50x2030 DATA-SMART AGRICULTURE

ANNUAL REPORT

50x2030

FY24 JULY 1, 2023 – JUNE 30, 2024

THE 50x2030 INITIATIVE

BRIDGING THE AGRICULTURAL DATA GAP

Hoi An, Vietnam. / Photo by Kiril Dobrev via Unsplash.

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01.

MESSAGE FROM THE PROGRAM MANAGEMENT TEAM

PMT - Tanzania

PMT - Cabo Verde

JOURNEY TO 50 COUNTRIES AND DEEPENING ENGAGEMENT

Agriculture remains an important sector for many developing countries, particularly in Sub-Saharan Africa, providing employment opportunities to a majority of the workforce and contributing substantially to national economic growth. Globally, it accounts for about four percent of gross domestic product and much higher in low- and lower middle-income countries, contributing between 15 to 25 percent, respectively. Growth and development in agriculture has the potential to end extreme poverty, curb food insecurity, and is more effective in raising incomes of the poorest population, two to four times greater compared to other sectors.

However, agriculture development has lagged and was not given appropriate attention in some developing countries. The dearth in foundational data on agriculture contributed to a lack of understanding of the drivers of agricultural growth leading to missed opportunities for developing the sector. Data is crucial to inform needed investments and right policies to spur agricultural growth and development, understand

levels of productivity, provide insights into market dynamics, risk factors, value chain analysis and resource optimization. In particular, private sector investments in agriculture relying on frequent and reliable data is important in many developing countries, especially in Africa, to inform and drive growth and development in the sector. Also to be included is the need for countries to assess and manage the impact on agricultural productivity of global shocks such as climate change, COVID-19 pandemic, and the war in Ukraine using quality, up-to-date data.

The 50x2030 Initiative is working to bridge the agriculture data gap by supporting low- and middle-income countries, primarily in Sub-Saharan Africa, to institutionalize a system of regular agriculture surveys that will produce the needed foundational data and ensure that capacities of data users are strengthened to make use of survey data to inform national agriculture development policies, programs, and investments. This Fiscal Year 24 (FY24) Annual Report presents the Initiative's milestones to date as well as its accomplishments during the period.

PMT Mission in Nepal.

PMT Mission in Nigeria.

AFCAS 50x2030 session.

PMT Mission in Nepal.

PMT Mission in Bangladesh.

PMT Mission in Guinea Bissau.

- The Initiative is more than halfway through achieving its target of supporting 50 countries in designing, collecting, and using agricultural data to inform critical policies on food security, sustainability, and agriculture development with a **total of 35 countries already engaged as of the end of FY24**.

- The increase in the number of partner countries was made possible through **strong partnerships with eight different World Bank IDA/IBRD operations that allocated a total of US$ 161.5M funding for agriculture survey data collection** either as a component of regional statistics projects or as integral to agriculture-related projects in countries.

- The **US$ 73.9M contribution from donor partners** of the Initiative, particularly for technical assistance, as well as **US$ 37.5M counterpart funding from a few national governments** are instrumental in increasing the number of partner countries this year.

Icon design by Teewara soontorn via The Noun Project.

FY24 is a crucial period for 50x2030. During this expansion phase of the Initiative, support to countries in Sub-Saharan Africa deepened, a strategic move considering a majority of countries have been behind in generating foundational agricultural data and are in vital need of assistance to build capacities. As a result, the Initiative started implementing a first round of annual agriculture surveys in several countries in the region. Further, there was an upsurge in data use activities in select partner countries to facilitate data awareness and build capacities of government personnel to make use of data generated to inform agriculture policies. Country policy briefs providing analysis of the agricultural situation in countries using 50x2030 survey data have been produced. On methodology and tool development, the Initiative piloted the use of promising technological innovations such as portable in-field soil scanners and all-in-one automatic weather stations that could improve the collection of reliable soil and weather-related data integrated in agricultural survey operations.

The 50x2030 Initiative will continue to expand country partnership to reach its target of 50 countries by 2030 and intensify implementation of survey and data use activities in the coming fiscal year. It will endeavor to continuously improve and fine-tune its operations to adapt to country demands and overall data needs of users both in countries and externally with the objective of making available agriculture survey data and using it to inform national agriculture and food security policies.

02.

