

# A Proposal for Making Aid More Efficient and Effective

*By Using Sectoral Absorptive Capacity and  
Donor Dependency Indicators*

# Efficiency



## Development Policy Paper

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Discussion Draft 17 June 2022

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## Sector Absorptive Capacity and Sectoral Donor Dependency Indicators

Monitoring the Importance of Donor Assistance for Government Policies by Sector  
For more efficient allocation of aid and government resources

June 2022

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### Introduction

- 1. Governments and their international partners are always looking for ways to make aid more efficient and effective.** There are many dimensions to efficiency and effectiveness but a crucial one is to understand how important aid is to supporting government sectoral policies. The problem is that despite there being ample data, governments and donors do not routinely track and analyse how much aid is allocated to different sectors in terms of share of government spending in those sectors. Our assessment is that this happens not because policy makers and donors aren't interested in knowing what the share of aid by sector looks like, and making sure donors are not providing too much or too little funding, but because it's too difficult to deal with different classification systems of donors and government, including different currencies.
- 2. The central problem is that there are two different classification systems:** donors report aid to the OECD according to Development Assistance Committee – Creditor Reporting System (DAC-CRS) classification standards, while governments report their fiscal activity to the IMF according to Government Finance Statistics (GFS) standards. Hence, to be able to analyse aid and government expenditures by sector, both datasets need to be comparable so that policy decisions are better informed.
- 3. This discussion paper presents a methodology that resolves this classification and comparability problem.** Using a global database (available [here](#)), we provide the necessary data to allow free and easy analysis of how important aid is to government sectoral funding. The system takes three global datasets and establishes a set of bridging tables (classification mapping) to allow analysts to determine the size of donor assistance in a sector as a share of government spending over time. This data can help donors and governments allocate aid and government resources much more efficiently. New metrics have been developed using this methodology that enables analysts to undertake Sector-based Absorptive Capacity Analysis and assessment of a range of Sectoral Donor Dependency Indicators.

### Methodology

- 4. The aim of the methodology is to use readily available public data** to enable analysts to quickly know how important donor assistance is to a government's sector financing.<sup>1</sup> Public data is available in existing online databases.
- 5. The first global database AFI uses is the OECD DAC-CRS<sup>2</sup>.** This provides a summary of all official aid committed and disbursed to recipient governments over time. It provides a lot of detail on

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<sup>1</sup> There is nothing stopping any government and / or donor applying the same methodology to non-public data drawn from their own systems to expand the analysis.

<sup>2</sup> The OECD-DAC-CRS database is available here: [Creditor Reporting System \(CRS\) \(oecd.org\)](https://stats.oecd.org/Index.aspx?DataSetCode=CRS1#) at <https://stats.oecd.org/Index.aspx?DataSetCode=CRS1#>

donor assistance in multiple dimensions including sector or purpose of spending (e.g. health and education), aid type/modalities (e.g. budget support and projects), channel (e.g. public sector-recipient government, non-government organisation and multilateral organisations), and flow (e.g. official development assistance – grants, loans and equity investments, other official aid and private development finance). This is in addition to the standard dimensions of time (year), who and where (donor and aid recipient) and aid flow type (disbursement/commitment)<sup>3</sup>. The OECD-DAC-CRS database is already converted to US\$ from local currencies of donors and can be viewed in constant terms (removing the effects of inflation) and current terms (with inflation).

6. **The second database the AFI system uses is the one that provides fiscal data according to the IMF Government Finance Statistics (GFS) accounting and classification reporting standards<sup>4</sup>.** GFS is an internationally recognized statistical reporting framework that was designed to help governments strengthen their capacity to formulate fiscal policy and monitor fiscal performance. The GFS framework establishes a common language that analysts can use to understand and guide complex government activities<sup>5</sup>. The framework is also designed to work with other statistical systems, most importantly, the System of National Accounts (SNA), which is the standard for the compilation of measures of economic activity (like GDP). In many countries the statistics compiled for the GFS system are used by national accounts statisticians as the starting point for compiling statistics for the SNA general government sector.

7. **The GFS database presents fiscal data differently to OECD-DAC-CRS.** Firstly, it provides fiscal data in local currencies (and % of GDP) only, not US\$. Secondly, by definition, it uses a different classification system. Under GFS, government has two types of economic responsibilities: i) to provide goods and services to the community in a non-market way; and ii) redistribute income and wealth between different segments of society through transfers. Expenditure is presented through two different classification systems under GFS. The first is the economic classification system, which classifies expenditures according to payments for certain activities like compensation for employees, purchase of goods and services, acquisition of assets, and transfers like subsidies to companies, social benefits to vulnerable citizens and groups and grants to sub-national governments. The second is on purpose of spending. GFS applies the Classification of Functions of Government (COFOG) for purpose of spending, which splits government spending into ten (10) functions of government such as health, education, economic affairs, and social protection. This is similar but different to the purpose of spending used under OECD-DAC-CRS system. GFS also distinguishes between different levels of government such as general government sector, central government and sub-national governments and has standards so that it is relatively easy to consolidate financial statements of local and central government to produce general government statements under both economic and COFOG systems (i.e. without double counting certain expenditures).

