](#) has also committed to implementing a PER to boost the economy.

<sup>28</sup> IBP, Budget Matters Newsletter <https://www.internationalbudget.org/where-we-work/ghana/>

### 3.3. Tax relief measures and deferrals

Across the globe, governments have been forced to lockdown their populations in an attempt to curb the spread of the COVID-19 pandemic. This has stalled economic activity, resulting in the loss of income for businesses, workers (both in formal and informal sectors) as well as those that are self-employed. In response, governments worldwide have implemented economic and tax relief packages to help businesses and workers mitigate the impact of these measures. This section focuses on tax incentives data, and seeks to capture additional measures, such as the suspension or postponement of deadlines, as they have an impact on the tax revenue calendar.

#### 3.3.1. Guiding questions

As we identify datasets in a user-centered and purpose-oriented approach, it is important to keep in mind the questions that the potential users from within and outside of the government will want to answer with the data, for example:

- On the design of the measures:
  - Will special tax relief measures be implemented? If so, what form(s) will they take (exclusions, deductions, deferrals, credits)?
  - What are their expected outcomes?
  - How can natural or legal persons receive or benefit from the incentives?
  - When should the incentives phase-out?
- On the progressivity:
  - Do the measures have well-defined coverage that aligns with their goals?
  - Who is benefiting from the tax incentives?
- For control:
  - Are the legal conditions being respected in the approval and implementation of these measures?
  - In light of financial stability and recovery, are the incentives and related measures sustainable?

### 3.3.2. Datasets and data fields

Dataset	Description	Purpose	Specific data fields
<b>Tax relief measures and deferrals</b>	<p>The focus is not on general stimulus measures but on immediate, targeted and mostly temporary measures to (i) support health priorities; (ii) secure survival of solvent enterprises; (iii) protect affected individuals; and on (iv) securing or enhancing revenue sources into the medium term.</p> <p>For information on the <a href="#">design of temporary tax incentives</a> and how to <a href="#">design them from a legal point of view</a>, consult the special series of COVID-19 of the International Monetary Fund.</p> <p>An example of disclosure of the measures implemented (not published as datasets, they just exemplify the fields) is the <a href="#">Working Tax Credit of the United Kingdom</a> or the <a href="#">Family Tax Benefit from Australia</a></p>	<p>Through this dataset it will be possible to have clarity on the design of the tax measures and incentives. It will also allow the analysis of implementation complemented by the beneficiaries' dataset.</p> <p>Additionally, the legal implementation of temporary measures should phase-out once the crisis period has passed, through this dataset it will be possible to monitor sunset clauses.</p>	Title/identifier
			Description
			Objective of the measure or incentive
			Type (e.g. tax deferral, tax credit, tax suspension, tax deduction, deadlines suspension, suspension of administrative and judicial actions)
			Legal framework
			URL to legal framework
			Type of claim (i.e. automatic, requires applying or enrolling)
			How to claim- description and link to application formats or online formularies
			Natural or legal person indicator
			Eligibility criteria
			Exceptions (i.e. legal persons registered in tax havens)
			Restrictions with other benefits/programs
Phase-out – can be a date or meeting certain circumstance (e.g. three months after passing of the state of emergency)			
<b>Beneficiaries of tax incentives</b>	A list of natural and legal persons benefiting from tax incentives related to COVID-19. The dataset should not include tax issues implemented	Analyze if the design and implementation of the tax incentive is aligned with the declared objectives and progressivity.	Taxpayer number (or anonymized number)
			Title or identifier of the tax incentive

Dataset	Description	Purpose	Specific data fields
	<p>in a general form, such as the suspension of deadlines.</p> <p>The dataset can be anonymized for publication, in consideration to data privacy laws of the country.</p> <p>Examples of publication can be found in the <a href="#">data portal of Argentina</a> and in the case of the <a href="#">job preservation measures</a> of Croatia.</p>	<p>It should also allow the flagging of possible mismanagement and corruption in the application of benefits.</p>	<p>Type of incentive (e.g. tax deferral, tax credit, tax suspension, tax deduction)</p> <p>Natural or legal person indicator</p> <p>Eligibility criteria (preferably from a list of options related to the design of the incentive, not in narrative form)</p> <p>Sector</p> <p>Geographic registration</p> <p>Demographic specific data for natural (i.e. age, genders) and legal persons (i.e. number of employees)</p> <p>Tax base or income</p> <p>Total amount of the benefit</p> <p>Date of approval</p>

## Use cases

The following use cases are included in this Guide as examples, including of the tools and other measures that have been implemented, to help answer the guiding questions posed at the beginning of each dimension.

### Tax expenditures analyses

Tax expenditure analyses, particularly in the form of cost-benefit analyses are used by tax policy makers to ensure that decisions taken to grant exemptions are likely to yield the desired positive benefits. To this end, two complementary evaluation approaches are available: [estimating the budgetary cost of tax](#) measures that deviate from the benchmark tax, and assessing their effectiveness with respect to their initial goals<sup>29</sup>. Associated datasets of this dimension of the Guide are necessary prerequisites to be able to perform such studies. Periodic reviews to assess the achievement of the objectives set should be conducted, particularly after the COVID-19 crises in which additional tax expenditures are being set. A recent [tax expenditures study of Madagascar](#) provides an example.

A civil society perspective of such challenges has been reported by [IBP](#) and is part of their Tax Equity [Initiative](#).

### Ensuring that the poor and vulnerable do not shoulder the cost of the COVID-19 crisis

Before the COVID-19 pandemic, the growing gap between the rich and poor was already a cause for concern<sup>30</sup>. Tax exemptions can either ameliorate the situation or worsen the situation. Kinuthia and Lakin<sup>31</sup> from the International Budget Partnership have analyzed the recent tax reforms introduced in Kenya to support small businesses and formal-sector workers with lower incomes. While some of the reforms are positive, some provisions provide for tax cuts for large businesses and individuals with higher incomes. The Center for Economic and Social Rights and the Tax Justice Network have proposed a series of recommendations towards [more progressive taxation](#) in the context of COVID-19. Data on tax measures, as well as on beneficiaries will be of paramount importance in performing either the internal or external evaluations on how progressive the measures are at any point in time, necessary to inform the adjustments required.

