Food and Agriculture Organization of the United Nations

MAFAP

Companion note for MAFAP public expenditure database
Data sources, coverage and limitations

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Companion note on MAFAP public expenditure database:
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Annex 1

1. Background on the MAFAP methodology

The MAFAP public expenditure (PE) methodology aims to monitor the level and composition of public expenditure on food and agriculture as well as certain rural development expenditures that may indirectly affect agriculture. This type of analysis is important and critical to inform policy making as it has been widely acknowledged that public expenditure is an important tool of fiscal policy that governments can use to achieve their development goals, including agricultural and rural transformation. Recent research focusing on agricultural sector expenditures has confirmed that higher spending on agriculture can lead to improved agricultural outcomes as well as to a reduction in rural poverty. However, research has also shown that the composition of expenditure is crucial, with different spending categories having very heterogeneous impacts.

The importance of agricultural spending has also been recognized at the political level, most notably in the context of the Comprehensive Africa Agriculture Development Programme (CAADP), when, in 2003, heads of state or government in the region committed to spend 10 percent of their budgets on agriculture. This political commitment has indeed created a need for mechanisms and tools for tracking the evolution of public expenditure on agriculture.
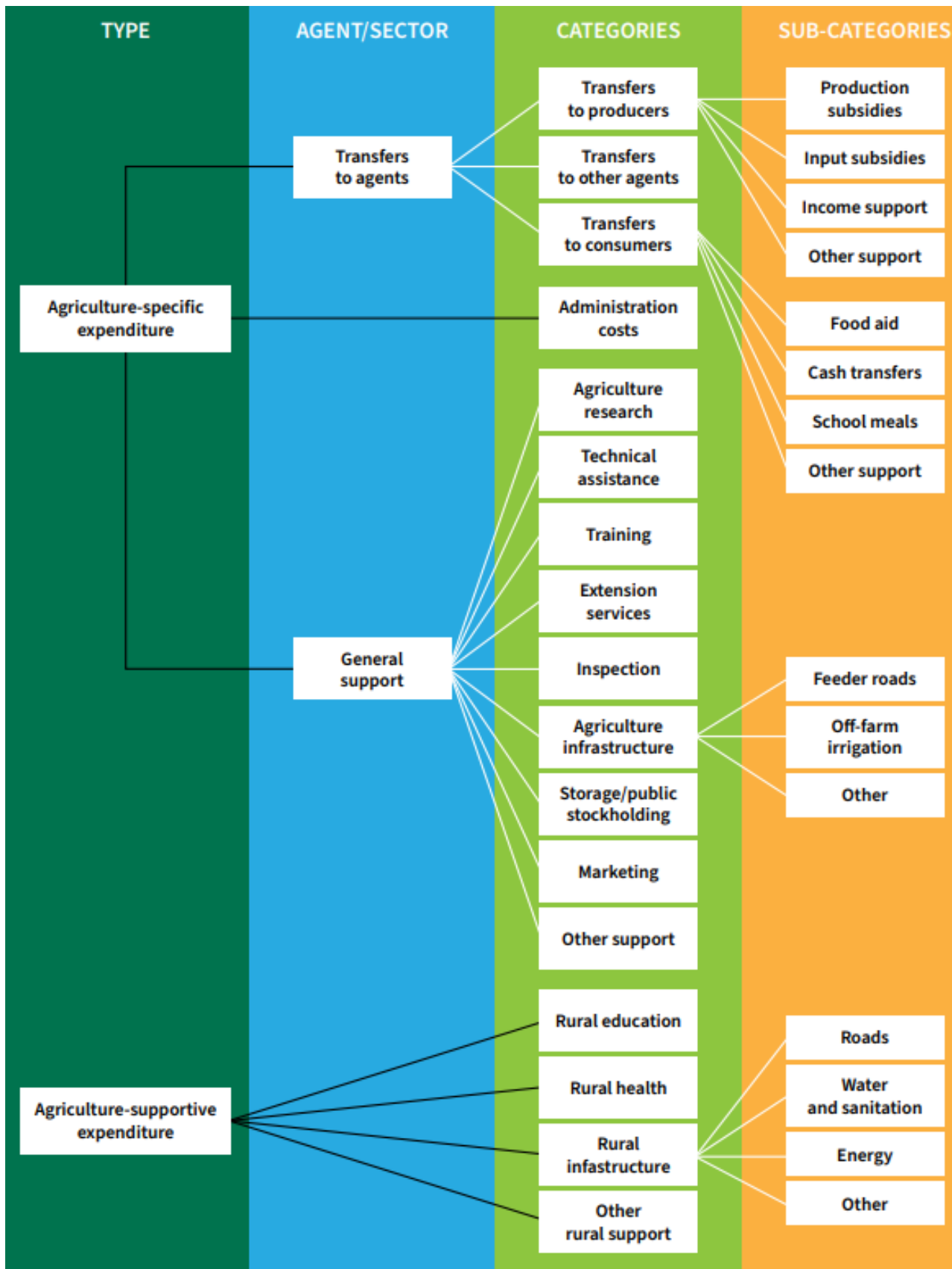
By providing regular updates on both the level and the composition of food and agricultural public expenditure, indicators and analysis built through the MAFAP PE methodology can be used to inform budget allocations as well as monitor compliance with commitments.

The classification used by MAFAP differs from other initiatives and classifications on numerous aspects, the most important differences being:

1) **Definition of agriculture**: the definition of agriculture used by the MAFAP method is broader than that of other methodologies such as the Classification of the Functions of Government (COFOG), CAADP guidelines, World Bank Agricultural Public Expenditure Reviews. The two main differences are that MAFAP i) includes food and cash-related expenditures to consumers (e.g. school feeding, food aid or food for work programmes, etc.) beyond agricultural specific interventions and ii) tracks also rural expenditures, defined as agriculture-supportive expenditure that indirectly support agricultural development. By excluding these two spending categories from the aggregate values, definition of expenditure on agriculture and related figures become very similar to those presented by other methodologies.

2) **Disaggregation by beneficiary**: unlike most initiatives and classifications, the MAFAP PE approach categorizes public transfers by targeted agent or beneficiary. As such, it makes a distinction between public expenditures for the provision of private goods (e.g. producer subsidies, subsidies to consumers, payments to input suppliers or traders, etc.), and expenditures used to provide public goods that benefit the sector collectively, such as agricultural research and extension, off-farm irrigation and infrastructure, inspection services.