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<sup>3</sup> For OECD DAC CRS classification system see [DAC and CRS code lists - OECD](https://www.oecd.org/development/financing-sustainable-development/development-finance-standards/dacandcrscodelists.htm) at <https://www.oecd.org/development/financing-sustainable-development/development-finance-standards/dacandcrscodelists.htm>

<sup>4</sup> The IMF GFS database is available here: [Government Finance Statistics - At a Glance - IMF Data](https://data.imf.org/?sk=a0867067-d23c-4ebc-ad23-d3b015045405) at <https://data.imf.org/?sk=a0867067-d23c-4ebc-ad23-d3b015045405>

<sup>5</sup> The GFS classification and accounting framework is available here: [IMF's Government Finance Statistics Manual 2014](https://www.imf.org/external/np/sta/gfsm/) at <https://www.imf.org/external/np/sta/gfsm/>

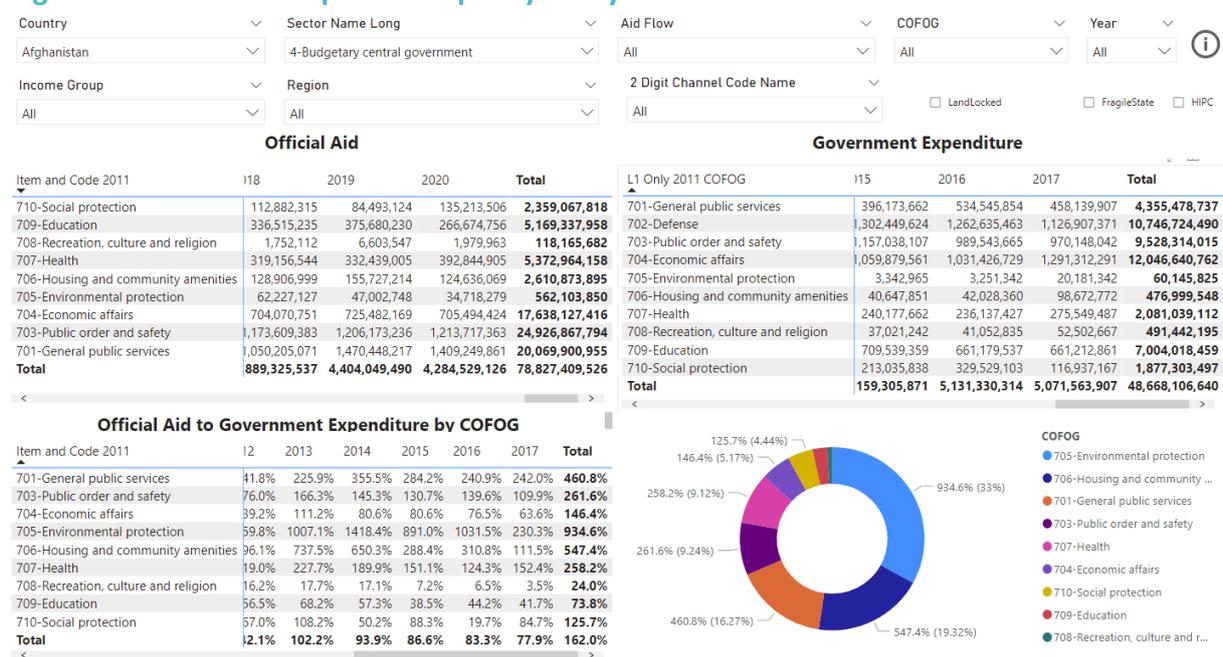
8. **Another important difference is that aid data relates to commitments and disbursements, while GFS equivalent is budget and actuals.** Moreover, disbursements are not expenditures. That said they are reasonable proxies for expenditures, and for Sectoral Absorptive Capacity indicators they do not need to be the same as they are proportionate comparisons. Consolidation of OECD DAC-CRS data and GFS data, does however, require the proxy assumption.

9. **To overcome core classification differences AFI developed a methodology using bridging tables.** The most important is the bridge from OECD-DAC-CRS purpose of spending sector classifications to COFOG purpose of spending classification. To do this, direct attribution was applied without any splitting of OECD-DAC-CRS to COFOG classification. The other important issue was to convert local currency GFS/COFOG data into a single comparable currency (US\$) so that percentages could be calculated. The foreign exchange rate used for a particular year was the official exchange rate provided in the World Development Indicators (WDI), which is the third global database the system relies on.<sup>6</sup>

10. **The consolidation of the 3 databases, OECD-DAC-CRS, IMF-GFS and WDI, was all done in Power BI.** An Application Programming Interface (API) was not used in favour of CSV/txt data dumps from the three sources as they were readily available and provide a complete set of data. The downside of using CSV/txt datafiles is that updates are slower than a direct link.

## Results

**Figure 1. Sector Absorptive Capacity Analytics: Power BI Interface**



Source: AFI Sectoral Absorptive Capacity Indicators Database

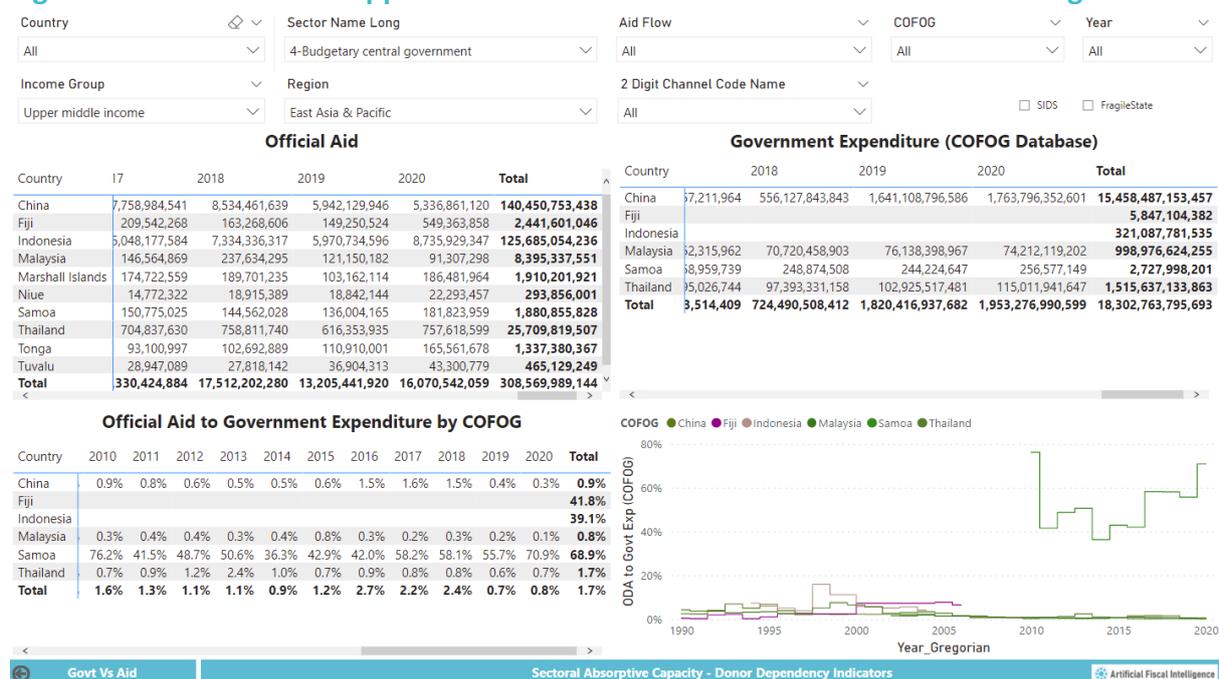
11. **Many metrics can be derived from the combined dataset but the focus for this paper is the Sector Absorptive Capacity analytics and Sectoral Donor Dependency Indicators.** Figure 1 presents