---

<sup>29</sup> Anne-Marie Geourjon, Bertrand Laporte, Emilie Caldeira, Céline de Quatrebarbes and Yannick Bouterige. Tax Expenditure Assessment: From Principles to Practice Methodological guide. (Foundation for Studies and Research on International Development, 2018) <https://ferdi.fr/dl/df-PSDXZuxEEh8LihnEhHUoFkix/tax-expenditure-assessment-from-principles-to-practice-methodological-guide.pdf>

<sup>30</sup> Gemma Cortes, A taxing problem: how to ensure the poor and vulnerable don't shoulder the cost of the COVID-19 crisis. (United Nations, 2020) <https://news.un.org/en/story/2020/07/1068111>

<sup>31</sup> John Kinuthia and Jason Lakin, Tackling COVID-19 requires a more progressive and targeted tax policy: a look at Kenya. (IBP, 2020) <https://www.internationalbudget.org/2020/06/tackling-covid-19-requires-a-more-progressive-and-targeted-tax-policy-a-look-at-kenya/>

### 3.4. Revenue adjustments and additional funding sources

The COVID-19 pandemic will cause a major revenue shortfall, caused by the economic slowdown and by tax policy and administration measures taken to respond to it. At the same time, the emergency might require additional resources to meet government responsibilities. As such, the crisis may lead authorities to undertake measures that create a departure from sound debt management practices<sup>32</sup>, and in some cases implement temporary tax collection targeted at higher income individuals, as is the case of the “solidarity surcharge”.

Additionally, in some countries donor assistance and debt relief will take on an important role. Clarity on the sources and objectives of such resources will be key to enabling the correct tracking of the expenditures, as well as for accountability and evaluation purposes.

#### 3.4.1. Guiding questions

As we identify datasets in a user-centered and purpose-oriented approach, it is important to keep in mind the questions that the potential users from within and outside of the government will want to answer with the data, for example:

- On the changes to overall revenue and composition:
  - How has total estimated revenue changed and how does this affect expenditure?
  - Will the composition of revenue be affected?
  - What are the sources of funding for the additional resources?
  - Will there be any additional temporary fees or taxes imposed on certain sectors or individuals?
- On the debt:
  - If any additional debt is contracted, what are the conditions, currency, interest rate and maturity profile?
  - What is the impact from the increased or new financing needs from sub-national governments and state-owned entities?
- If the additional resources include aid:
  - How are the resources channeled, through the treasury, a trust or some other form?
  - Are the resources earmarked and to what extent?

---

<sup>32</sup> Debt Management Responses to the Pandemic, International Monetary Fund, Special Series  
<https://www.imf.org/~media/Files/Publications/covid19-special-notes/en-special-series-on-covid-19-debt-management-responses-to-the-pandemic.ashx?la=en>

### 3.4.2. Datasets and data fields

Dataset	Description	Purpose	Specific data fields
<b>Revenue estimates and adjustments</b>	<p>A dataset with the individual sources of revenue, including the four types of revenue: (i) compulsory levies in the form of taxes and certain types of social contributions; (ii) property income derived from the ownership of assets; (iii) sales of goods and services; and (iv) other transfers receivable from other units<sup>33</sup>.</p> <p>The dataset should allow the identification of at least, the revenue forecast, adjusted and actual collection by sector.</p> <p>An example of a dataset of this kind can be seen in the <a href="#">fiscal transparency portal</a> of El Salvador, the <a href="#">revenue explorer</a> of Somalia or the <a href="#">Estimates of national revenue</a> in Vulekamali, the South African open budget data portal.</p>	<p>Analyze the impact of the economic downturn on overall revenue, as well as on the composition thereof (e.g. changes in tax collection from different sources, such as changes in extractives revenues due to falling oil prices).</p>	Financial year
			Revenue classification identifiers- all levels
			Revenue classification description- all levels
			Sector of the economy
			Estimate
			Revised estimate
			Actual collection
<b>Loans and other debt instruments</b>	<p>A consolidated dataset of domestic and external debt<sup>34</sup>. The new debt will be identified through the date of approval<sup>35</sup>.</p> <p>According to the Public Sector Debt Statistics: Guide</p>	<p>Analyze additional debt acquired to face the emergency or enact countercyclical measures. This dataset will also allow a review of the debt structure and possible emerging</p>	Date of Signature
			Closing date
			Title
			Borrower
			Lender

<sup>33</sup> More details on the revenues classification, the Government Finance Statistics Manual of 2014 by the IMF, contains the latest macroeconomic statistical framework designed to support fiscal analysis: <https://www.imf.org/external/pubs/ft/gfs/manual/gfs.htm>

<sup>34</sup> More information on the current challenges of consolidating domestic and external debt can be read in Debt Data Transparency, Background Paper prepared by Gerry Teeling, Chief DMFAS Programme, Debt & Development Finance Branch, Globalization & Development Strategies Division, UNCTAD

<sup>35</sup> Example of dataset of foreign loans in Mexico:  
[http://www.transparenciapresupuestaria.gob.mx/work/models/PTP/DatosAbiertos/Presupuesto/Programacion/Prestamos\\_ppef\\_2019.xlsx](http://www.transparenciapresupuestaria.gob.mx/work/models/PTP/DatosAbiertos/Presupuesto/Programacion/Prestamos_ppef_2019.xlsx)

