

IFPRI Nexus SAMs: Annual Release Note 2024

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The Nexus Project is pleased to provide an update on the [Nexus Social Accounting Matrices \(SAMs\)](#) developed and released by IFPRI in collaboration with national statistical agencies and research institutions in 2024. This Annual Release Note provides a brief overview of SAMs and the Nexus Project. It serves as a useful one-stop shop for obtaining links to the latest versions of all Nexus SAMs.

For more information or questions, please email IFPRI-Nexus@cgiar.org

What is a SAM?

SAMs are economywide databases constructed to conduct SAM multiplier analyses and calibrate economywide models, such as computable general equilibrium (CGE) models. They are constructed using a standardized toolkit developed by IFPRI that ensures consistency and transparency across datasets. These datasets are the foundation for CGE modeling, which is at the core of IFPRI's [Rural Investment and Policy Analysis \(RIAPA\) data and modeling system](#).

What is the Nexus Project?

The Nexus Project establishes common data standards and classification systems for constructing and updating national SAMs. Nexus SAMs ensure greater data transparency, source traceability, and consistency across countries. These features facilitate collaboration among users, such as researchers and policy analysts.

What are the distinguishing features of Nexus SAM?

The Nexus SAMs are developed using the Nexus SAM Building Toolkit to reconcile disparate information from various data sources. The toolkit uses a standardized template to construct and export an unbalanced SAM to a compilation and cross-entropy-based reconciliation balancing program that is executed in the General Algebraic Modeling System (GAMS).

A typical Nexus SAM includes 90 economic sectors, and more than half of these are in primary agriculture, agrifood processing, and food services. This high level of detail makes Nexus SAMs unique in its representation of national agrifood systems.

IFPRI maintains publicly accessible SAMs for more than 30 countries throughout Africa, Asia, and Latin America.

What does a new SAM build or SAM update entail?

New Nexus SAM build

A new Nexus SAM is constructed in three stages.

1. *First stage:* A Macro SAM is constructed using four key data sources. The **country's national accounts** provide sectoral and expenditure-based GDP estimates to capture transactions across activity and commodity accounts. The International Monetary Fund's (IMF) **Government Finance Statistics (GFS) database** includes detailed information on government revenues and expenditures, and the **IMF Balance of Payments Statistics (BOPS)** provides information on external accounts. **National input-output tables (IOT) or supply-use tables (SUT)** give information on production technologies.
2. *Second stage:* The Macro SAM entries are disaggregated across detailed activities and commodities using agricultural and industrial production data and surveys, as well as international trade and tax data.
3. *Third stage:* Factors and households are disaggregated using income and expenditure shares derived from household and labor force surveys.

Updating an existing SAM

An existing SAM can be updated in three ways.

1. A SAM can be updated to the latest actual GDP estimates for a specific analysis if, at minimum, the GFS and BOPS are available for the same GDP year.

Note that the IOT/SUTs are only updated when national statistical agencies rebase national accounts. This is to revise the methods and benchmark year used to calculate GDP for a more accurate reflection of the economy's size and structure. Likewise, the household survey is only conducted every 5 to 10 years. In these cases, updating a SAM assumes the same input-output structure and household consumption patterns as in past SAMs.

2. An existing SAM can be updated to incorporate new supply-and-use data which are often accompanied by a rebased GDP series (see above). SUTs are instrumental in ensuring the consistency of national accounts by aligning production, income, and expenditure approaches to measuring GDP. SUTs provide information about input-output relationships between economic sectors and actors.
3. A SAM can be updated to incorporate new household survey data.

Table 1 below presents the Nexus SAMs constructed and released in 2024. The second column shows the year of the latest SAM published. Newly rebased GDP series were incorporated in the SAMs for Cambodia, Ethiopia, Guatemala, India, Pakistan, Tajikistan, and Uganda. The third column shows the year of the latest SUT/IOT. Newly released IOTs were used in the Cambodia SAM, and new SUTs were used in the SAMs for Guatemala, India, Pakistan, Tajikistan, Tanzania, and Uganda. The fourth column provides the name of the survey used and the year it was conducted. The last column contains information on the other versions of Nexus SAMs available for the country. Table 2 lists any older SAMs we have that were not updated this year.