3) **Policy transfers versus administrative costs**: the MAFAP method also makes a distinction between administrative costs and 'policy transfers'. Administrative costs include expenditures related to running costs of government institutions, training of government officials, policy documents preparation, whereas 'policy transfers' include all other public expenditures on food and agriculture.

4) **Level of disaggregation**: the MAFAP classification is more disaggregated than other approaches in terms of mapped categories (types of expenditure), which allows for a more detailed analysis of the composition of public spending on food and agriculture, as shown in Figure 1 and further explained in Appendix 1.[1]

5) **Frequency of the update**: one key benefit of the MAFAP PE approach is the 'monitoring' aspect: data are updated on a regular basis (yearly in the past, every two years from 2021) and updates are performed in collaboration with government partners that are also trained and involved in almost all steps, from data collection to classification, analysis of the results and policy dialogues around those.

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[1] A review of initiatives and approaches to track public spending to the agriculture sector is available at: https://www.fao.org/in-action/mafap/resources/detail/en/c/281359/

Figure 1. Schematic chart of how MAFAP classifies public expenditure

TYPE | AGENT/SECTOR | CATEGORIES | SUB-CATEGORIES

Agriculture-specific expenditure
- Transfers to agents
  - Transfers to producers
    - Production subsidies
    - Input subsidies
    - Income support
    - Other support
  - Transfers to other agents
  - Transfers to consumers
    - Food aid
    - Cash transfers
    - School meals
    - Other support
- Administration costs
- General support
  - Agriculture research
  - Technical assistance
  - Training
  - Extension services
  - Inspection
  - Agriculture infrastructure
    - Feeder roads
    - Off-farm irrigation
    - Other
  - Storage/public stockholding
  - Marketing
  - Other support

Agriculture-supportive expenditure
- Rural education
- Rural health
- Rural infastructure
  - Roads
  - Water and sanitation
  - Energy
  - Other
- Other rural support

Source: MAFAP. 2015. *MAFAP Methodology working paper: Volume II. Analysis of Public Expenditure on Food and Agriculture. MAFAP Technical Notes Series.* FAO, Rome.

The main indicators produced following the approach outlined above are summarized in the Figure 2.

Figure 2. Main indicators of public expenditure on food and agriculture by the MAFAP methodology
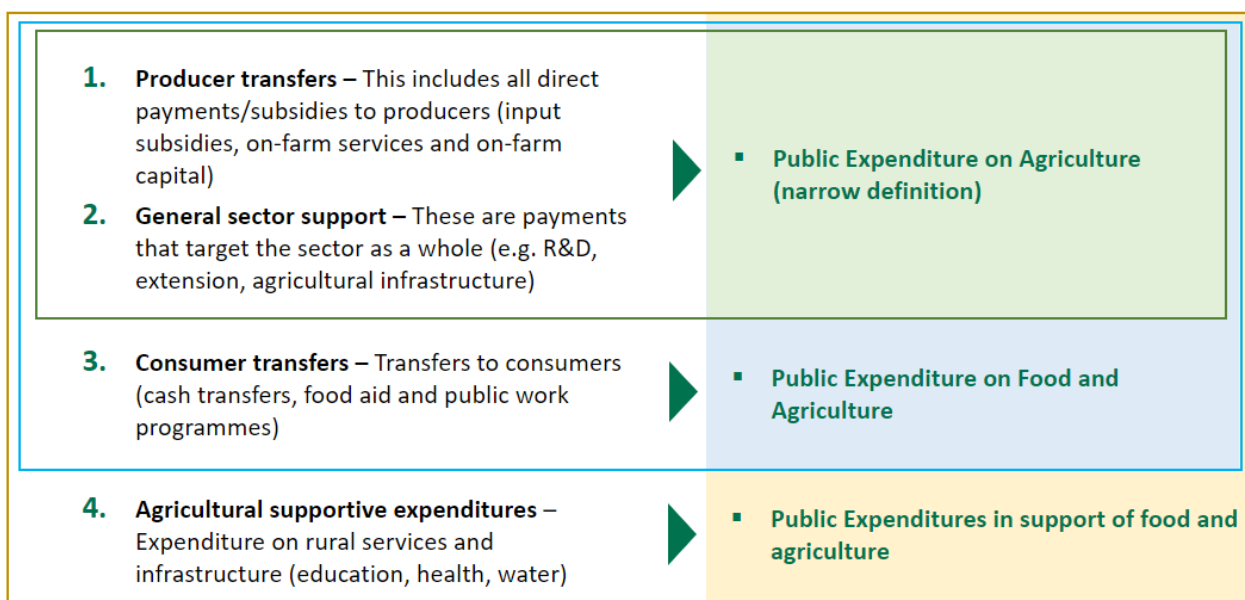
Source: Authors' own elaboration.

2. Data sources and coverage

One of the key objectives of the MAFAP PE approach is to ensure full comparability of indicators across time and across countries. However, data availability and access can vary a lot across these two dimensions. It is therefore important to take data coverage issues into account when analysing public expenditure data. For instance, in Mozambique, MAFAP PE analysis includes the full government budget, including agricultural institutions both at central and subnational level, as well as rural expenditure. However, in Rwanda, MAFAP could only access PE data from three key public institutions related with agriculture (i.e. Ministry of Agriculture, Rwanda Agriculture Board and National Agricultural Export Development Board) and therefore the analysis does not include transfers targeting consumers or rural development expenditures. As a result, total expenditure in support of food and agriculture (including all transfers to agents and rural development expenditures) are not comparable for these two countries. The most comparable aggregates between these two countries would be the agricultural-specific expenditures including administrative costs but excluding consumers transfers.

For some countries, donor data are only available for certain years, which hampers the comparability of expenditures over time for the same country. For instance, in the case of Burundi, donor funding data was not accessible for 2011 and 2013. Given the importance of donor contributions to agriculture in Burundi, this means that the level of expenditure in these two years is not comparable to other years.

To facilitate the interpretation and analysis of the PE data and point to the main data coverage issues, Table 1 outlines the current coverage (as well as main sources) of the MAFAP PE data using the following categories:

- **Full coverage (FC)** – data from all the relevant institutions are covered in the dataset.
- **Fairly good coverage (FGC)** – data cover institutions that are likely to represent the largest portion of the expenditure.
- **Partial coverage (PC)** – data from some institutions are included, but other institutions and/or budget items are missing.
- **No coverage (NC)** – data are not available in the dataset.
- **Not distinguished (ND)** – data for donor (on-budget) expenditure are included in the dataset are not distinguished from national expenditures.