ABOUT 50x2030
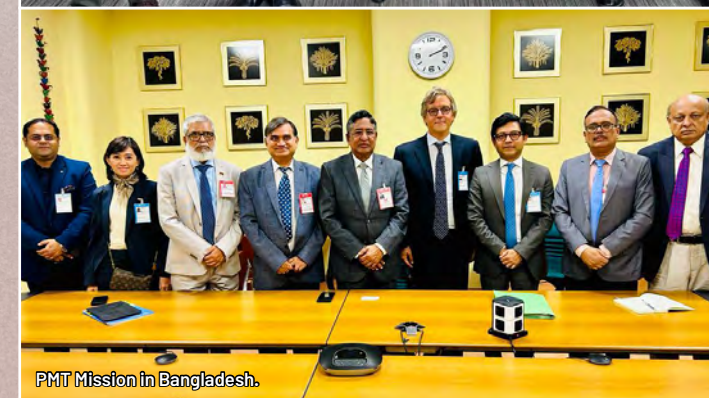
50x2030 Initiative is a multi-agency, long-term program that supports 50 low and lower-middle income countries to sustainably build strong national data systems able to produce high-quality and timely agricultural data. Data produced under 50x2030 are crucial to inform agricultural development policies, programs and plans of partner countries, including investments in agriculture aimed at addressing food security, improving livelihoods, and attaining agriculture sustainability.

Photo by Tobias Nii Kwatei Quartey via Unsplash.

10 countries with Agricultural survey reports available

Munnar, India. / Photo by Bala Karthikeya Pavan Guda via Unsplash.

INDICATORS & DATA SETS AVAILABLE

- Armenia
- Cambodia
- Ethiopia
- Georgia
- Indonesia
- Malawi
- Nepal
- Nigeria
- Senegal
- Uganda

22 Microdata sets disseminated

- Burkina Faso EHCVM-P 2021/22
- Cambodia CIAS 2019, CAS 2020, 2021
- Ethiopia ESS4 2018/19, ESS5 2021/22
- Georgia GSAH 2020, GSAH 2021, PME 2021
- Malawi IHS 2019/20, IHPS 2019
- Mali EAC 2023/24
- Nepal PAGRIS 2019, CLIS 2021
- Nigeria GHS 2018/19
- Senegal EAA 2017/18, 2018/19, 2019/20, 2020/21, 2021/22, 2022/23
- Uganda AAS 2018, UNPS 2019/20

67 data points available in 9 countries to inform 9 Comprehensive Africa Agriculture Development Programme (CAADP) indicators

35 data points on 4 SDG indicators computed in 8 countries

SDG 2.3.1	Volume of production per labor unit by classes of farming/pastoral/forestry enterprise size	11 data points	Cambodia, Ethiopia, Georgia, Indonesia, Malawi, Nigeria, Senegal, Uganda
SDG 2.3.2	Average income of small-scale producers	10 data points	Ethiopia, Georgia, Indonesia, Malawi, Nigeria, Senegal, Uganda
SDG 2.4.1	Proportion of agricultural area under sustainable agriculture	3 data points	Georgia, Indonesia
SDG 5.a.1	Women's and men's land rights	11 data points	Ethiopia, Georgia, Malawi, Nigeria, Indonesia, Senegal, Uganda

35/50

COUNTRIES ENGAGED

(as of June 30, 2024)

22.
countries onboarded and/ or implementing activities

13.
countries onboarding and/ or preparatory phase

18 PIP
Program Implementation Plans signed

Legend

- ☑ Survey/Pilots/Listing completed/ ongoing
- 📊 Statistical survey report/bulletin / Survey/Census Data Sets available
- ⬡ Microdata available
- ⚙ SDG indicators computed
- 🌍 CAADP indicators monitored
- 👁 Data Use Assessment or Rapid Needs Assessment conducted
- ⚙ Data Use Awareness Workshop and/or Data Use Training conducted
- 📋 Policy Briefs produced