<sup>6</sup> Other indicators are drawn from the WDI database to calculate metrics like spending or aid per capita or as a percentage of GDP.

the Power BI interface for the analytics. The dashboard is available online [here](#)<sup>7</sup>. The top section of the dashboard has specific filters to allow for easy access to sub-sets of the global data set. The filters on this dashboard are: i) country; ii) GFS sector (i.e. level of government); iii) Aid flow (i.e. ODA, Other official flows and private); iv) COFOG (the ten functions of government); v) Year; vi) Income group (e.g. high/low income countries) and vii) Region (e.g. East-Asia Pacific or Sub-Sharan Africa. Four additional country groupings are also provided: landlocked countries, small island developing states (SIDS), fragile countries, and Highly Indebted Poor Countries (HIPC).

12. **There are three main data tables – aid, government expenditure and aid to government expenditure.** The first one contains aid levels in US\$ currency classified by COFOG. It is produced by applying the Sector to COFOG bridging table to the OECD-DAC-CRS data. The second table is the IMF GFS/COFOG database with WDI official exchange rates applied to convert local currencies to US\$ for the relevant year. Both tables are in the same classification and currency. This allows the third table to be produced, which is the aid to COFOG government expenditure levels. The pie chart at the bottom right simply presents the COFOG shares for the country/countries over the period under consideration (set by choosing the years filter). The charts and tables change depending on the filters chosen or what items are clicked on by the user. Caution is advised when interpreting aid to expenditure by COFOG as some country data includes grant aid spending that is recorded in the financial statements. Review of financial statements will alert the analyst to which is the case though a marker can be created.

**Figure 2. COFOG Data: Upper Middle Income Countries in East-Asia Pacific Region**



Source: AFI Sectoral Absorptive Capacity Indicators Database

13. **Figure 2 above presents another dashboard of sectoral absorptive capacity indicators by country.** Here different COFOG functions can be selected using the filter allowing cross-country analysis of different functions. Caution is advised when using the database and assessing groups of countries, as not all countries that receive aid provide COFOG Data. The figure reveals that six (5 can

<sup>7</sup> See: [https://artificialfiscalintelligence.com/?post\\_type=powerbi&p=4996&preview=true](https://artificialfiscalintelligence.com/?post_type=powerbi&p=4996&preview=true)

be seen) of the ten upper middle-income countries from the East Asia Pacific Region that receive official aid do provide COFOG data. These are China, Fiji (last year 2006), Indonesia (last year 2004), Malaysia, Samoa, and Thailand. The implication of this is that when assessing totals for a group of countries, the user will need to exclude countries which receive aid that are not in the IMF COFOG database. The AFI database that produces the sectoral absorptive capacity indicators bridges two existing databases rather than creating a separate consolidated database. A consolidated database would be easier to exclude/include countries with or without COFOG Data. Such a system could be developed either way.

**Table 1. Number of Countries that provide COFOG Data by Year Region**

Region	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
East Asia & Pacific	11	13	14	13	14	14	15	16	16	15	13	354
Europe & Central Asia	13	14	14	14	14	14	14	14	14	15	13	393
Latin America & Caribbean	7	7	7	7	11	12	10	10	10	9	9	310
Middle East & North Africa	9	9	9	8	7	7	5	5	5	5	5	295
North America												1
South Asia	8	8	7	7	7	7	6	5	4	3	2	192
Sub-Saharan Africa	15	15	15	14	11	10	11	15	15	13	11	355
<b>Total</b>	<b>63</b>	<b>66</b>	<b>66</b>	<b>63</b>	<b>64</b>	<b>64</b>	<b>61</b>	<b>65</b>	<b>64</b>	<b>60</b>	<b>53</b>	<b>1900</b>

Income Group	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Lower middle income	21	23	24	22	22	21	20	22	22	20	15	614
Upper middle income	21	22	21	20	22	22	21	22	22	22	22	609
High income	15	15	15	15	16	17	15	14	15	13	11	532
Low income	6	6	6	6	4	4	5	7	5	5	5	145
<b>Total</b>	<b>63</b>	<b>66</b>	<b>66</b>	<b>63</b>	<b>64</b>	<b>64</b>	<b>61</b>	<b>65</b>	<b>64</b>	<b>60</b>	<b>53</b>	<b>1900</b>

Source: AFI Sectoral Absorptive Capacity Indicators Database – drawn from IMF database (v14/5/2022). See Attachment for more detail. Totals refer to years between 1989 and 2020, which is the range of the IMF database.

14. **The supply of COFOG data is low at around 25% of all countries and territories in the database.** Around sixty (60) countries/territories provide COFOG data to the IMF. This is a deterioration compared to the 1990's when almost 80 countries provided data. Many European countries do not have data in the database (as at 14/5/2022), after the turn of the century. Table 1 provides a summary of the number of countries that provide COFOG data since 2010 on the IMF database by region and year and income group (totals in the table refer to 1989 start year). The Attachment on page 11 provides a list of all countries that are on the COFOG Database by region and year.