The data coverage is reported across four types of expenditure in Table 1:

1. Central-level expenditures from agriculture ministries (Central - ag ministries);
2. Donor-funded expenditures (on-budget, as specified below);
3. Agricultural-supportive expenditure, rural development programmes and transfers to consumers (bundled under a category named 'AGSUP+CONS');
4. Sub-national expenditures (i.e. expenditure at decentralized level, such as country regions or districts).

Another important caveat in the analysis relates to the fact that in some cases, even when dataset coverage is good and includes also rural or subnational expenditure, certain expenditures categories may be low. This does not necessarily mean that the government is spending little money on these categories. Rather, it may be due to the fact that the structure of the raw dataset does not allow to clearly distinguish the 'rural dimension' of a programme/expenditure line (e.g. distinguishing between health expenditures benefiting rural and urban areas).

Another important coverage issue relates to inclusion of off-budget expenditures. The MAFAP PE dataset includes only on-budget expenditures: therefore, in countries where a large proportion of public spending on food and agriculture is implemented off-budget (usually the case of many donor expenditures), the level of public funding to the sector will be underestimated as off-budget expenditures are not captured

Table 1. Data coverage for Bangladesh

Bangladesh																		
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	FC	FC	FC	FGC
Donor	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	ND	ND	ND	ND
AGSUP+CONS	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	FC	FC	FC	FGC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministry of Finance, accessed through the Integrated Budget and Accounting System (iBAS++) server (2019–2022).

Table 2. Data coverage for Benin

Benin																		
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
Donor	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
AGSUP+CONS	NC	NC	NC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	NC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministère de l'économie et des finances, provided by Ministry of Agriculture (2008–2020).

Table 3. Data coverage for Burkina Faso

Burkina Faso	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
Donor	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
AGSUP+CONS	NC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	NC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministère de l'agriculture et des aménagements hydro-agricoles (2006–2016), Ministère de l'économie, des finances et de la prospective (2017–2020).

Table 4. Data coverage for Burundi

Burundi	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC
Donor	FC	FC	FC	FC	FC	FC	NC	FC	NC	FC	FC	FC	FC	NC	NC	NC	NC	NC
AGSUP+CONS	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC
Sub national	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC

Source: Ministère des finances, du budget et de la planification économique, provided by the Ministère de l'agriculture et de l'élevage (2005–2017).

Table 5. Data coverage for Ethiopia

Ethiopia																		
	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Central – ag ministries	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC
Donor	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC
AGSUP+CONS	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC
Sub national	NC	NC	NC	PC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC

Source: Ministry of Finance, as provided in the World Bank BOOST dataset (2007–2021).

Table 6. Data coverage for Ghana

Ghana																		
	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Central – ag ministries	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	NC	NC
Donor	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	FGC	FGC	FGC	FGC	FGC	NC	NC
AGSUP+CONS	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	NC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministry of Finance and Economic Planning (2016–2020).

Table 7. Data coverage for Kenya

Kenya	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Central – ag ministries	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC
Donor	NC	NC	PC	NC	PC	PC	PC	NC	NC	PC	PC	PC	PC	PC	NC	NC	NC	NC
AGSUP+CONS	NC	NC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	NC	NC	NC	NC
Sub national	NC	NC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	NC	NC	NC	NC

Source: Ministry of Finance, as provided in the World Bank BOOST dataset (2007–2018).

Table 8. Data coverage for Malawi

Malawi	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2022
Central – ag ministries	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC
Donor	NC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	ND	ND	NC
AGSUP+CONS	NC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	PC	NC
Sub national	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC

Source: Ministry of Finance, Economic Planning and Development (2006–2020).

Table 9. Data coverage for Mali

Mali																	
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2022
Central – ag ministries	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC
Donor	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	PC	FGC	FGC	FGC	NC
AGSUP+CONS	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministère de l'agriculture, de l'agro-alimentaire et de la forêt (2005–2018), Ministère de l'économie et des finances (2019–2020).

Table 10. Data coverage for Mauritania

Mauritania																		
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC
Donor	NC	NC	NC	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC
AGSUP+CONS	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministry of Economy and Finance, as provided in the World Bank BOOST database (2009–2021).

Table 11. Data coverage for Mozambique

Mozambique																		
	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Central – ag ministries	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
Donor	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
AGSUP+CONS	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
Sub national	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC

Source: Ministério da Economia e Finanças, extracted by Ministério da Agricultura e Desenvolvimento Rural (2009–2020).

Table 12. Data coverage for Niger

Niger																		
	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Central – ag ministries	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC
Donor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	NC	NC	NC
AGSUP+CONS	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministry of Finance, as provided in the World Bank BOOST database (2004–2018).

Table 13. Data coverage for Nigeria

Nigeria																		
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	NC
Donor	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	ND	ND	ND	ND	ND	ND	ND	NC
AGSUP+CONS	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Federal Ministry of Finance, provided by Federal Ministry of Agriculture and Rural Development (2015–2021).

Table 14. Data coverage for Rwanda

Rwanda																		
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	NC	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
Donor	NC	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	ND	ND	NC	NC
AGSUP+CONS	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministry of Finance and Economic Planning, provided by Ministry of Agriculture and Animal Resources (2012–2020).

Table 15. Data coverage for Senegal

Senegal																		
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
Donor	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
AGSUP+CONS	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC
Sub national	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC

Source: Ministère de l'économie, des finances et du plan (2010–2020).

Table 16. Data coverage for Seychelles

Seychelles																		
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Donor	ND	ND	ND	ND	ND	ND	ND	ND	ND	NC	NC	NC	NC	NC	NC	NC	NC	NC
AGSUP+CONS	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministry of Finance, as provided in the World Bank BOOST database (2004–2013).

Table 17. Data coverage for Sierra Leone

Sierra Leone																		
	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Central – ag ministries	NC	NC	NC	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	NC	NC	NC
Donor	NC	NC	NC	NC	NC	NC	NC	NC	NC	ND	ND	ND	ND	ND	ND	NC	NC	NC
AGSUP+CONS	NC	NC	NC	NC	NC	NC	NC	NC	NC	FGC	FGC	FGC	FGC	FGC	FGC	NC	NC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministry of Finance, as provided in the World Bank BOOST database (2014–2019).