GEORGIA   ☑ 📊 ⬡ ⚙ 🌍 👁 ⚙ 📋 4 AGS   PIP

ARMENIA   ☑ ⬡ 1 AGS

NEPAL   ☑ 📊 ⬡ 2 AGS

TUNISIA

SENEGAL   ☑ 📊 ⬡ ⚙ 🌍 👁 ⚙ 📋 6 AGS   PIP

MAURITANIA   ☑

CABO VERDE   ☑ 👁 ⚙   PIP

MALI   ☑ 1 AGS   PIP

NIGER

CHAD

BURKINA FASO   ☑ ⬡ ⚙ 🌍 👁 ⚙ 📋 1 AGS   PIP

CENTRAL AFRICAN REP.   ☑ 2 AGS

ETHIOPIA   ☑ 📊 ⬡ ⚙ 🌍 👁 📋 4 AGS   PIP

CAMBODIA   ☑ 📊 ⬡ ⚙ 🌍 👁 ⚙ 📋 5 AGS   PIP

THE GAMBIA   ☑   PIP

GHANA   ☑   PIP

GUINEA   ☑ 1 AGS

NIGERIA   ☑ 📊 ⬡ ⚙

BENIN   ☑   PIP

CAMEROON

TOGO   ☑   PIP

GABON

UGANDA   ☑ 📊 ⬡ ⚙ 🌍 👁 ⚙ 5 AGS   PIP

TANZANIA   ☑ 2 AGS   PIP

COTE D'IVOIRE   ☑   PIP

LIBERIA   ☑ 1 AGS   PIP

REPUBLIC OF CONGO

MALAWI   ☑ 📊 ⬡ ⚙ 🌍 1 AGS

INDONESIA   ☑ 📊 ⬡ 2 AGS

SIERRA LEONE   ☑ 👁 ⚙ 2 AGS   PIP

ZAMBIA

MOZAMBIQUE

GUINEA BISSAU

ANGOLA   ☑   PIP

MADACASGAR   ☑   PIP

40
Agricultural Surveys completed including full surveys, and pilots
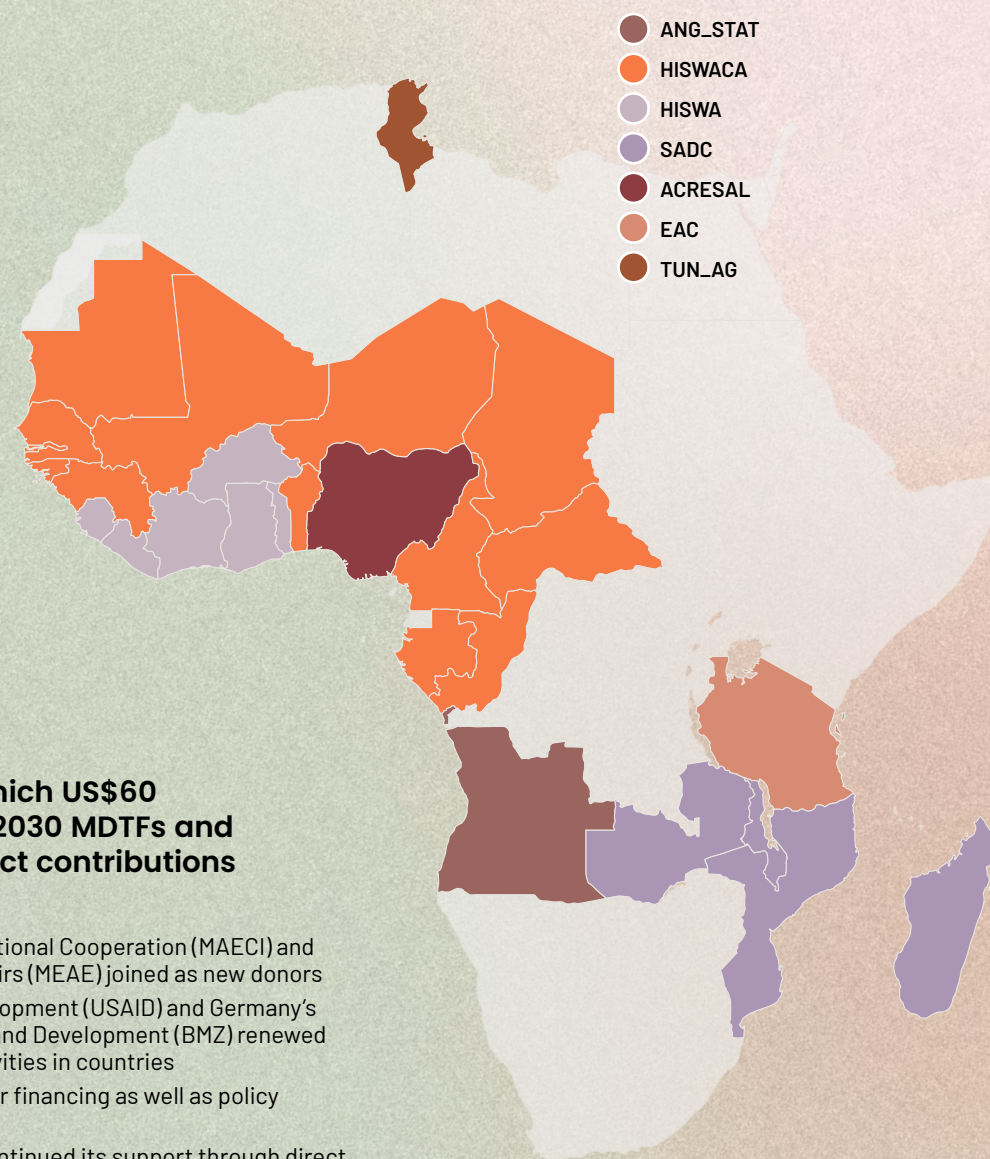
AGS

FINANCING

US$161.5m

funding raised from partnerships with eight World Bank IDA/IBRD projects to produce useful, high quality agriculture data

- Harmonizing and Improving Statistics in West Africa (HISWA)
- Harmonizing and Improving Statistics in West and Central Africa (HISWACA SOP 1 and 2)
- Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL)
- Eastern Africa Regional Statistics Program-for-Results (EAC)
- Southern African Development Community (SADC) Regional Statistics Project
- Angola Strengthening Statistical Capacity (ANG_STAT)
- Tunisia Emergency Food Security Response (TUN_AG)

US$37.5m

share of countries from national budget

- ANG_STAT
- HISWACA
- HISWA
- SADC
- ACRESAL
- EAC
- TUN_AG

US$73.9m

overall donor contributions, of which US$60 million received through the 50x2030 MDTFs and Other Funding Mechanisms (direct contributions to Implementing Agencies)

- Italy's Ministry of Foreign Affairs and International Cooperation (MAECI) and France's Ministry of Europe and Foreign Affairs (MEAE) joined as new donors