## Application

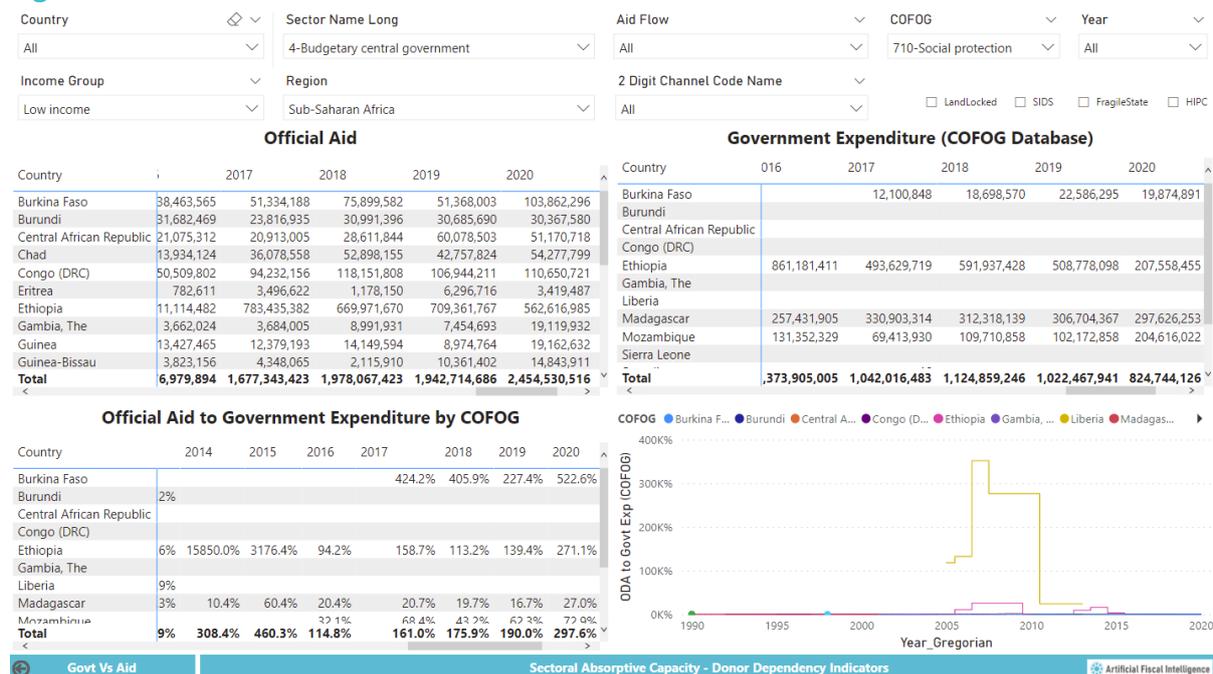
15. **Absorptive capacity analysis generally looks at overall aid as percentage of GDP or drills down deeper by creating some type of absorptive capacity index.** This is often based on a range of factors that impact on a government's ability to spend aid and domestic revenues efficiently. Such factors include governance quality (e.g. CPIA, WDI and PEFA), donor fragmentation measures (e.g.

ratio of number of donors to the log of government expenditures), and human capital (e.g. adult literacy rates and student teacher ratios)<sup>8</sup>.

16. **The application of this type of sectoral/functional data can help donors and governments allocate resources better.** From a donor’s perspective, analysing aid to government expenditure trends over time and point in time helps a donor know if they are potentially over or under aiding a particular sector<sup>9</sup>. From the government side, it allows governments to have a detailed picture of how total resources (both government and donor) are being allocated. Both donors and recipient governments will be in a far better position to discuss historical and planned aid allocations with a view to getting government and aid sector policies to be more efficient and more cost-effective. It would also assist in defragmenting resource allocation systems. For example, both parties will be using the same set of baseline parameters for aid allocation.

17. **This outcome can be achieved without much effort from donors and governments.** Donors will no longer need to manually convert their aid data into the same classification system of the recipient/partner government. Under this methodology, however, donors still need to convert their national aid classification system to the DAC-CRS classification system, which for some donors is already available on their systems in real time. Recipient governments will also need to convert their fiscal data to GFS, which they are obliged to do already as a member of the IMF.

**Figure 3. Social Protection: Low-Income Countries in Sub-Saharan Africa**



Source: AFI Sectoral Absorptive Capacity Indicators Database

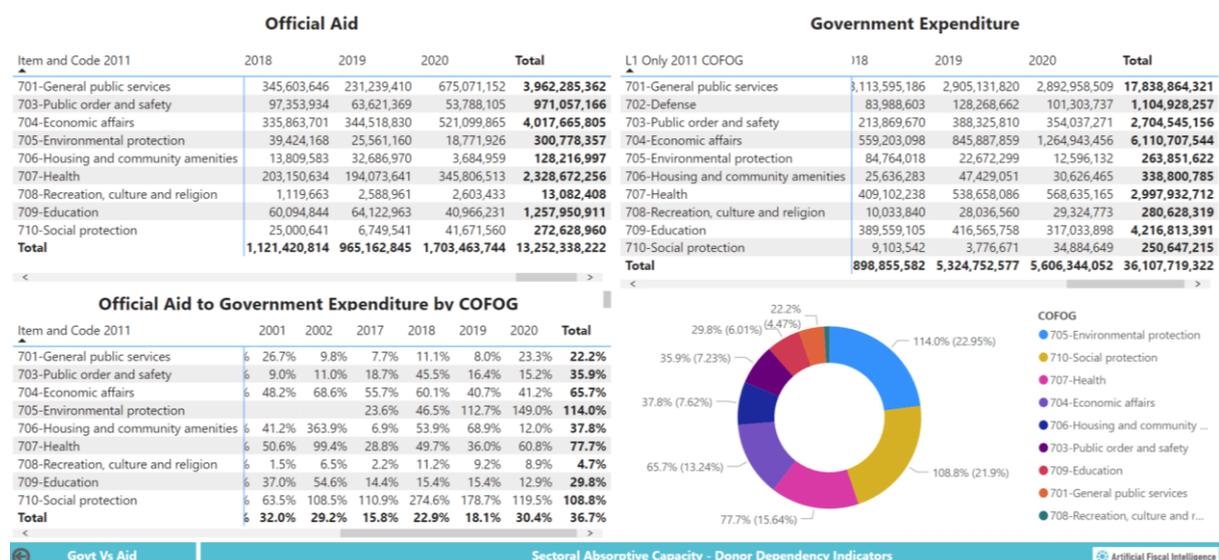
<sup>8</sup> See Feeny, Simon and Ashton de Silva. “Measuring absorptive capacity constraints to foreign aid.” Economic Modelling 29 (2012): 725-733. Available at <https://www.sciencedirect.com/science/article/abs/pii/S0264999312000272>