Table 18. Data coverage for United Republic of Tanzania

United Republic of Tanzania																		
	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Central – ag ministries	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC
Donor	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC
AGSUP+CONS	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC
Sub national	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC

Source: Ministry of Finance and Planning, as provided in the World Bank BOOST database (2011–2017).

Table 19. Data coverage for Uganda

Uganda																		
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC
Donor	FGC	FGC	FGC	FGC	NC	NC	NC	NC	NC	NC	NC	NC	FGC	NC	NC	NC	NC	NC
AGSUP+CONS	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	NC	NC	NC	NC	NC
Sub national	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	FGC	NC	NC	NC	NC	NC

Source: Ministry of Finance, Planning and Economic Development, as provided in the World Bank BOOST database (2005–2017).

Table 20. Data coverage for Zambia

Zambia																		
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Central – ag ministries	NC	NC	NC	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	PC	NC	NC	NC
Donor	NC	NC	NC	NC	NC	NC	NC	NC	NC	ND	ND	ND	ND	ND	NC	NC	NC	NC
AGSUP+CONS	NC	NC	NC	NC	NC	NC	NC	NC	NC	FGC	FGC	FGC	FGC	FGC	NC	NC	NC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministry of Finance and National Planning, as provided in the World Bank BOOST database (2014–2019).

Table 21. Data coverage for Zimbabwe

Zimbabwe																		
	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Central – ag ministries	NC	NC	NC	NC	NC	NC	FC	FC	FC	FC	FC	FC	FC	NC	NC	NC	NC	NC
Donor	NC	NC	NC	NC	NC	NC	ND	ND	ND	ND	ND	ND	ND	NC	NC	NC	NC	NC
AGSUP+CONS	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Sub national	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Source: Ministry of Finance and Economic Development, as provided in the World Bank BOOST database (2011–2017).

Data for total government budget are key to compute shares of spending (e.g. to track CAADP commitments/Malabo Declaration's 10% target). Sources for total budget data in the MAFAP covered countries are summarized in Table 16.

Table 22. Sources for total public budget data by country

Country	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Bangladesh															Ministry of Finance			
Benin				Cour Suprême, Chambre des Comptes						Ministère de L'économie et des finances								
Burkina Faso		Ministère de l'Économie, des Finances et de la Prospective																
Burundi		Cour des Comptes/ Banque de la République du Burundi									Banque de la République du Burundi							
Ethiopia			National Bank of Ethiopia															
Ghana											Ministry of Finance and Economic Planning							
Kenya			Ministry of Finance as provided in BOOST database and National Treasury															
Malawi			National Statistics Office and Ministry of Finance											Ministry of Finance				
Mali		Ministère de l'agriculture, de l'agro-alimentaire et de la forêt												Ministère de l'économie et des finances				
Mauritania				Ministry of Economy and Finance														
Mozambique			Ministério da Economia e Finanças															
Niger	Ministry of Finance																	
Nigeria									Federal Ministry of Finance									
Rwanda								Ministry of Finance and Economic Planning										
Senegal					Ministère de L'économie, des finances et du plan													
Seychelles	Ministry of Finance																	
Sierra Leone								Ministry of Finance										

United Republic of Tanzania						Ministry of Finance and Planning					
Uganda	Ministry of Finance, Planning and Economic Development										
Zambia							Ministry of Finance and National Planning				
Zimbabwe							Ministry of Finance and Economic Development				

Source: Authors' own elaboration.

3. Global database compilation

Individual country databases are compiled in local currency units (LCUs). To facilitate comparisons between countries, MAFAP also generates some additional data series (in USD current and constant, per farm etc.), which are briefly explained in this section. The sources and the numbers used for all the additional data used are provided in Appendix 2.

LCU nominal series – This series is obtained by multiplying the Public Expenditure data by the unit in which the budget is expressed. In many West African countries, for example, the data is expressed in thousands or even millions of LCUs. As such, we need to multiply the data by these units to obtain the LCU nominal series. This is given by the following formula:

$$PELCUN_{it} = PELCUB_{it} * BU_i$$

Where PELCUB represents the Public Expenditure in LCUs in the units as they appear in the budget. BU represents the units in which the budget is expressed.

Current USD nominal data series – In order to make data more comparable, we use the LCU/USD exchange rates to obtain the current USD series. This is done through the following formula:

$$PEUSDN_{it} = \frac{PELCUN_{it}}{XR_{it}}$$

Where the variable XR_{it} represents the LCU/USD exchange rate for country i in year t.

Constant (inflation-adjusted) LCU series – Nominal increases in expenditures in a given country do not necessarily mean that a higher quantity of goods and services can be purchased in a given country. This will also depend on the evolution of price-levels in the country. In order to take this into account, we construct a constant LCU series and the base year used is 2011. In order to construct this series, we proceed in the following way:

We first build a deflator series using the following formula:

$$PEdeflator_{it} = \frac{CPI_{it}}{CPI_{i2011}}$$

Essentially, we use the consumer price index (CPI) as a proxy for the price levels in a given country. We then divide the CPI (CPI_{it}) in a given country by the CPI level in 2011 (CPI_{i2011}).

We then adjust the public expenditure series using the following formula:

$$PELCUIad_{it} = \frac{PELCUN_{it}}{PEdeflator_{it}}$$

Where the adjusted series ($PELCUIad_{it}$) is obtained by dividing the nominal LCU series ($PELCUN_{it}$) by the deflator generated in the previous step.

Constant (inflation-adjusted) USD series – The aim of this series is to provide an idea of the increases in expenditure while keeping prices constant (using 2011 as the base year), expressed in USD. In order to get the series expressed in USD at 2011 prices we divide the inflation-adjusted LCU series by the 2011 exchange rate:

$$PEUSDIad_{it} = \frac{PELCUIad_{it}}{XR_{i2011}}$$

Current PPP adjusted series (current international USD) – The previous series increase comparability between countries by taking into account both local inflation and the differences in exchange rate. However, they do not take into account the fact that the prices of goods and services may be very different across countries. A common way to tackle this is to use a purchasing power parity (PPP) conversion factor. In order to obtain this series, we divide the current USD nominal data series by the PPP conversion factor as follows:

$$PEUSDPPP_{it} = \frac{PEUSDN_{it}}{PPPCF_{it}}$$

Where $PEUSDN_{it}$ represents the nominal public expenditures expressed in USD and the PPPCF represents the PPP conversion factor.