Dataset	Description	Purpose	Specific data fields
	<p>for Compilers and Users<sup>36</sup>, the following are debt instruments:</p> <ul style="list-style-type: none"> <li>• Special drawing rights (SDRs);</li> <li>• Currency and deposits;</li> <li>• Debt securities;</li> <li>• Loans;</li> <li>• Insurance, pension, and standardized guarantee schemes; and</li> <li>• Other accounts payable/receivable.</li> </ul> <p>The publication of this dataset by sub-national governments as well, was highlighted as being very important by the participants in the co-creation process. Additionally, State Owned Enterprises debt, particularly backed by the central government should also be published and consolidated.</p>	risks that will be complemented with the datasets related to macrofiscal frameworks	<p>Guarantor</p> <p>Objective</p> <p>Contract number or Loan prefix<sup>37</sup></p> <p>Total amount</p> <p>Currency denomination</p> <p>Interest rate structure</p> <p>Maturity</p> <p>Outstanding balance</p> <p>Dispute resolution</p> <p>Collateral</p> <p>Governing law</p>
<b>External development and humanitarian resource flows</b>	<p>A dataset on international cooperation, including details on the financial flows and scope of relevant activities.</p> <p>The focus of this dataset is on both on and off budget disbursements of externally funded activities.</p> <p>The suggested data fields are drawn from fields that</p>	The aim of this dataset is to provide information on external assistance. This data could potentially be linked to expenditure datasets.	<p><b>Basic information and identification</b></p> <p>Title</p> <p>Activity Description</p> <p><a href="#">Activity Status</a> (e.g. pipeline, implementation, closed)</p> <p><a href="#">Activity Date</a> (e.g. start and end dates)</p> <p><b><a href="#">Participating Organisations</a></b></p> <p>Funding organizations</p> <p>Accountable organizations</p> <p>Implementing organizations</p>

<sup>36</sup> International Monetary Fund, 2011 [https://www.elibrary.imf.org/doc/IMF069/11874-9781616351564/11874-9781616351564/Other\\_formats/Source\\_PDF/11874-9781463969813.pdf](https://www.elibrary.imf.org/doc/IMF069/11874-9781616351564/11874-9781616351564/Other_formats/Source_PDF/11874-9781463969813.pdf)

<sup>37</sup> New Zealand debt management <https://debtmanagement.treasury.govt.nz/funding-strategy>

Dataset	Description	Purpose	Specific data fields
	<p>are available in the <a href="#">IATI Standard</a>. Additional details on the values that can be selected within each of the data fields (as available in the IATI Standard) can be found using the links provided.</p> <p>In order to identify specific activities as COVID-19-related, IATI has developed guidance on <a href="#">Publishing data on COVID-19 using the IATI Standard</a>. This guidance suggests ways that organizations can include COVID-19-specific values in certain data fields to enable these activities to be identified as COVID-19-related and then accessed in</p>		<p><b>Financial data</b> Budgets and budget periods <a href="#">Transactions</a><sup>38</sup> and transaction dates (e.g. commitments, disbursements, expenditures)</p> <p><b>Geography</b> Recipient country or specific location (e.g. map coordinates)</p> <p><b>Classifications</b> <a href="#">Sector</a> <a href="#">Aid Type</a> (e.g. budget support, projects, basket funds) <a href="#">Finance Type</a> (e.g. grants, loans, guarantees) <a href="#">Flow Type</a> (e.g. overseas development assistance, other official flows, private foreign direct investment) Humanitarian</p>

<sup>38</sup> These transactions differ from those of the spending dataset, as these relate to pledges and reception of funds. The expenditure of the funds can be linked through the spending dataset including the stages of the transactions of the expenditures.

Dataset	Description	Purpose	Specific data fields										
	<p>tools such as <a href="#">d-Portal</a>. Additional guidance on accessing and using COVID-19 data in IATI can be found <a href="#">here</a>. When tracking these activities at the national level, similar approaches could be used to “tag” activities as COVID-19-related.</p> <p>It should also be noted that similar data fields are also used in most national level Aid Information Management Systems (AIMS). Examples of AIMS include: <a href="#">Somalia AIMS</a>, <a href="#">Rwanda Development Assistance Database</a>, <a href="#">Madagascar Aid Management Platform</a>, <a href="#">Myanmar’s Mohinga</a>. Mechanisms to “tag” or identify activities as COVID-19 related in these systems are likely underway.</p>		<p><b>Results</b> Type of results (outputs, outcomes, impact) and baselines, targets, and actual results for indicators</p>										
<p><b>Trust Funds</b></p>	<p>Different types of trusts play roles in the management of the emergency response and stimulus plans. This dataset should be linked to the Emergency specific funds included in the Emergency and countercyclical spending datasets to obtain the balance of the trust and follow the use of the resources.</p> <p>The structure is created from a transactional point of view and not from aggregates.</p>	<p>Clarity on the funds from trusts that are being used as part of the emergency response and stimulus plans.</p> <p>In some countries, the directives indicate that private donations for the emergency should be deposited to specific trusts related to emergency management.</p>	<table border="1"> <tr><td>Identifier of the trust</td></tr> <tr><td>Title of the trust</td></tr> <tr><td>Description</td></tr> <tr><td>Objective</td></tr> <tr><td>Trustor</td></tr> <tr><td>Type of trust</td></tr> <tr><td>Trustee</td></tr> <tr><td>Transactions – Incoming amount</td></tr> <tr><td>Date of the transaction</td></tr> <tr><td>Depositor of incoming transaction</td></tr> </table>	Identifier of the trust	Title of the trust	Description	Objective	Trustor	Type of trust	Trustee	Transactions – Incoming amount	Date of the transaction	Depositor of incoming transaction
Identifier of the trust													
Title of the trust													
Description													
Objective													
Trustor													
Type of trust													
Trustee													
Transactions – Incoming amount													
Date of the transaction													
Depositor of incoming transaction													

Dataset	Description	Purpose	Specific data fields
<b>Contingent tax collection (such as Solidarity surcharges)</b>	<p>Exceptional measures might be required to address the revenue loss during the pandemic and the aftermath. While policy discussions about tax responses to COVID-19 have focused overwhelmingly on how to offer immediate tax relief, they also point to the need for sustainability: tax relief today, expanded revenue collection in the future to compensate.</p> <p>The International Monetary Fund in the <a href="#">Tax Issues policy paper</a> proposes governments “consider increasing higher rates of income tax/higher end property/wealth taxes, perhaps through a ‘solidarity surcharge’”.</p> <p>This dataset can be presented monthly with the estimates and actuals of the tax collected to assess its use.</p>	Provide clarity of additional taxes and applicability, as well as sunset clauses established.	Title
			Objective
			Legal framework
			URL to legal framework
			Beginning of validity
			Tax base
			Estimate revenue to the period
			Actual revenue to the period
			Period/month
			Phase-out – can be a date or meeting certain prerequisites (e.g. three months after passing of the state of emergency)

## Use cases

The following use cases are included in this Guide as examples, including of the tools and other measures that have been implemented, to answer the guiding questions posed at the beginning of each dimension.