<sup>9</sup> See Laing, 2017, ISE Development Practice Note on “The Absorptive Capacity Limit: The point where too much aid becomes bad aid” at [ise-0-DPN7-1-1.pdf \(effectivestates.org\)](https://www.ise.org/ise-0-DPN7-1-1.pdf)

18. **The data can also help donors and governments establish and improve critical government functions.** There is a strong case for donors to do the heavy lifting from a financing and technical cooperation perspective when a country is establishing new social or economic policies, like for example setting up new social protection or community development programs. Figure 3 above reveals that in Sub-Saharan Africa, a few low-income countries have very high levels of official aid to Government expenditure rates in the social protection area. Burkina Faso had the highest rate at 522% in 2020, Ethiopia had 271% and Uganda had 144%. Burkina Faso, for example, receives over \$100m in aid (though all channels) for social protection related activities, but spent only \$20m itself on social protection in 2020. Over time, the aid allocation policy would want to see a decline in this rate, in line with a sustainable fiscal strategy and assuming the social protection programs were proving successful. Consequently, the data is important when donors are considering both exit and scale up strategies in particular sectors.

19. **Aid channel information is also useful when analysing aid to government expenditures by sector.** Sectoral aid levels change depending on the channel it flows through. Aid channels can be through the recipient governments own systems, or through donor systems, or multilateral organisations for example. These have implications for absorptive capacity and efficiency. Channel information is made available in the AFI system when looking at aid to government expenditure ratios by function. Users can view the levels and the aid ratios by selecting a different view of the aid channel. The data can also be used to assess how aid is represented in government budgets compared to DAC-CRS data and how well government budgets consolidate aid in their budgets/financial statements. For example, reconciliation of aid channelled through an aid recipient government with those recorded in government financial statements can be useful. Likewise, is the assessment of the amount of aid channelled outside those systems and the extent to which in-kind and 3<sup>rd</sup> party payments by donors are reflected in financial statements.

**Figure 4. Papua New Guinea COFOG Aid and Expenditure Data**



20. **An important implication of focusing more on COFOG-based analytics is that there may be increased demand for more detail on how COFOG allocations are determined.** For example, Papua New Guinea’s reported Social Protection spending increased tenfold between 2019 and 2020 with a

corresponding six-fold increase in Social Protection related aid (see Figure 4). Understanding what's driving these changes is crucial, and that's where the importance of understanding what's happening with the underlying programs and projects comes in.

21. **Publication of government COFOG bridging tables** (e.g. from program activities) would be one new transparency measure that would make it easier to understand what is happening at more granular levels. These tables would show how government programs are mapped/attributed to COFOG functions and how government classifications map to GFS-economic. These tables can be quite advanced by revealing different types of mapping methodologies over time.

22. **Better still would be the publication of activity to program data alongside functional data** in a structured form. This is easy to do technically but disclosure standards in this area are not yet in place and the appetite to supply or demand such information is uncertain. The system of release could be similar to how the OECD-DAC-CRS data discloses the same sort of information in raw data files, which provide project information alongside other classification fields (albeit in downloadable data dumps rather than in the online data hub). The publication of AFI's OECD-DAC-CRS sector to COFOG function bridging tables can also be provided, and can be created easily from the data itself in any case. The donor project information on the DAC-CRS database can also be easily viewed and sliced and diced in the AFI system. More advanced versions of both types of bridging tables can also be developed allowing for changes attribution over years and attribution methodologies allowing for cross functional mapping.

23. **There are opportunities to strengthen the competencies of governments in the construction of GFS compliant structured datasets** on both economic and functional classifications. One indicator that the bridging tables are sound and datasets are structured well is that that resulting datasets can easily produce cross-tabulations of economic and functional information as well as cross tabulations involving activity to project information. There are also other opportunities to explore, such as automated consolidation of GFS statements for different levels of government if data is structured appropriately.

## Conclusion

24. **AFI has produced the first international database that provides Sectoral Absorptive Capacity and Donor Dependency Indicators.** These can help improve the allocation of both aid and government resources. Having a good understanding of where aid is going relative to government spending is arguably a key condition that can drive more efficient, effective, and sustainable aid as well as more efficient, effective, and sustainable budgets.

25. **Provision of COFOG data to the IMF is, however, not yet comprehensive enough.** Too many governments that receive aid do not provide any COFOG data to the IMF. In addition, many countries that do provide COFOG data, do not provide the data at a level of granularity required under GFS. If more granular data is provided, more robust policy and resource allocation dialogue could occur at interesting levels like components of social protection (e.g. old age vs family), education (e.g. primary vs secondary) and health (e.g. pharmaceuticals and hospitals). Another key weakness is the lack of GFS compliant data on original and final approved budgets for IMF member countries. The GFS data that is available only relate to actuals or final fiscal outcomes. Collecting original and final budget information would provide extremely valuable. Some adjustments would be need to capture certain

budget only characteristics like contingency reserves, though original to final budget analytics can help reveal how much risk is being realised in contingency reserve operations.