Constant expenditure per farm – As the population of a country is likely to be a determinant of the total public budget, a way to compare more populous countries with less populous countries is to divide the total budget by its rural population. In order to generate this series, we use the total rural population of a country and divide this number by 6 (i.e. we assume that there are, on average, 6 household members in a farm). We then divide the constant PPP adjusted series by this number. Mathematically these steps can be expressed as follows:

$$nfarms = \frac{popru_{it}}{6}$$

Where the popru_it represents the total rural population of a country. We then divide the Constant PPP adjusted series by the number of farms:

$$PEUSDIadpfarm_{it} = \frac{PEUSDIad_{it}}{nfarms}$$

4. Comparability aspects

Given the aspects discussed in previous sections, users of the MAFAP database, should be aware of a number of comparability issues. The main ones are discussed below.

Comparability across time within a country: in general, for most countries, PE indicators are comparable across time in terms of coverage. However, there are exceptions, as also highlighted in Table 1. Furthermore, it should be noted that, since macroeconomic factors within a country (e.g. inflation) can affect the level of expenditure, shares are more comparable than absolute aggregate values over time.

Cross-country comparability: while MAFAP strives to produce PE indicators that are as much comparable as possible across countries, there are two key limitations that may undermine such comparability and should be taken into consideration, namely:

- *Varying quality of information:* in certain countries, raw PE data are broken down at a very disaggregated level and there is good information on most food and agricultural programmes and projects, which allows for a fair classification. In other countries, detailed information is often not available or is 'vague' (e.g. proportion of expenditures spent on different categories may be missing), which necessarily leads to the use of assumptions when classifying data.

- *Subjective biases in the data classification:* while MAFAP continues to improve its internal guidelines to harmonize classification and minimize the issues associated to classification biases, some differences in the way data are classified may persist. In some cases, where project classifications are not clear-cut, this can lead to biases. In addition, for countries where there is no or little project information or classification is not clear-cut, the analyst is forced to rely more on local knowledge for the classification, which can introduce some further bias and make data less comparable across countries.

In addition to these limitations, users wishing to analyse agricultural-supportive expenditures (those related rural development) should be aware of two additional factors that hamper the comparability between countries for these categories, namely:

- Different data coverage as in some countries, expenditures from ministries other than the ministry of agriculture are only partially captured.

- Distinction between rural and non-rural expenditures proves sometimes challenging. Generally, this distinction is made based on a) project name, b) project documentation, and/or c) geographical markers in the database. However, in many countries, the raw data do not have geographical markers and enough project documentation

to disentangle the 'rural' nature of the expenditure. In these cases, MAFAP follows a conservative approach and considers these expenditures as non-rural. This implicitly leads to a bias in favor of countries that either have geographical markers or name of the location in their raw budget data.

Given these limitations on agricultural-supportive expenditure indicators, the most comparable aggregates across countries are agriculture-specific expenditures (excluding payments to consumers) including administrative costs. Consumer-related expenditures also present some issues, as in some countries coverage of social security programmes targeting consumers is partial (see Tables 1–20).

Comparability with other PE monitoring initiatives: as explained above, MAFAP's approach aims at capturing public expenditures on the agrifood sector, including also on rural development. As such, its definition is, by construction, broader than that of other commonly used approaches to monitor PE (e.g. COFOG and African Union Commission guidelines) and total PE reported by MAFAP are likely to be higher. However, agriculture-specific expenditures including administrative costs and excluding consumer transfers, as aggregate, are broadly comparable to the agricultural expenditure estimated by other approaches.

Comparability across PE indicators: as explained in section 3, PE indicators computed by MAFAP are several (e.g. inflation-adjusted, currency-adjusted, PPP-adjusted, *per farm*) to allow stronger analysis and comparability across countries. However, users should be aware of some of the limitations of these indicators, such as:

- The basket of goods that is used to compute the PPP adjustment factor, may not necessarily be a good reflection of the types of goods and services purchased by the government.

- The *per farm* series implicitly assumes that the total rural population is composed of farmers and that the average household is composed of six members. This is a strong assumption to be aware of, when interpreting the results.

- The choice of the base year is likely to have a large effect on the constant dollar series for each country.

Annexes

Annex 1. Schematic view of MAFAP public expenditure categories

Table A1. Schematic view of MAFAP public expenditure categories

	CATEGORY	AGENT/SECTOR	DEFINITION
SPECIFIC	Administrative costs	Sector	This category covers expenditures such as running costs of ministries not tied to a specific category as well as expenditures related to policy formulation and policy coordination.
	A. Production subsidies based on outputs	Producer	Monetary transfers to agricultural producers based on output of a specific agricultural commodity.
	B. Production subsidies based on outputs	Producer	Monetary transfers to agricultural producers that are based on on-farm use of inputs.
	B1. Variable inputs	Producer	Monetary transfers reducing the on-farm cost of a specific variable input. Includes seeds, fertilizer, energy, credit and others.
	B2. Capital	Producer	Monetary transfers reducing the on-farm investment cost of farm buildings, equipment, plantations, irrigation, drainage and soil improvements.
	B3. On-farm services	Producer	Monetary transfers reducing the cost of on-farm technical assistance and training.
	C. Income support	Producer	Monetary transfers to agricultural producers based on their level of income.
	D. Non-classified (producer)	Producer	Monetary transfers to agricultural producers individually for which there is insufficient information to allocate them into above listed categories.
	E. Food aid	Consumer	Monetary transfers to final consumers to reduce the cost of food.
	F. Cash transfers	Consumer	Monetary transfers to final consumers to increase their food consumption expenditure.
	G. School meals programmes	Consumer	Monetary transfers to final consumers to provide free or reduced-cost food in schools.
	H. Non-classified (consumers)	Consumer	Monetary transfers to final consumers individually for which there is insufficient information to allocate them to the above listed categories.
	Payments to transporters	Transporters	Monetary transfers to transporters.
	Payments to input suppliers	Input suppliers	Monetary transfers to input suppliers.
	Payments to traders	Traders	Monetary transfers to traders.
	Payments to other agents	Other agents	Monetary transfers to other agents in the agricultural sector.
	I. Agricultural research	Sector	Public expenditures financing research activities improving agricultural production.
	J. Technical assistance	Sector	Public expenditures financing technical assistance for agricultural sector agents.
	K. Technical assistance	Sector	Public expenditures financing training for agents of the agricultural sector.
	L. Extension	Sector	Public expenditures financing the collective provision of extension services.
	M. Inspection	Sector	Public expenditures financing control of the quality and safety of food, agricultural inputs and the environment.
	N. Agricultural infrastructure	Sector	Public expenditures on agricultural infrastructure.
	N1. Feeder roads	Sector	Public expenditures financing feeder roads.
	N2. Irrigation	Sector	Public expenditures financing off-farm irrigation.
	N3. Other agricultural infrastructure	Sector	Public expenditures financing other off-farm infrastructure.