- United States Agency for International Development (USAID) and Germany's Federal Ministry for Economic Cooperation and Development (BMZ) renewed commitments, supporting key program activities in countries
- USAID mobilized several country missions for financing as well as policy advocacy support
- Bill and Melinda Gates Foundation (BMGF) continued its support through direct contribution to FAO
- Australia's Department of Foreign Affairs and Trade (DFAT) and the European Union provided support in the early years of 50x2030

28

countries with IDA/IBRD for agriculture surveys

Laos. / Photo by Simon Berger via Unsplash.

03. PERFORMANCE HIGHLIGHTS

KEY ACHIEVEMENTS FY24

In FY24, the 50x2030 Initiative contributed to informing country policies on food security and agricultural sustainability. With an increasing number of partner countries joining the program, implementation of activities has expanded significantly. These include technical assistance and support in designing annual agriculture survey programs, conducting surveys, generating and disseminating data sets, building capacities in analyzing data, and assisting countries in producing policy briefs to aid in better decision-making, among others.

Continued research and studies were undertaken specifically in the measurement of soil health and climate at the local level, land area measurement using newly developed Survey Solutions features, and the implementation of mixed-mode (phone and in-person) surveys for improved measurement of agricultural labor and non-labor inputs. New modules were developed and piloted on digital agriculture and climate-related perceptions. Papers have been published.

The Initiative continued with its advocacy through engaging with various partners and participating in events including in the Conference on Food Systems, UN Commission on Agriculture Statistics in Africa and Asia and Pacific, SDG2 Advocacy Hub, and others meant to showcase knowledge products and value added it provides.

Photo by Arka Roy via Unsplash.