Table 1: Nexus SAMs constructed and released in 2024

	SAM base year	Supply-and-use data/ Input-output data	Household survey	Other versions of Nexus SAMs available (⁵)
Bangladesh	2022	2012	Bangladesh Household Income and Expenditure Survey 2016	2018
Cambodia	2022 ⁽²⁾	2022 ⁽³⁾	Cambodia Socio-Economic Survey 2021 ⁽⁴⁾	2018
Colombia	2022	2018	Colombia National Household Budget Survey 2016/17	2019
Ethiopia	2022 ⁽²⁾	2010/11	Ethiopia Household Consumption-Expenditure Survey (HCES) 2015/16 ⁽⁴⁾	2018
Ghana	2022	2013	Ghana Living Standards Survey (GLSS7) 2016/17	2013 , 2015 , 2019
Guatemala ⁽¹⁾	2021 ⁽²⁾	2021 ⁽³⁾	Guatemala National Household Budget Survey 2014 ⁽⁴⁾	N/A
India	2022-2023 ⁽²⁾	2019/20 ⁽³⁾	India Survey on Household Consumption Expenditure 2022/23 ⁽⁴⁾	2017/18
Malawi	2022	2017	Malawi The Fifth Integrated Household Survey 2019/20	2019
Nigeria	2021	2010	Nigeria Living Standards Survey 2018/19	2018
Nepal	2022	2010/11	Nepal Living Standards Survey 2010/11	2018
Pakistan ⁽¹⁾	2023 ⁽²⁾	2015/16 ⁽³⁾	Pakistan Social and Living Standards Measurements 2018/19 ⁽⁴⁾	N/A
Rwanda	2022	2011	Rwanda The Fifth Integrated Household Living Conditions Survey 2016/17	2021
Sudan	2021	2019	Sudan National Household Budget & Poverty Survey 2014/15	2019
Tajikistan ⁽¹⁾	2022 ⁽²⁾	2016 ⁽³⁾	Tajikistan Living Standards Survey 2009 ⁽⁴⁾	N/A
Tanzania	2022	2015 ⁽³⁾	Tanzania Household Budget Survey 2011/12	2018
Uganda	2022 ⁽²⁾	2016/17 ⁽³⁾	Uganda National Household Survey 2016/17	2013

Notes: ⁽¹⁾ First ever Nexus-compliant SAM for this country. ⁽²⁾ First Nexus SAM for this country to incorporate newly rebased GDP series. ⁽³⁾ First Nexus SAM update for this country to incorporate newly released supply-and-use data. ⁽⁴⁾ First Nexus SAM update for this country to incorporate newly released household survey data. ⁽⁵⁾ Links provided where these versions are published.

Table 2: Other available Nexus SAMs released prior to 2024

	SAM base year	Supply-and-use data/ Input-output data	Household survey	Other versions available
Democratic Republic of Congo	2018	2013	DRC Enquête 1-2-3 2012	N/A
Egypt	2019	2017/18	Egypt Household Income, Expenditure, and Consumption Survey 2017/18	2015
Indonesia	2018	2010	Indonesia National Socio-Economic Survey 2015	N/A
Jordan	2015	2006	Jordan Household Expenditure and Income Survey 2013	N/A
Kenya	2021	2016	Kenya Integrated Household Budget Survey 2015/16	2013 , 2019
Lao PDR	2014	2011	Laos Expenditure and Consumption Survey 2007/08	N/A
Mali	2018	2016	Mali Enquête Modulaire et Permanente auprès des Ménages 2016	N/A
Mozambique	2012	2007	Mozambique Inquérito aos Agregados Familiares sobre Orçamento Familiar 2008/09	N/A
Myanmar	2014	2011	Myanmar Integrated Household Living Conditions Assessment 2009/10	N/A
Niger	2018	2015	Niger National Survey on Household Living Conditions and Agriculture 2014	N/A
Philippines	2018	2012	Philippines Family Income and Expenditure Survey 2015	N/A
Papua New Guinea	2019	2016	Papua New Guinea Household Income and Expenditure Survey 2009/10	N/A
Senegal	2018	2015	Senegal Poverty Monitoring Survey 2011	N/A

Tunisia	2015	2015	Tunisia Households' Budget, Consumption and Standard of Living Survey 2015	N/A
Yemen	2014	2012	Yemen Household and Budget Survey 2014	N/A
Vietnam	2015	2012	Vietnam Household Living Standards Survey 2010	N/A
Zambia	2021	2010	Zambia Living Conditions Monitoring Survey 2015	2019

Explore the Nexus SAMs

You can access the full set of Nexus SAMs on the [IFPRI Dataverse](#). We look forward to receiving your feedback and working together to further strengthen economic modeling and policy analysis in developing countries.

For further information, please email: [IFPRI-Nexus](#)

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