	O. Storage/public stockholding	Sector	Public expenditures financing storage of agrifood products.
	P. Marketing	Sector	Public expenditures financing assistance in marketing of agrifood products.
	Q. Other general sector expenditure	Sector	Other transfers to agrifood sector not classified in categories above. Note: Often includes early warning systems, general forestry and subnational expenditures not tied to a category.
SUPPORTIVE	R. Rural education	Sector (rural)	Public expenditures on education in rural areas.
	S. Rural health	Sector (rural)	Public expenditures on health services in rural areas.
	T. Rural infrastructure	Sector (rural)	Public expenditures on rural infrastructure.
	T1. Rural roads	Sector (rural)	Public expenditures on rural roads.
	T2. Rural water	Sector (rural)	Public expenditures on rural water.
	T3. Rural energy	Sector (rural)	Public expenditures on rural energy.
	T4. Other rural infrastructure	Sector (rural)	Public expenditures on other rural infrastructure.
	U. Non-classified (ag supportive)	Sector (rural)	Other public expenditure not classified in the above categories.

Source: Authors' own elaboration.

Annex 2. Data assumptions used in global database by country

Table A2. Data assumptions for Bangladesh

Bangladesh					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2019	84.45	0.37	3.66	1.91	103 604 879.00
2020	84.87	0.38	3.84	1.98	103 504 655.00
2021	85.08	0.38	4.12	2.07	103 398 765.00
2022	91.75	0.36	5.05	2.17	103 206 552.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A3. Data assumptions for Benin

Benin					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2008	446.00	0.48	6.43	0.93	5 159 607.00
2009	470.29	0.46	2.54	0.96	5 266 858.00
2010	494.79	0.44	0.88	0.96	5 375 270.00
2011	471.25	0.47	3.73	1.00	5 484 900.00
2012	510.56	0.46	7.70	1.08	5 595 366.00
2013	493.90	0.47	1.40	1.09	5 706 707.00
2014	493.76	0.46	-0.25	1.09	5 820 544.00
2015	591.21	0.37	0.85	1.10	5 937 048.00
2016	592.61	0.36	0.68	1.11	6 054 660.00
2017	580.66	0.37	-0.37	1.10	6 173 197.00
2018	555.45	0.38	0.67	1.11	6 291 307.00
2019	585.95	0.36	-0.40	1.11	6 408 115.00
2020	574.29	0.37	2.88	1.14	6 521 955.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A4. Data assumptions for Burkina Faso

Burkina Faso					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2006	522.43	0.37	-0.66	0.79	11 118 137.00
2007	478.63	0.40	2.49	0.81	11 363 537.00
2008	446.00	0.46	9.16	0.88	11 621 238.00
2009	470.29	0.44	2.41	0.90	11 881 653.00
2010	494.79	0.43	3.78	0.94	12 146 783.00
2011	471.25	0.47	6.74	1.00	12 419 447.00
2012	510.56	0.47	5.82	1.06	12 704 037.00

2013	493.90	0.47	-2.13	1.04	12 989 920.00
2014	493.76	0.47	-0.62	1.03	13 275 977.00
2015	591.21	0.38	-2.22	1.01	13 564 948.00
2016	592.61	0.36	2.60	1.03	13 852 529.00
2017	580.66	0.36	1.42	1.05	14 134 437.00
2018	555.45	0.37	1.07	1.06	14 405 827.00
2019	585.91	0.35	0.90	1.07	14 670 338.00
2020	575.59	0.37	6.56	1.14	14 935 196.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A5. Data assumptions for Burundi

Burundi					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2005	1081.58	0.27	18.84	0.56	6 696 167.00
2006	1028.68	0.28	2.85	0.57	6 921 702.00
2007	1081.87	0.28	8.27	0.62	7 160 953.00
2008	1185.69	0.31	24.22	0.77	7 440 530.00
2009	1230.18	0.33	10.46	0.85	7 805 682.00
2010	1230.75	0.35	8.56	0.92	8 155 352.00
2011	1261.07	0.37	8.36	1.00	8 423 640.00
2012	1442.51	0.37	14.29	1.14	8 698 973.00
2013	1555.09	0.35	7.95	1.23	8 984 203.00
2014	1546.69	0.35	5.31	1.30	9 259 032.00
2015	1571.90	0.36	21.32	1.58	9 431 523.00
2016	1,654.63	0.32	0.97	1.59	9 188 748.00
2017	1729.06	0.33	11.45	1.77	9 738 163.00
2018	1782.88	0.31	-2.85	1.72	9 995 643.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A6. Data assumptions for Ethiopia

Ethiopia					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2007	8.97	0.31	17.22	0.51	68 781 680.00
2008	9.60	0.37	30.31	0.66	70 429 747.00
2009	11.78	0.41	24.15	0.82	72 085 216.00
2010	14.41	0.33	1.44	0.83	73 782 698.00
2011	16.90	0.31	20.06	1.00	75 534 019.00
2012	17.70	0.38	33.54	1.34	77 298 928.00

2013	18.63	0.39	4.90	1.40	79 050 945.00
2014	19.59	0.37	10.98	1.55	80 796 875.00
2015	20.58	0.39	10.84	1.72	82 563 655.00
2016	21.73	0.38	10.40	1.90	84 375 675.00
2017	23.87	0.38	6.68	2.03	86 222 946.00
2018	27.43	0.36	12.38	2.28	88 055 633.00
2019	29.07	0.37	12.86	2.57	89 898 498.00
2020	34.93	0.39	18.25	3.04	91 766 343.00
2021	43.73	0.36	21.76	3.71	93 611 468.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A7. Data assumptions for Ghana