26. **Moving forward, donors and government could prioritize the timely provision of COFOG data to the IMF** to allow indicators to be made available to all stakeholders. Budget support is one mechanism where agreements could be entered in to, to provide additional COFOG data to the IMF. Technical assistance is another, aimed at strengthening the construction of GFS compliant data. Expanding the scope of GFS data collection and provision to granular levels (e.g. third level function) and collection of original and final budget data could also be explored.

27. **The good news is that the creation and provision of COFOG data is not a major capacity problem.** The data reveals that 40% of countries that do provide COFOG data to the IMF are from low income or lower middle-income country groups, where capacity constraints are believed to be the greatest (see Table 1 above). The necessary skills required to get reasonably accurate COFOG data built from existing budget and accounting systems are likely to be already in place. A new process just needs to be introduced (or re-introduced in many cases as revealed by historical data trends). A greater focus of donors to help aid recipient governments improve in this area would help enormously.

28. **Further research is warranted on the development of Sectoral Absorptive Capacity and Donor Dependency Indicators** and their application. Priority areas include establishment of bridging tables for the construction of GFS-compliant financial statements following economic classification standards. This would be especially for aid channelled through recipient governments, and for aid channelled through different mechanisms for the benefit of recipient governments (e.g. in the form of in-kind aid). Automated consolidation and elimination of aid and government financial statements using OECD-DAC-CRS and GFS would then be theoretically possible and could be used as an additional disclosure in budgets and end-of-year financial statements. This would also help with the COFOG-based sectoral absorptive capacity tables, given the caution on interpreting percentages aid and shares of total functional spending (i.e. some country data includes COFOG allocation of grant aid spending that is recorded in financial statements).

29. **One of the challenges of OECD-DAC-CRS data is that channel and aid type data, for example, do not track end use of funds, just first recipients.** This complicates financial statement consolidation between donor aid disbursements and government expenditures, though not to a position that it is not possible nor useful. Plenty of value could be gained at understanding different dimensions such as the cost of TA disbursements by donors, compared the to the salary and professional services bill of governments - in aggregate and in different sectors.

30. **There is big hurdle to overcome to have sectoral absorptive capacity indicators that deliver cross tabulation of sectors (COFOG) and economic classifications** (i.e. salaries, goods and services and capital split by function). The hurdle is the one created by way the current IMF databases report economic and COFOG statements, which are completely separate. This separation significantly reduces the granularity of the data available compared to if the two classification systems were integrated into a single structured dataset in a way that allows cross tabulation. It would appear though, that the only way this could be achieved would be through a change in the way data is provided by IMF member countries. This is not a major technical challenge and is relatively easy to do, as such datasets are readily available ore creatable off member countries' existing accounting systems.

31. **Two questions emerge – the first being whether there is demand for such granular information.** AFI believes such information is extremely useful to ensure both aid and other government resources are allocated and spent as efficiently and effectively as possible. The other critical question is whether governments are willing to be more transparent over their financial operations – since such structured data provides a much higher degree of visibility to stakeholders and citizens compared to current expectations on public disclosures. As an interim step, the data does not necessarily need to be a public disclosure, but made available to analysts within Government, allowing decision makers access to much better fiscal and aid-related information, thereby being able to drive better value for money and better policy outcomes at lower cost.

32. **AFI will continue to update the datasets on a routine basis,** especially if there is demand, and will look at ways to provide additional functionalities to users. Suggestions for further refinements in the dataset can be sent to [info@artificialfiscalintelligence.com](mailto:info@artificialfiscalintelligence.com).

## Attachment – Countries with COFOG Data on IMF Database

**Table 2. Total Number of Countries**

Region	Count of US\$ Equivalent	Count of Country
East Asia & Pacific	366	48
Europe & Central Asia	415	69
Latin America & Caribbean	310	48
Middle East & North Africa	295	22
North America	1	4
South Asia	192	8
Sub-Saharan Africa	355	51
<b>Total</b>	<b>1934</b>	<b>250</b>

**Table 3. Number of Countries with COFOG Data by Region**

Region	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
East Asia & Pacific	8	8	9	9	11	12	13	12	11	10	10	10	11	12	9	11	10	9	7	10	10	12	14	15	14	15	15	16	17	17	16	13	<b>366</b>
Europe & Central Asia	17	17	18	22	24	7	9	10	11	12	11	11	10	9	9	8	10	10	13	13	14	15	15	15	15	15	15	15	15	16	14	<b>415</b>	
Latin America & Caribbean	15	14	15	15	15	13	12	12	10	10	10	10	7	8	10	8	9	9	7	6	6	7	7	7	7	11	12	10	10	10	9	<b>310</b>	
Middle East & North Africa	12	12	12	12	13	12	11	13	13	12	8	9	9	9	10	10	11	11	11	11	9	9	9	8	7	7	5	5	5	5	5	<b>295</b>	
North America	1																															<b>1</b>	
South Asia	5	5	5	5	5	5	5	5	6	6	6	6	7	7	8	8	8	8	8	8	8	8	8	7	7	7	7	6	5	4	3	2	<b>192</b>
Sub-Saharan Africa	9	9	10	11	10	11	10	8	9	11	5	9	9	10	11	12	13	14	15	14	15	15	15	14	11	10	11	15	15	13	11	<b>355</b>	
<b>Total</b>	<b>1</b>	<b>66</b>	<b>65</b>	<b>69</b>	<b>74</b>	<b>78</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>61</b>	<b>50</b>	<b>54</b>	<b>55</b>	<b>55</b>	<b>57</b>	<b>57</b>	<b>60</b>	<b>57</b>	<b>63</b>	<b>62</b>	<b>65</b>	<b>68</b>	<b>68</b>	<b>65</b>	<b>66</b>	<b>66</b>	<b>63</b>	<b>67</b>	<b>66</b>	<b>62</b>	<b>54</b>	<b>1934</b>