ENGAGEMENT, COORDINATION & ADVOCACY

8

PIPs signed articulating the survey program, data collection and data use plans

- Angola
- Benin
- Cabo Verde
- Gambia
- Cote d'Ivoire
- Madagascar
- Mali
- Tanzania

11

global, regional, and national events (co-)organized to bolster the Initiative's advocacy activities

- AFCAS28
- APCAS30
- CFS
- AAAE
- Asian Evaluation Week
- CFS51
- Francophone Africa Risk Finance Knowledge Week
- UNGA78
- SDG2 Advocacy Hub
- Ghana National Dialogue on Food Security Statistics
- GSARSII final year conference

120

events/meetings such as workshops, seminars, missions in various partner countries and regional and global fora had active participation from 50x2030

PMT advocacy in Mauritania.

As the Initiative strives to remain relevant and responsive to the needs of its partner countries, the Program Management Team carried out necessary changes as well as new activities to improve the way it conducts business. Some of these include:

- Review of the 50x2030 results framework and preparation of the draft Theory of Change with revised indicators and targets to better assess the Initiative's progress and results.
- Preliminary data audit of existing data sets in four countries (Cambodia, Ethiopia, Georgia, Senegal).
- Revamp of the 50x2030 website, updating of other communication products (brand assets, brochure, 50x2030 Overview PowerPoint), and expanding social media presence (LinkedIn, Facebook, Twitter) resulting in an increase in the number of followers by 35 percent.
- Resource mobilization strategy updates to further tap potential new World Bank IDA/IBRD projects and partner-donors.
- Prepared paper identifying key choke points of data use in policymaking and defining approach to promote data use taking into context countries' political economy.

50x2030.org

23,000

total unique visits

↳ **7,756**

unique visitors in FY24 (50x2030 website) an increase of three percent from previous period.

30+ f X in

posts on each social media channel including reposts/ retweets

18,599

total 50x2030 microdata datasets downloaded from the World Bank Microdata Library since inception

COUNTRY IMPLEMENTATION

15 pilot studies and surveys conducted / or ongoing in 13 countries

4
countries benefitted from technical assistance on agricultural sample census preparation and/or implementation

- Gambia
- Liberia
- Nigeria
- Malawi

9
statistical survey report/ bulletin produced

- Cambodia (3)
- Georgia (2)
- Senegal (3)
- Uganda (1)

7
countries supported on strengthening data use for policy and decision-making

- Burkina Faso
- Cabo Verde
- Cambodia
- Georgia
- Sierra Leone
- Senegal
- Uganda

3
rapid needs assessment conducted to identify sources and types of agricultural data available and needed support to better use data

- Burkina Faso
- Cabo Verde
- Sierra Leone

Nagpur, Maharashtra, India / Photo by Lucas Stock via Unsplash.

Early technical assistance key to streamlining agricultural data dissemination

One important area of 50x2030 support to countries is the provision of technical assistance on **strengthening and modernizing dissemination strategies** on agricultural survey programs. For each annual survey cycle, collaboration is established with national agriculture statistics agencies to disseminate outputs that meet user needs within limited resources, utilizing web-based channels. Outputs generated from national survey programs include a statistical bulletin with main survey results; interactive statistical tables on a data portal, adhering to Open Data standards; microdata and metadata; and data highlights for communication in various traditional and social media platforms.

An approach implemented by 50x2030 to strengthen and modernize data dissemination in countries replaces the strict sequential approach with initiation of dissemination efforts early in the data production cycle. **Mali, Liberia, and Sierra Leone piloted this approach where early technical assistance, through training, was conducted aimed at modernizing statistical programs and aligning dissemination outputs with data needs and formats, from the questionnaire and tabulation plan design phase.**

Hanoi, Vietnam. / Photo by Stephan Valentin via Unsplash.

COUNTRIES IN FOCUS

50x2030 data: input to important decision-making processes in countries

The Initiative successfully organized data use workshops in Senegal, Sierra Leone, Cambodia, and Georgia with the objective of bringing together different stakeholders from statistics agencies, Ministry of Agriculture, and other relevant government agencies to either:

1. Discuss data needs, metrics and indicators to measure progress and achievement of national development goals
2. Produce analytical briefs and factsheets that support agricultural policy development
3. Make use of 50x2030 data for impact assessments of agricultural development interventions/programs and investments.

SENEGAL

Policy briefs were produced on topics such as agroecology, farm typology, gender and youth which served to inform national agricultural policies in the country.