### Revenue policy analysis

As the IMF points out in the [Challenges in Forecasting Tax Revenue](#) note of the Special Series on Fiscal Policies to Respond to COVID-19, the frequently-used method of forecasting revenue by applying an aggregate tax buoyancy to GDP forecasts, would likely overestimate revenue during the pandemic. Additionally, the effect will be differentiated by sector making sectoral disaggregated data necessary. Different models can be used depending on the country's content, such as sectoral and tax-specific breakdowns and microsimulations to refine forecasts. Examples from Rwanda, Somalia and Dominica are included in the note.

### Daily revenue data to identify early fiscal stress

The United States publishes [daily revenue data](#) on a cash-flow basis. This data already shows the COVID-19 impact, allowing for the timely identification of fiscal stress. In the working paper *Nowcashing: Using Daily Fiscal Data for Real-Time Macroeconomic Analysis*<sup>39</sup>, Misch et al., show a significant difference on the time it takes for signs of fiscal stress to first emerge under daily, monthly, and quarterly fiscal reporting<sup>40</sup>. This daily data can be used for tax revenue monitoring and forecasting, monitoring government expenditures during fiscal adjustment, monitoring government cash balances, improving cash planning and nowcasting revenue.

### Sustainable debt for financing sustainable development

Government borrowing has an important role to play in financing COVID-19 responses, however this is typically accompanied by the risk of burdening poorer people when loans have to be repaid—in the short or long term. With increased financing requirements, the crystallization of existing contingent liabilities could significantly add to the stock of debt liabilities and increase near-term debt servicing costs, placing further pressure on available liquidity<sup>41</sup>. The United Nations (UN) in its [2020 Financing for Development Report](#)<sup>42</sup> finds that there is a change in the composition of the debt in developing countries, with borrowing on commercial terms outpacing other sources of external credit in the last two years. Data on the composition of the debt, including in respect of the lender, interest rates, maturity profiles and debt currency is necessary to evaluate the country position and available options emanating from innovative debt instruments (i.e. debt swaps<sup>43</sup>). UNCTAD, through its Debt Management and Financial Analysis System (DMFAS) Programme, launched the [debt data quality assessment](#) (Debt-DQA) framework to assess and monitor the quality of the data recorded in countries.

<sup>39</sup> Florian Misch, Brian Olden, Marcos Poplawski-Ribeiro, and Lamyia Kejji, *Nowcashing: Using Daily Fiscal Data for Real-Time Macroeconomic Analysis* (IMF, 2017) <https://www.imf.org/en/Publications/WP/Issues/2017/11/06/Nowcashing-Using-Daily-Fiscal-Data-for-Real-Time-Macroeconomic-Analysis-45372>

<sup>40</sup> It is worth noting that the analysis draws on the proof of concept of one of the winning projects under the IMF's 2016 Big Data Challenge Initiative.

<sup>41</sup> IMF, *Debt Management Responses to the Pandemic*. (IMF, 2020)

<sup>42</sup> 2020 Financing for Development Report. (Inter-agency Task Force on Financing for Development, United Nations, 2020). [https://developmentfinance.un.org/sites/developmentfinance.un.org/files/FSDR\\_2020.pdf?\\_ga=2.200550190.1661409692.1598200540-974284574.1542995029](https://developmentfinance.un.org/sites/developmentfinance.un.org/files/FSDR_2020.pdf?_ga=2.200550190.1661409692.1598200540-974284574.1542995029)

<sup>43</sup> "The Economic Commission for Latin America and the Caribbean (ECLAC) has proposed a swap of some of the region's external debt for debtor-country commitments to make annual payments into the new Caribbean Resilience Fund. In the proposal, the Green Climate Fund would buy up some of the external private debt of participating countries at a discount. For their part, the Caribbean countries would commit to pay into the new Caribbean Resilience Fund the amount that they would have paid in debt servicing to its former creditors." 2020 Financing for Development Report. (Inter-agency Task Force on Financing for Development, United Nations, 2020).

### 3.5. Macroeconomic framework impact

According to the International Monetary Fund, structural macrofinancial linkages could worsen and prolong the negative impact of the pandemic, particularly in countries with (i) strong sovereign-financial nexus, (ii) reliance on external financing, (iii) dependence on commodities, and (iv) exposure to real estate markets. In short, countries are facing significant (albeit different) macrofinancial stability risks<sup>44</sup>. Analyzing the impact to the macroeconomic framework will be facilitated through the publication of time series with estimates, adjustments and actuals. These datasets are therefore defined in a different structure to those in the previous categories.

#### 3.5.1. Guiding questions

- What changes are expected in the macroeconomic framework considering the national and international economic context?
- Will there be a greater deficit than projected and how will it be covered?
- Are debt stressors impacting different dimensions of the macrofiscal framework?
- Are departures from the general government balance path temporary?
- Are there contingent liabilities that could materialize?

#### 3.5.2. Time Series data

Purpose	Time series required
Overall impact in the macroeconomic framework	GDP growth forecasts- disaggregated by main sectors GDP at current prices (nominal) Exchange rate Interest rate CPI inflation
Provide certainty on the macroeconomic stability and risk management <sup>45</sup>	Current account balance (% of GDP) General government balance Asset and liability management Public and publicly guaranteed debt and other contingent liabilities Financing of borrowing requirements Public Private Partnerships (PPPs)
Liquidity position	Reserve cash Cash outflows and inflows

<sup>44</sup> International Monetary Fund, Special Series COVID-19 <https://www.imf.org/~media/Files/Publications/covid19-special-notes/enspecial-series-on-covid19macrofinancial-considerations-for-assessing-the-impact-of-the-covid19-pan.ashx?la=en>

<sup>45</sup> Olden, Brian. Fiscal Risk Analysis and Management, International Monetary Fund, presentation February 2017 [https://www.imf.org/~media/Files/News/Seminars/IMF-JICA\\_Conference\\_020117\\_Olden.ashx](https://www.imf.org/~media/Files/News/Seminars/IMF-JICA_Conference_020117_Olden.ashx)

## 4. Section 3. Customization of the Guide and prioritization of data

As mentioned in the section of “Considerations”, applying this guide in a national context will require the customization and prioritization of data. This process of customizing and prioritizing is important considering the cost implications of collecting (establishing the data architecture and systems) and analyzing the data. For instance, a low-income country with weak data collection systems might be overwhelmed by the comprehensive list of data fields in this guide.