**Table 4. Countries with COFOG Data by Income Groups**

Income Group	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Lower middle income	16	16	17	17	19	19	19	21	21	23	19	21	20	17	18	18	20	19	21	21	21	23	24	22	22	21	20	22	22	20	15	<b>614</b>	
Upper middle income	18	18	19	19	21	21	20	19	18	18	17	17	19	18	18	17	17	18	18	20	20	21	22	21	20	22	22	21	22	22	22	22	<b>609</b>
High income	1	27	27	28	33	33	15	16	16	14	12	12	13	15	16	16	17	14	15	15	15	15	15	15	15	15	17	15	14	15	13	11	<b>532</b>
Low income	5	4	5	5	5	5	5	4	5	5	1	3	2	4	4	5	5	5	5	5	4	6	6	6	6	4	4	5	7	5	5	5	<b>145</b>
<b>Total</b>	<b>1</b>	<b>66</b>	<b>65</b>	<b>69</b>	<b>74</b>	<b>78</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>49</b>	<b>53</b>	<b>54</b>	<b>54</b>	<b>56</b>	<b>56</b>	<b>59</b>	<b>56</b>	<b>61</b>	<b>60</b>	<b>63</b>	<b>66</b>	<b>66</b>	<b>63</b>	<b>64</b>	<b>64</b>	<b>61</b>	<b>65</b>	<b>64</b>	<b>60</b>	<b>53</b>	<b>1900</b>

**Table 5. Countries with COFOG Data by Region**

Region	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	
<b>East Asia &amp; Pacific</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>11</b>	<b>10</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>9</b>	<b>11</b>	<b>10</b>	<b>9</b>	<b>7</b>	<b>10</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>15</b>	<b>14</b>	<b>15</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>17</b>	<b>16</b>	<b>13</b>	<b>366</b>		
Australia																																		20
China		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31
Fiji		1	1	1	1	1	1	1								1	1	1																10
Indonesia						1	1	1	1	1	1			1	1	1	1																	10
Kiribati																								1	1	1	1	1	1	1	1	1	1	10
Korea		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																17
Macao								1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	25
Malaysia															1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19
Marshall Islands																						1	1	1	1	1	1	1	1	1	1	1	1	12
Micronesia																						1	1	1	1	1	1	1	1	1	1	1	1	13
Mongolia				1	1	1	1	1	1	1		1	1	1									1	1	1				1	1	1	1	1	18
Myanmar																									1	1	1	1	1	1	1	1	1	8
Nauru																												1	1	1	1	1	1	5
New Zealand			1	1	1	1	1	1	1	1	1	1				1	1																	12
Palau																						1	1	1	1	1	1	1	1	1	1	1	1	12
Papua New Guinea		1	1	1	1	1	1	1	1	1	1	1	1	1	1																1	1	1	17
Philippines		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31
Samoa																						1	1	1	1	1	1	1	1	1	1	1	1	11
Singapore		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31
Solomon Islands																								1	1	1	1	1	1	1	1	1	1	10
Thailand		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31
Vanuatu		1					1	1	1																									4
Vietnam						1	1	1	1	1	1	1	1	1																				9
<b>Europe &amp; Central Asia</b>	<b>17</b>	<b>17</b>	<b>18</b>	<b>22</b>	<b>24</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>11</b>	<b>11</b>	<b>10</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>10</b>	<b>10</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>14</b>	<b>415</b>									
Albania							1	1	1	1					1								1	1	1	1	1	1	1	1	1	1	1	15
Armenia																							1	1	1	1	1	1	1	1	1	1	1	11
Austria		1	1	1	1	1																												5
Azerbaijan																						1	1	1	1	1	1	1	1	1	1	1	1	13
Belarus						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	27
Bulgaria			1	1	1	1																												4
Croatia				1	1	1																												3
Cyprus		1	1	1	1	1																												5
Czech Republic					1	1																												2
Denmark		1	1	1	1	1																												5
Estonia																																		2
Finland		1	1	1	1	1																												5
France		1	1	1	1																													4
Georgia								1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	25
Germany		1																																1
Greece		1	1	1	1	1																												5
Hungary		1	1	1	1	1																												5
Iceland		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	29
<b>Total</b>	<b>1</b>	<b>66</b>	<b>65</b>	<b>69</b>	<b>74</b>	<b>78</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>61</b>	<b>50</b>	<b>54</b>	<b>55</b>	<b>55</b>	<b>57</b>	<b>57</b>	<b>60</b>	<b>57</b>	<b>63</b>	<b>62</b>	<b>65</b>	<b>68</b>	<b>68</b>	<b>65</b>	<b>66</b>	<b>66</b>	<b>63</b>	<b>67</b>	<b>66</b>	<b>62</b>	<b>54</b>	<b>1934</b>	