Casamance, Senegal / Photo by Vince Gx via Unsplash.

SIERRA LEONE

Sierra Leone conducted its first ever annual agriculture survey in 2023 adopting the 50x2030 survey methodology. The core module including the income and labor productivity (ILP) module was implemented, collecting basic agricultural data from 5,300 sampled agriculture households across the country. The survey was conducted in two visits during post planting and post-harvest. Modern data collection methods, utilized CAPI as well as GPS for objective measurement of plot area. Further, in support of Sierra Leone's Feed Salone strategy for food security, 50x2030 assisted in identifying a set of harmonized indicators which will be populated once the agriculture survey data becomes available.

Freetown, Sierra Leone. // Photo by Random Institute via Unsplash.

CAMBODIA

50x2030 data produced in Cambodia was used by IFAD in assessing its long-term investment of $45 million on water resources, in particular the Climate Adaptive Irrigation and Sustainable Agriculture for Resilience project. 50x2030 data was used in assessing the economic benefits of diversification of agriculture in the country with the aim of mobilizing additional funds for the program. The 50x2030 data proved useful in the impact assessment of proposed IFAD projects.

Krong Siem Reap, Cambodia. / Photo by Rokas Skeivys via Unsplash.

GEORGIA

The Ministry of Environmental Protection and Agriculture (MEPA) uses 50x2030 data in optimizing their quarterly reporting processes on main agricultural products transitioning from an excel-based approach to an automated model using PowerBI. Benefiting from the 50x2030 training on data use, the Ministry now generates quarterly product factsheets in a fraction of the time previously required. In addition, analysis of 50x2030 data contributed to the development of a new livestock policy and as input in the formulation of the "Cattle breeding development program", which was officially approved by the Government of Georgia in February 2024. Also noteworthy is the passage by the Georgian Parliament of the Food Law and Waste Reduction in 2023 which was based on the 59-page analytical report using 50x2030 data.

Kazbek, Georgia. / Photo by Alex Batonisashvili via Unsplash.

KNOWLEDGE GENERATION & TOOL DEVELOPMENT

69
total knowledge products such as policy briefs, fact sheets generated from 50x2030 agriculture survey data, data use ecosystem mapping, and rapid needs assessment reports

10
data use research papers produced informing national policies

13
methodological papers and reports produced

5
published papers (2 in journals and 3 in working paper series/website) and

8
submitted for peer review or publication

3
technical notes produced

RESEARCH SPOTLIGHT

Empowering agriculture: testing new tools for soil health and climate variability measurement

Soil health and climate variability, together with information on farming methods and practices, are integral elements to understand agricultural outcomes and the linkages with household food security, wellbeing, and resilience. Traditionally, household and agricultural surveys have relied on self-reported measures of soil quality and climate shocks experience, though research conducted in the context of Sub-Saharan Africa shows that farmer assessments in both domains are not well grounded (Gourlay et al., 2017; Markhof et al. 2022). With georeferencing progressively adopted in 50x2030 surveys, there is increased opportunity and reliance on the integration of geospatial data products with survey data to obtain more accurate measures of key agricultural variables, including quality of soils and household exposure to extreme weather events.

However, products like high-resolution gridded soil maps or climate datasets, may also be inaccurate and failing to sufficiently capture variation on the ground (Gourlay et al., 2017; Michler et al. 2022). The significant cost of weather station maintenance combined with reductions in funding to national meteorological services has resulted in very sparse observation networks and, consequently, limited availability of data for most households and/or weakly calibrated geospatial climate products in LMICs. At the same time, traditional approaches to measuring soil health, through wet chemistry approaches, are prohibitively costly and time intensive to scale. All this hinders our ability to fully understand agricultural productivity of small-scale farmers with implications for the design, monitoring and evaluation of agricultural policies and programs, while, at the same time, calling for the need of better methods and tools to collect soil and weather data that can blend into survey operations.