To customize and prioritize datasets and data fields, users of this guide can consider two primary factors: 1) the country position, including the effects of the pandemic in the economy and the stimulus measures taken and 2) current data availability and its quality. These factors are described below, together with tools to assess each.

While these factors can determine present needs and possibilities for data collection and publication, assessing the data needs, availability and quality can also assist in developing a roadmap towards improving the data architecture of any given country in the future, building more resilient fiscal transparency systems.

### 4.1. Assessing the country position

The country’s current position is a primary factor in deciding what information is more relevant in its specific context and which is not applicable. The main elements to be assessed in the COVID-19 context are: 1) the impact of the health emergency in the country and 2) the effects of the economic slowdown or recession in the country, which depend on many factors including the exposure of the economy to external shocks and how much fiscal space the country has, among others. Additionally, the user of this guide should consider other elements specifically relevant to the country (e.g. countries that have faced natural disasters at the same time). To exemplify this, we will rely on use cases. Marked in *italic* the reader will be able to identify the country position in relation with the datasets contained in this guide:

- Country 1 might not be experiencing a massive outbreak of COVID-19 within its borders, and therefore *the health facilities capacity will not require adjustments and will not require additional medical staff. Some emergency purchases of medical supplies will take place as a matter of preparedness, which will go beyond the originally approved budget of the sector but can be covered through virements from other sectors budgets.* To maintain the social distancing measures, the government established *tax relief measures for businesses and unemployment benefits to individuals through budget programs.* The tax relief measures and lower economic activity will *decrease the estimated revenue collection*, which would lower the budget ceilings, however the government has decided to acquire some *additional debt* to maintain the originally planned overall budget.

- Country 2 implemented social distancing measures, providing *subsistence grants to individuals in impoverished regions*. Nonetheless, given the economic structure in which individuals need to purchase produce frequently from the market, the spread of the outbreak reached levels that overwhelmed the health system, particularly in those impoverished regions. The government has decided to *establish temporary clinics* and hire *additional medical staff*, which will be covered by a *Contingencies Wealth Fund* and support from *external development partners*. *Revenues have been impacted* by a decrease in global oil prices, and a minor tax collection decrease, given that tax collection rate is usually low.
- Country 3 had a mild COVID outbreak that was covered by a health sector primarily reliant on individual private insurance, with *subsidies from the government* to support increased operations. Amid the pandemic, the country was additionally hit by a hurricane that damaged houses on the coast, public buildings including hospitals, and killed livestock. The government will declare a natural disaster emergency to access the *Natural Disasters Wealth Fund*. The reconstruction plan will include resources from the aforementioned fund, local government resources and the private sector or individuals that are rebuilding some properties.

For this assessment, as can be perceived, it is important to **understand the circumstances of the specific economy as a whole**, which is certainly more complex than the simplified cases described above, and to **compile a list of the measures taken by the government** within the different aspects of its public finances as part of its pandemic and recovery responses. This will provide clarity on what the most relevant datasets are that will provide responses to the main applicable questions, simultaneously showing which aspects are not applicable<sup>46</sup>.

---

<sup>46</sup> In certain cases a dataset might not present changes against the originally approved plan, however this data also needs to be open to provide factual certainty of this.

## 4.2. Assessing data availability and its quality

### 4.2.1. Data availability

As is apparent from the design of this Guide as well as international data schemas—such as the Open Spending Data Schema, the Open Contracting Data Standard or the International Aid Transparency Data Standard—to identify data publication possibilities, it is important to understand the availability of **each data field rather than a dataset as a whole**. That is, it is important to map: 1) the specific data fields required for the established use objective, 2) the availability and form of gathering—systems, manual, not gathered—and 3) the specific characteristics of the data field considering the collection method—system or dataset administrator, frequency of update and other metadata.

A simple solution is to use mapping templates, which can be filled together by CSOs and governments, thereby providing transparency regarding the actual possibilities for transparency thereby adjusting expectations and facilitating plans for future actions. More information about using mapping templates can be obtained in module 5 of the [Tutorial for Developing Fiscal Transparency Portals: A User-Centered Development](#).

In response to a popular request from the participants in the development of this Guide, a [mapping](#) template has been developed to facilitate the process of identifying the data fields contained in this Guide. This mapping template enlists all the fields contained in the dataset tables, with a proposed nomenclature and identifies if the field is related to any existent data schema.

	A	B	C	D	E	F	G	H	
1	<b>COVID-19</b>								
2	Topic	Specific field	Existent	Currently published?	Publication as:	If published, location link	Name in the country	Current form of gathering	Name
3	Adjusted budget and spending	Administrative classification Level 1_Code	Yes	Yes	Part of report or			Excel spreadsheet	GFMS
4	Adjusted budget and spending	Administrative classification Level 1_Description	No	No	Structured data			System	Investmen
5	Adjusted budget and spending	Administrative classification Level 2_Code	Yes		API			Data schema	
6	Adjusted budget and spending	Administrative classification Level 2_Description							
7	Adjusted budget and spending	Administrative classification Level 3_Code							
8	Adjusted budget and spending	Administrative classification Level 3_Description							
9	Adjusted budget and spending	Administrative classification Level N_Code							
10	Adjusted budget and spending	Administrative classification Level N_Description							
11	Adjusted budget and spending	Economic classification Level 1_Code							
12	Adjusted budget and spending	Economic classification Level 1_Description							
13	Adjusted budget and spending	Economic classification Level 2_Code							
14	Adjusted budget and spending	Economic classification Level 2_Description							
15	Adjusted budget and spending	Economic classification Level 3_Code							
16	Adjusted budget and spending	Economic classification Level 3_Description							
17	Adjusted budget and spending	Economic classification Level N_Code							
18	Adjusted budget and spending	Economic classification Level N_Description							
19	Adjusted budget and spending	Functional classification Level 1_Code							
20	Adjusted budget and spending	Functional classification Level 1_Description							
21	Adjusted budget and spending	Functional classification Level 2_Code							
22	Adjusted budget and spending	Functional classification Level 1_Description							
23	Adjusted budget and spending	Functional classification Level N_Code							
24	Adjusted budget and spending	Functional classification Level N_Description							
25	Adjusted budget and spending	Program/Activity classification Level 1_Code							