Ghana					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2016	3.91	0.39	15.75	2.88	13 373 618.00
2017	4.35	0.41	10.68	3.19	13 477 013.00
2018	4.59	0.42	10.57	3.53	13 564 560.00
2019	5.22	0.39	8.48	3.83	13 646 945.00
2020	5.60	0.39	9.37	4.19	13 725 263.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A8. Data assumptions for Kenya

Kenya					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2007	67.32	0.39	8.13	0.61	29 508 944.00
2008	69.18	0.43	15.15	0.70	30 252 283.00
2009	77.35	0.42	27.70	0.89	31 006 755.00
2010	79.23	0.41	1.64	0.91	31 731 712.00
2011	88.81	0.40	10.07	1.00	32 415 926.00
2012	84.53	0.45	9.52	1.10	33 067 204.00
2013	86.12	0.44	7.34	1.18	33 686 548.00
2014	87.92	0.44	7.64	1.27	34 272 609.00
2015	98.18	0.40	9.24	1.38	34 830 333.00
2016	101.50	0.39	5.85	1.46	35 391 766.00
2017	103.41	0.39	7.58	1.57	35 946 533.00
2018	101.30	0.40	4.22	1.64	36 450 926.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A9. Data assumptions for Malawi

Malawi				
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2006	136.01	0.39	19.97	0.62	11 131 671.00
2007	139.96	0.39	4.10	0.65	11 439 429.00
2008	140.52	0.42	11.96	0.73	11 760 730.00
2009	141.17	0.45	7.90	0.78	12 092 750.00
2010	150.49	0.47	12.13	0.88	12 430 590.00
2011	156.52	0.50	13.99	1.00	12 772 398.00
2012	249.11	0.38	17.64	1.18	13 117 544.00
2013	364.41	0.31	27.05	1.49	13 466 259.00
2014	424.90	0.34	20.97	1.81	13 819 741.00
2015	499.61	0.37	19.81	2.17	14 175 692.00
2016	718.01	0.31	20.29	2.61	14 532 652.00
2017	730.27	0.34	10.58	2.88	14 892 509.00
2018	732.33	0.36	6.13	3.06	15 256 915.00
2019	745.54	0.37	7.73	3.29	15 627 061.00
2020	749.53	0.40	9.06	3.59	16 000 221.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A10. Data assumptions for Mali

Mali				
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2005	527.26	0.32	7.50	0.70	8 954 866.00
2006	522.43	0.33	4.65	0.73	9 150 660.00
2007	478.63	0.36	4.56	0.76	9 348 036.00
2008	446.00	0.41	7.28	0.82	9 545 096.00
2009	470.29	0.41	4.64	0.85	9 741 147.00
2010	494.79	0.40	4.36	0.89	9 938 831.00
2011	471.25	0.46	12.18	1.00	10 137 272.00
2012	510.56	0.44	4.61	1.05	10 305 330.00
2013	493.90	0.44	0.65	1.05	10 474 824.00
2014	493.76	0.44	1.27	1.07	10 672 205.00
2015	591.21	0.37	2.88	1.10	10 869 374.00
2016	592.61	0.36	1.35	1.11	11 073 642.00
2017	580.66	0.37	1.93	1.13	11 283 238.00
2018	555.45	0.38	1.46	1.15	11 490 927.00
2019	585.91	0.36	1.93	1.17	11 695 460.00
2020	575.59	0.37	0.53	1.18	11 904 776.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A11. Data assumptions for Mauritania

Mauritania					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2009	26.24	0.33	-0.36	0.70	1 804 646.00
2010	27.59	0.38	22.34	0.85	1 826 403.00
2011	28.11	0.43	17.55	1.00	1 850 477.00
2012	29.66	0.41	0.46	1.00	1 876 234.00
2013	30.07	0.40	4.49	1.05	1 897 456.00
2014	30.27	0.39	-11.88	0.92	1 913 785.00
2015	32.47	0.36	-4.79	0.88	1 930 136.00
2016	35.24	0.33	11.21	0.98	1 946 447.00
2017	35.79	0.31	1.58	0.99	1 962 529.00
2018	35.68	0.32	4.55	1.04	1 978 535.00
2019	36.69	0.32	5.33	1.10	1 994 344.00
2020	37.19	0.33	6.44	1.17	2 009 661.00
2021	36.06	0.35	7.46	1.25	2 024 451.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A12. Data assumptions for Mozambique

Mozambique					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2009	27.52	0.58	1.47	0.91	15 407 703.00
2010	33.96	0.50	7.65	0.98	15 729 357.00
2011	29.07	0.58	2.35	1.00	16 077 251.00
2012	28.37	0.64	3.18	1.03	16 444 410.00
2013	30.10	0.61	2.60	1.06	16 827 754.00
2014	31.35	0.59	1.09	1.07	17 217 312.00
2015	39.98	0.46	7.06	1.15	17 609 169.00
2016	63.06	0.31	12.16	1.28	18 023 216.00
2017	63.58	0.36	7.98	1.39	18 440 146.00
2018	60.33	0.38	3.80	1.44	18 834 813.00
2019	62.55	0.38	4.68	1.51	19 222 873.00
2020	69.47	0.35	3.17	1.56	19 619 219.00

Source: World Bank. 2024. Open Data - Global Development. In: *World Bank*. Washington, DC. 26 April 2024.
https://data.worldbank.org

Table A13. Data assumptions for Niger

Niger					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2005	527.26	0.36	8.58	0.75	11 604 856.00
2006	522.43	0.36	1.50	0.76	12 032 552.00
2007	478.63	0.41	7.04	0.81	12 479 352.00
2008	446.00	0.47	10.13	0.89	12 946 955.00
2009	470.29	0.46	4.19	0.93	13 435 763.00
2010	494.79	0.45	3.48	0.96	13 947 145.00
2011	471.25	0.48	3.97	1.00	14 480 483.00
2012	510.56	0.46	5.31	1.05	15 043 639.00
2013	493.90	0.49	-0.37	1.05	15 629 889.00
2014	493.76	0.49	-0.41	1.04	16 230 067.00
2015	591.21	0.42	2.25	1.07	16 857 908.00
2016	592.61	0.43	1.79	1.09	17 513 591.00
2017	580.66	0.45	0.37	1.09	18 183 772.00
2018	555.45	0.47	2.40	1.12	18 868 776.00