Region	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	
Ireland		1	1	1	1	1																										5		
Kazakhstan										1	1	1					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19	
Kyrgyz Republic						1	1	1	1	1	1	1	1					1			1	1	1	1	1	1	1	1	1	1	1	1	21	
Lithuania					1	1																											2	
Luxembourg		1	1	1	1	1																											5	
Moldova								1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	25	
Netherlands		1	1	1	1	1																											5	
Norway		1	1	1	1	1																											5	
Poland						1																											1	
Romania		1	1	1	1	1																											5	
Russia											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22	
San Marino														1	1	1															1	1	5	
Serbia																			1	1	1	1	1	1									6	
Slovenia					1	1																												2
Spain		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31	
Sweden		1	1	1	1	1																												5
Tajikistan										1	1	1	1																					4
Turkey		1	1	1	1	1	1	1	1	1	1	1	1								1	1	1	1	1	1	1	1	1	1	1	1	25	
Ukraine											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22	
United Kingdom							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	26	
Uzbekistan																									1	1	1	1	1	1	1	1	1	8
<b>Latin America &amp; Caribbean</b>	<b>15</b>	<b>14</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>13</b>	<b>12</b>	<b>12</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>7</b>	<b>8</b>	<b>10</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>11</b>	<b>12</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>9</b>	<b>9</b>	<b>310</b>	
Argentina		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1											1	1	1	1	1	1	1	22
Bahamas		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31	
Barbados																1	1	1															4	
Belize		1	1	1	1	1	1	1																										7
Bolivia		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1														18	
Brazil																							1	1	1	1	1	1	1	1	1	1	1	11
Chile																		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
Colombia		1	1	1	1	1	1	1	1																									8
Costa Rica		1				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	28	
Dominican Republic		1	1	1	1	1	1	1	1	1	1	1		1	1											1	1	1	1	1	1	1	1	20
Ecuador		1																																1
El Salvador		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31	
Grenada			1	1	1	1	1																											5
Guatemala		1	1	1	1	1						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	26	
Jamaica				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					24	
Mexico		1	1	1	1	1	1	1	1	1	1	1																						11
Nicaragua		1	1	1	1	1			1																			1	1	1	1	1	1	13
Panama																											1	1	1	1	1			5
Paraguay		1	1	1	1																													4
St. Vincent and the Grenadines		1	1	1	1	1	1	1	1	1	1																							10
<b>Total</b>	<b>1</b>	<b>66</b>	<b>65</b>	<b>69</b>	<b>74</b>	<b>78</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>61</b>	<b>50</b>	<b>54</b>	<b>55</b>	<b>55</b>	<b>57</b>	<b>57</b>	<b>60</b>	<b>57</b>	<b>63</b>	<b>62</b>	<b>65</b>	<b>68</b>	<b>68</b>	<b>65</b>	<b>66</b>	<b>66</b>	<b>63</b>	<b>67</b>	<b>66</b>	<b>62</b>	<b>54</b>	<b>1934</b>	

Region	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total		
Uruguay		1	1	1	1	1	1	1	1	1	1	1			1	1	1	1														15			
<b>☐ Middle East &amp; North</b>		<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>12</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>10</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>295</b>		
Algeria					1	1	1	1	1	1	1							1	1	1	1											10			
Bahrain		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31		
Egypt		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	26		
Iran		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20		
Israel		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31		
Jordan		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31		
Kuwait		1	1	1	1	1	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24		
Lebanon									1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24		
Malta		1	1	1	1	1																											5		
Morocco		1	1	1	1	1	1		1	1	1																						9		
Oman		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24		
Qatar																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7		
Tunisia		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	23		
United Arab Emirates		1	1	1	1	1	1	1	1	1	1											1	1	1	1	1	1	1	1	1	1	1	20		
Yemen		1	1	1	1	1	1	1	1	1	1																						10		
<b>☐ North America</b>		<b>1</b>																															<b>1</b>		
United States		1																															1		
<b>☐ South Asia</b>		<b>5</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>192</b>							
Afghanistan															1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15		
Bangladesh													1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	
Bhutan		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31	
India		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	29	
Maldives		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22	
Nepal		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31	
Pakistan										1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	
Sri Lanka		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	30	

Region	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	
East Asia & Pacific		8	8	9	9	11	12	13	12	11	10	10	11	12	9	11	10	9	7	10	10	12	14	15	14	15	15	16	17	17	16	13	366	
Europe & Central Asia		17	17	18	22	24	7	9	10	11	12	11	11	10	9	9	8	10	10	13	13	14	15	15	15	15	15	15	15	15	16	14	415	
Latin America & Caribbean		15	14	15	15	15	13	12	12	10	10	10	7	8	10	8	9	9	7	6	6	7	7	7	7	11	12	10	10	9	9	310		
Middle East & North Africa		12	12	12	12	13	12	11	13	13	12	8	9	9	9	10	10	11	11	11	11	9	9	9	8	7	7	5	5	5	5	295		
North America	1																															1		
South Asia		5	5	5	5	5	5	5	5	6	6	6	7	7	8	8	8	8	8	8	8	8	8	8	7	7	7	7	6	5	4	3	2	192
Sub-Saharan Africa		9	9	10	11	10	11	10	8	9	11	5	9	9	10	11	12	13	14	15	14	15	15	15	14	11	10	11	15	15	13	11	355	
Angola											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21		
Botswana		1	1	1	1	1	1	1																								11		
Burkina Faso																																4		
Burundi			1	1	1	1	1	1	1	1	1											1	1	1	1							13		
Cabo Verde																				1	1	1	1	1	1	1	1	1	1	1	1	12		
Cameroon		1	1	1	1	1	1			1	1										1	1	1	1	1	1	1	1	1	1	1	8		
Central African Republic																					1	1	1									3		
Congo (DRC)				1	1	1	1	1	1																							6		
Côte d'Ivoire																										1						1		
Equatorial Guinea																			1	1	1											3		
Eswatini											1																					1		
Ethiopia		1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1					1	1	1	1	1	1	1	1	1	26	
Gambia, The		1																														1		
Ghana		1	1	1	1								1	1																		6		
Kenya			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	27		
Liberia																	1	1	1	1			1	1	1							7		
Madagascar		1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	25		
Mauritius		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31		
Mozambique																						1	1					1	1	1	1	7		
Namibia												1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21		
Nigeria															1	1	1	1	1	1	1	1	1	1	1	1						11		
Republic of the Congo															1	1	1	1	1	1	1	1	1	1	1							9		
Senegal								1	1	1	1	1																				5		
Seychelles					1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	19		
Sierra Leone		1																														1		
Somalia																														1		1		
South Africa							1						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21		
Sudan										1	1																					2		
Tanzania																													1	1		2		
Uganda													1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20		
Zambia			1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	30		
<b>Total</b>	<b>1</b>	<b>66</b>	<b>65</b>	<b>69</b>	<b>74</b>	<b>78</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>61</b>	<b>50</b>	<b>54</b>	<b>55</b>	<b>55</b>	<b>57</b>	<b>57</b>	<b>60</b>	<b>57</b>	<b>63</b>	<b>62</b>	<b>65</b>	<b>68</b>	<b>68</b>	<b>65</b>	<b>66</b>	<b>66</b>	<b>63</b>	<b>67</b>	<b>66</b>	<b>62</b>	<b>54</b>	<b>1934</b>	