## 4.2.2. Data quality

Data quality depends on the workflows for the gathering, integrating, validating, releasing and updating of data. Many governments focus on the development of a national open government data portal as if it were a higher priority than developing technical infrastructures to open up public data for others to use. Understanding the preconditions for effective publication lies at the core of governments' data publishing responsibility<sup>47</sup>.

### 4.2.2.1. Frequency and timeliness

Data is valuable when it is still relevant. Gathering information in time is key for tracking and decision-making. Publishing comprehensive information timeously is central to its potential for success.<sup>48</sup> However, frequency and timeliness varies per dataset, primarily depending on how frequently transactions or adjustments take place. In the case of the subset related to Emergency and Countercyclical Spending, transactions will be registered daily and, in fact, many times in a day (i.e. once benefits are being applied, once the good and services have been procured, etc.), whilst on the other hand the key variables of the Macroeconomic framework will only be sporadically adjusted. Under the Fiscal Reporting Pillar of the Fiscal Transparency Code of the IMF, the advanced practice for the Frequency of In-Year reports indicates that they should be published on a monthly basis, within a month<sup>49</sup>.

With the progress in implementing FMIS to collect data, with less reliance on manual reporting, the gathering process should be done in real time, avoiding ex-post reporting for consolidation. This can be enhanced through systems or data interoperability<sup>50</sup> which will allow combining different sources of data inputs for automated consolidation. Consequently, publication delays—in open data—can be greatly reduced, potentially enabling weekly, daily or even real time publication<sup>51</sup>.

---

<sup>47</sup> Barbara Ubaldi (2013), "Open Government Data: Towards Empirical Analysis of Open Government Data Initiatives", OECD Working Papers on Public Governance, No. 22, OECD Publishing, Paris, <https://doi.org/10.1787/5k46bj4f03s7-en>.

<sup>48</sup> Adaptation of the principle 2 of the Open Data Charter. It is an adaptation since this text focuses not only in the opening process but also in the moment of gathering. Consult the principles here: <https://opendatacharter.net/principles/>.

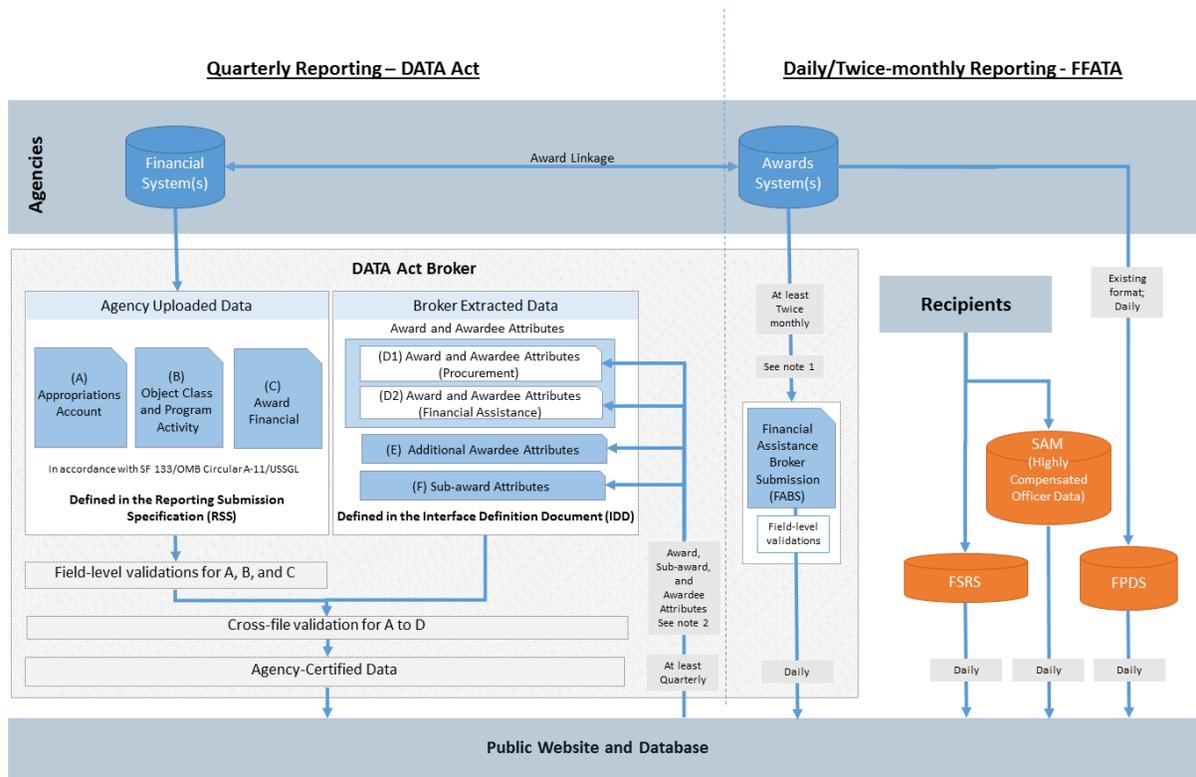
<sup>49</sup> Fiscal Transparency Principles of the Fiscal Transparency Code (IMF, January, 2019) <https://blog-pfm.imf.org/files/ft-code.pdf>