Table A14. Data assumptions for Nigeria

Nigeria					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2015	192.44	0.50	2.86	1.24	95 975 881.00
2016	253.49	0.42	9.54	1.36	96 818 209.00
2017	305.79	0.38	11.12	1.51	97 678 669.00
2018	306.08	0.41	10.23	1.67	98 511 358.00
2019	306.92	0.44	10.38	1.84	99 300 013.00
2020	358.81	0.40	7.85	1.98	100 084 652.00
2021	401.15	0.38	10.13	2.19	100 840 661.00

Table A15. Data assumptions for Rwanda

Rwanda					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2012	614.30	0.49	4.72	1.05	9 003 656.00
2013	646.64	0.47	2.69	1.08	9 220 004.00
2014	682.44	0.44	4.73	1.13	9 439 566.00
2015	719.86	0.42	0.49	1.13	9 663 190.00

2016	787.25	0.40	5.03	1.19	9 895 965.00
2017	831.55	0.39	8.14	1.29	10 135 893.00
2018	861.09	0.37	-0.64	1.28	10 374 959.00
2019	899.35	0.35	2.45	1.31	10 612 900.00
2020	943.28	0.35	6.72	1.40	10 854 688.00

Table A16. Data assumptions for Senegal

Senegal					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2010	494.79	0.48	1.60	0.96	7 045 311.00
2011	471.25	0.51	3.86	1.00	7 186 286.00
2012	510.56	0.48	3.27	1.03	7 330 039.00
2013	493.90	0.50	1.19	1.04	7 474 978.00
2014	493.76	0.49	-1.52	1.03	7 622 759.00
2015	591.21	0.41	1.07	1.04	7 772 149.00
2016	592.61	0.41	0.96	1.05	7 922 068.00
2017	580.66	0.43	0.60	1.06	8 073 041.00
2018	555.45	0.43	-0.84	1.05	8 224 798.00
2019	585.91	0.41	2.09	1.07	8 375 929.00
2020	575.59	0.42	1.60	1.09	8 526 730.00

Table A17. Data assumptions for Seychelles

Seychelles					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2005	5.50	0.74	0.46	0.53	40 045.00
2006	5.52	0.73	1.44	0.54	40 634.00
2007	6.70	0.65	11.08	0.60	40 573.00
2008	9.46	0.60	31.93	0.79	41 201.00
2009	13.61	0.53	28.21	1.01	41 057.00
2010	12.07	0.58	-2.11	0.99	41 890.00
2011	12.38	0.56	1.06	1.00	40 468.00
2012	13.70	0.56	10.45	1.10	40 513.00
2013	12.06	0.66	5.64	1.17	40 894.00

Table A18. Data assumptions for Sierra Leone

Sierra Leone				
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2014	4.52	0.40	1.80	1.22	4 253 565.00
2015	5.08	0.37	19.64	1.46	4 328 224.00
2016	6.29	0.31	5.85	1.54	4 404 323.00
2017	7.38	0.30	8.96	1.68	4 480 934.00
2018	7.93	0.32	14.01	1.92	4 555 219.00
2019	9.01	0.29	7.70	2.07	4 628 214.00

Table A19. Data assumptions for United Republic of Tanzania

United Republic of Tanzania				
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2011	1557.43	0.35	12.20	1.00	33 049 142.00
2012	1571.70	0.41	10.48	1.10	33 692 572.00
2013	1597.56	0.44	9.67	1.21	34 381 013.00
2014	1653.23	0.46	6.05	1.28	35 110 823.00
2015	1991.39	0.40	7.59	1.38	35 930 359.00
2016	2177.09	0.39	7.47	1.49	36 812 067.00
2017	2228.86	0.40	2.67	1.53	37 669 090.00
2018	2263.78	0.39	3.01	1.57	38 469 815.00

Table A20. Data assumptions for Uganda

Uganda				
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2005	1780.54	0.36	-1.74	0.40	23 206 847.00
2006	1831.45	0.34	2.41	0.41	23 759 492.00
2007	1723.49	0.36	7.32	0.44	24 326 365.00
2008	1720.44	0.40	6.36	0.47	24 900 929.00
2009	2030.49	0.40	85.35	0.87	25 482 464.00
2010	2177.56	0.39	5.64	0.91	26 072 931.00
2011	2522.80	0.37	9.39	1.00	26 670 552.00
2012	2504.56	0.39	3.84	1.04	27 273 317.00
2013	2586.89	0.40	3.59	1.08	27 880 935.00
2014	2599.79	0.42	5.11	1.13	28 522 730.00
2015	3240.65	0.40	5.19	1.19	29 209 851.00

| 2016 | 3420.10 | 0.35 | 4.78 | 1.25 | 29 981 884.00 |
| 2017 | 3611.22 | 0.36 | 4.65 | 1.30 | 30 819 206.00 |

Table A21. Data assumptions for Zambia

Zambia					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2014	6.15	0.50	5.44	1.24	9 225 180.00
2015	8.63	0.39	6.66	1.32	9 439 084.00
2016	10.31	0.38	13.55	1.50	9 651 859.00
2017	9.52	0.44	10.10	1.65	9 864 042.00
2018	10.46	0.42	7.41	1.77	10 073 534.00
2019	12.89	0.36	7.63	1.91	10 279 833.00

Table A22. Data assumptions for Zimbabwe

Zimbabwe					
Year	XR	PPP_ADJ	Inflation	Deflator	Rural population
2011	1.00	0.52	2.17	1.00	8 725 322.00
2012	1.00	0.55	4.86	1.05	8 909 792.00
2013	1.00	0.56	8.09	1.13	9 129 035.00
2014	1.00	0.55	0.62	1.14	9 352 079.00
2015	1.00	0.54	0.37	1.14	9 570 861.00
2016	1.00	0.52	2.01	1.17	9 785 059.00
2017	1.00	0.51	3.06	1.20	9 995 789.00

MONITORING AND ANALYSING FOOD AND AGRICULTURAL POLICIES [MAFAP]

The Monitoring and Analysing Food and Agricultural Policies (MAFAP) programme seeks to establish country owned and sustainable systems to monitor, analyse, and reform food and agricultural policies to enable more effective, efficient and inclusive policy frameworks in a growing number of developing and emerging economies.

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