<sup>50</sup> Interoperability is the ability to join-up and merge data without losing meaning. In practice, data is said to be interoperable when it can be easily reused and processed in different applications, allowing different information systems to work together. Source: Luis González Morales & Tom Orrell. Data Interoperability: A Practitioner's Guide to Joining Up Data in the Development Sector [http://www.data4sdgs.org/sites/default/files/services\\_files/Interoperability%20-%20A%20practitioner%E2%80%99s%20guide%20to%20joining-up%20data%20in%20the%20development%20sector.pdf](http://www.data4sdgs.org/sites/default/files/services_files/Interoperability%20-%20A%20practitioner%E2%80%99s%20guide%20to%20joining-up%20data%20in%20the%20development%20sector.pdf)

<sup>51</sup> When choosing daily or real time publication the system administrator must make sure that publication does not impact the operation of the transactional database by using data marts or similar solutions. Additionally, it is worth considering the cost-benefit of updating a dataset in real time (or near real time) depending on the scale of adjustments in each given time as well as the profile of the demand for the updated data.

When systems for specific datasets are not yet in place, relying on manual data collection and/or consolidation, or when it is necessary to consolidate diverse sources of data, it is important to standardize the format, structure and catalogues used among the different agencies or individuals responsible for this consolidation. This can be done through templates for filling in the data with conditional formatting to highlight errors and cell validation catalogues or by developing more complex data schemas as is the data model of the USAspending.gov platform that can be seen in the image below<sup>52</sup>. This structured collection will facilitate the consolidation as well as detect quality issues, reducing the time consuming process of cleaning up data.

Figure 1. Model for data consolidation of USAspending.gov



Note 1: The Financial Assistance Broker Submission (FABS) replaces the Award Submission Portal (ASP).  
 Note 2: D1 and D2 pull in all award data associated with the submitting agency and agency-specified action dates. E pulls in highly-compensated officer information for DUNS numbers that appear in an agency's D1 and D2. F pulls in all sub-award data associated with the awards that appear in an agency's D1 and D2.

Source: About USAspending.gov: <https://www.usaspending.gov/#/about>

#### 4.2.2.2. Coverage

The data gathered in respect of revenue, expenditure and the macroeconomic framework should not have a different coverage standard than that of any other fiscal report. This means that the information should cover

<sup>52</sup> Detailed information on the data model that the United States Treasury uses can be found here: <https://fiscal.treasury.gov/data-transparency/DAIMS-current.html>

the Public Sector<sup>53</sup> as a whole. Additionally, the principle of Unity<sup>54</sup> should be observed, including extra-budgetary funds, and social security funds. This is relevant for internal decision-making, including in order to correctly assess fiscal risks, and is also of paramount importance for the external users of public data.

The reality, however, shows that, in many cases, there is often not yet a central consolidation of financial transactions showing the net position of the Public Sector. As the Open Budget Survey has shown, certain corners of public finance stay hidden from public view<sup>55</sup>. Common areas that are often left outside of 'consolidated' reports are State Owned Enterprises, extra-budgetary funds—such as contingency funds or sovereign wealth funds which are normally particularly relevant in an emergency—and local governments. If Public Sector data is not available as a whole or presented together, this should be made clear to the user, with a clear indication of the coverage of the publication.

#### 4.2.2.3. Standardization and accounting

Countries continue to make the process towards accrual accounting<sup>56</sup>. However, with the COVID-19 impact, the balance sheets are even more important than ever. As the International Federation of Accountants (IFAC) notes, the efficient and effective management of an intervention requires the full understanding of the financial impact of the transaction, the management on a cash flow basis may lead the government to react to financial needs rather than anticipating them<sup>57</sup>. IFAC has developed a [COVID-19 Interventions Assessment Tool and pathways to accrual publication](#), offering as well different options on how to adopt and implement International Public Sector Accounting Standards (IPSAS).

Standardization of data should also consider other international standards, such as ISO for [geospatial](#), currencies, countries and dates. This should run from the data collection to the publication. An example of

---

<sup>53</sup> The public sector consists of all resident institutional units controlled directly, or indirectly, by resident government units, that is, all units of the general government sector and resident public corporations (including non-financial and financial public corporations). Fiscal Transparency Code (IMF, 2019).

<sup>54</sup> Revenue and expenditure (as well as borrowing constraints) should be considered together to determine annual budget targets. The budget should cover all government agencies and other institutions undertaking government operations, so that the budget presents a consolidated picture of these operations and is voted on, as a whole, in the parliament. Guidelines for Public Expenditure Management (IMF, n.d. <https://www.imf.org/external/pubs/ft/expend/guide3.htm>)

<sup>55</sup> Paolo de Renzio, The Hidden Corners of Public Finance: Where Can CSOs Look, and for What? (IBP, 2014) <https://www.internationalbudget.org/2014/06/the-hidden-corners-of-public-finance-where-can-csos-look-and-for-what/>

<sup>56</sup> The International Federation of Accountants has published the [International Public Sector Financial Accountability Index: 2018 Status Report](#).

<sup>57</sup> IFAC and the Zurich University of Applied Sciences (ZHAW), in partnership with the International Public Sector Accounting Standards Board (IPSASB), COVID-19 Intervention Assessment Tool (2020) <https://www.ifac.org/knowledge-gateway/supporting-international-standards/discussion/covid-19-intervention-assessment-tool>

guidance for adopting this type of data standardization can be found in the case of a publication from the government of [Ecuador](#).

Other open data standards<sup>58</sup> and specifications have been mentioned in the data dimensions of Section 2 of this Guide, including the Open Budget and Spending Data Specifications, the Open Contracting Data Standard, the Construction Sector Data Standard and the IAITI Standard.

#### 4.2.2.4. Data consistency

Data consistency means that there is uniformity in the measurement of variables throughout the datasets and it does not contain contradictions that would make its use difficult or impossible. This becomes a concern especially when data is aggregated from multiple sources. Discrepancies in data meanings between data sources can create inaccurate, unreliable datasets, either for internal use or for transparency purposes. Collecting data from different sources can result in formatting and spelling differences, thereby creating redundancies and polluting data quality.

The European Union Open Data Support recommends processing “all data before publication to detect conflicting statements and other errors (in particular if data is aggregated from different sources)”<sup>59</sup>. This consistency check can be performed through programming algorithms once the different sources of data are merged<sup>60</sup> or be done manually. To assess the quality of the data manually it will be necessary to select a sample of the data and review it for any differences in catalogues, formatting of dates and numbers, and other inside contradictions.

---

<sup>58</sup> Open standards are forms of handling and storage of data in which its structure is known and its modification and access are allowed, without imposing any restriction on its use; in addition, the data stored in open standard formats does not require proprietary software to be used.

<sup>59</sup> European Union Open Data Support, Open Data and Metadata Quality (PWC, 2014)

[https://joinup.ec.europa.eu/sites/default/files/document/2015-05/d2.1.2\\_training\\_module\\_2.2\\_open\\_data\\_quality\\_v1.00\\_en.pdf](https://joinup.ec.europa.eu/sites/default/files/document/2015-05/d2.1.2_training_module_2.2_open_data_quality_v1.00_en.pdf)

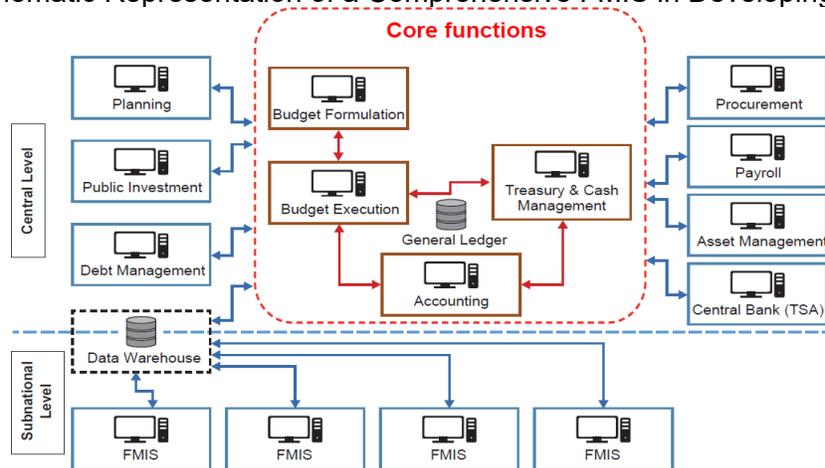
<sup>60</sup> View example of the footnote above.

### 4.3. Implications of the data availability and quality for FMIS

The World Bank and the IMF have produced blogs<sup>61</sup> and special notes<sup>62</sup> to support governments getting their PFM systems COVID-19 ready. Commonly, these publications state that controls might need to be reoriented (not diluted) through a risk-based approach, providing flexibility to respond to the emergency and continuing operations in the context of likely large-scale staff absences. This poses challenges to transparency and accountability that are heightened by the coverage of institutions, functions and operations being performed through FMIS in regular times and even more in these extraordinary times when extrabudgetary funds may acquire an increased relevant role.

As can be noticed throughout the datasets composition of this Guide, the data required for informed decision making goes beyond the core elements of FMIS (view figure 2). As such, the data mapping template and quality assessment presented above can support the development of a diagnosis of the coverage of functions. Additionally, in the IMF Technical Note “How to Design a Financial Management Information System: A Modular Approach”<sup>63</sup> Uña, Allen and Botton propose a mechanism to diagnose the functional and technological challenges of a certain FMIS, as well as an approach to modernize the systems through a modular approach depending on the severity of the issues faced.

Figure 2. Schematic Representation of a Comprehensive FMIS in Developing Countries



Source: IMF Technical Note “How to Design a Financial Management Information System: A Modular Approach” Uña, Allen and Botton

<sup>61</sup> Srinivas Gurazada, Jens, Kromann Kristensen, Mirja Channa Sjoblom, Moritz Piatti, Khuram Farooq. Getting government financial management systems COVID-19 ready. (World Bank, March 20, 2020) <https://blogs.worldbank.org/governance/getting-government-financial-management-systems-covid-19-ready>

<sup>62</sup> Sandeep Saxena and Michelle Stone. Preparing Public Financial Management Systems for Emergency Response Challenges (IMF, April 6, 2020) <https://www.imf.org/~media/Files/Publications/covid19-special-notes/special-series-on-covid19-preparing-public-financial-management-systems-for-emergency-response.ashx?la=en>

<sup>63</sup> Gerardo Uña, Richard I Allen, Nicolas M Botton. How to Design a Financial Management Information System : A Modular Approach. (IMF, May 15, 2019) <https://www.imf.org/en/Publications/Fiscal-Affairs-Department-How-To-Notes/Issues/2019/05/15/How-to-Design-a-Financial-Management-Information-System-A-Modular-Approach-46818>

In the fiscal transparency arena, a relatively less discussed subject pertains to the restrictions to publication that the data architecture of FMIS might impose, however, it is a crucial aspect to be worked on to be able to respond to current and future emergencies and to publish open data by default and sustainably<sup>64</sup>. Additionally, in its work, the Collaborative Africa Budget Reform Initiative (CABRI) has also diagnosed the need to work on capabilities to “capture, analyze, present and use data, without which information systems become simply an expensive architectural shell without potential to improve expenditure control, oversight or decision making”<sup>65</sup>. These actions should be part of an integral preparation for future emergencies to enable coordination, scalability and policy coherence, while reducing risks.

---

<sup>64</sup> This was highlighted as one of the principal challenges faced by governments at the 6th Expert Group Meeting on Open Government Data held on June 11th 2020. More information on the conclusions of the meeting will be published in this website: <https://www.oecd.org/gov/digital-government/open-government-data.htm>

<sup>65</sup> Recommended watch “Financial management information systems: Balancing flexibility and accountability during a crisis” webinar hosted by CABRI on July 2, 2020 <https://www.cabri-sbo.org/en/blog/2020/financial-management-information-systems-balancing-flexibility-and-accountability-during-a-crisis>.