Tech innovations such as portable in-field soil scanners and all-in-one automatic weather stations (AWS) can offer great potential for improving the collection of reliable soil- and weather-related data as part of agricultural survey operations. As such, 50x2030 **in partnership with the World Bank Agriculture and Food Practice Group, has implemented the Climate, Land Area and Soil Study (CLASS) in Uganda** to test these newly developed tools in local environments and thoroughly validate against benchmark measures. Initial findings point to the promise of community level AWSs, with good correspondence between AWSs and national met service stations rainfall measurement, accuracy of AWSs over modelled climate products (for rainfall), as well as significant differences in key soil parameters measured by different methods. It also served to highlight the importance of the method chosen in future survey operations (though benchmark measures from ICRAF are still being analyzed). These early findings were presented in relevant conferences and seminar series Analytical work is underway to identify best practices and translate findings into knowledge products for the Initiative and beyond, including the development of technical notes, guides and research outputs. Stay tuned!

For more info, check out the news story on the ICAE session hosted by Method & Tools Team showcasing their work: https://www.50x2030.org/news/icae-2024-highlights

CAPACITY BUILDING

IFAD capacity building in Burkina Faso.

STRENGTHENING AND FACILITATING WIDER USE OF 50X2030 DATA IN COUNTRIES:

12

data use trainings conducted on understanding statistical concepts, data analysis for effective decision-making, policy briefs and factsheets, and use of data for results-based M&E and impact assessments – in 6 countries

- Cambodia
- Georgia
- Uganda
- Sierra Leone
- Burkina Faso
- Senegal

207

stakeholders participated in data awareness workshop

114

organizations reached

230

individuals trained on data analysis, dashboards conception, policy briefs and factsheets development, impact evaluation and in policy processes

210

government staff

20

research grant competition recipients

20

local researchers supported to use 50x2030 data to prepare research papers aimed at informing national policies on agriculture

30

data production–related trainings conducted on:

1. Questionnaire development/design,
2. CAPI and adoption of IT and software tools,
3. Data cleaning/editing/data processing (including SDGs), and
4. Data anonymization and dissemination

7

data use awareness workshops conducted in 4 countries

- Burkina Faso
- Cambodia
- Senegal
- Sierra Leone

5

workshops and seminars organized

- Women's empowerment metric for national statistical systems (WEMNS)
- Climate and disaster risk finance for agricultural livelihoods and value chains
- 50x2030 Brown Bag Lunch in Cote d'Ivoire
- 50x2030 Brown Bag Lunch in Niger
- Methods and Tools/TAG Convening

CAPACITY BUILDING TOWARDS A CULTURE OF DATA USE IN PARTNER COUNTRIES

Strengthening country capacity to analyze agricultural survey data is an important component of 50x2030's support aimed at enhancing use of data in decision-making processes at the national and local levels. Several training courses ranging from basic data analysis to advanced analysis are implemented in countries. Participants are primarily technical staff of Ministries of Agriculture. A combination of on-site trainings complemented by remote assistance are given aimed at producing data-driven knowledge products such as analytical briefs and factsheets. The topics of the knowledge products are identified with the Ministry of Agriculture and in alignment with current sectoral priorities to ensure there is demand and uptake of the outputs. The impacts of 50x2030 data use support are evident in countries.

In Senegal, DAPSA and the National Institute of Agricultural Research and line ministries were trained on data analysis and presentation resulting in the publication of six analytical briefs and five factsheets. DAPSA used the 50X2030 data as inputs to their broader policy discussions.

In Burkina Faso, media personnel were trained on statistical reporting and interpretation of results of agricultural surveys and censuses that could serve as input in decision-making in the country. A network of agricultural journalists was created led by the Communication Unit of the Ministry of Agriculture. A second training on producing analytical briefs was conducted with staff of the Ministry of Agriculture, Ministry of Economy and Planning and the National Statistical Office was conducted that produced three briefs which are ready to be disseminated.

The impacts of these trainings have been enduring as countries continue to compose fact sheets to support decision and policymaking without 50x2030 technical assistance.
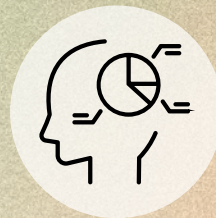
Casamance, Senegal. / Photo by Eyoël Studio via Unsplash.

04. MOVING FORWARD

FY25 PRIORITIES

As part of the Initiative's continued expansion in countries, the following shall be the priorities for FY25:

Increase and deepen country engagement to close the target of 50 countries. The Initiative will explore potential engagements in seven new countries[1] as well as in one region (with possibly an additional 11 new country beneficiaries)[2], as part of planned World Bank IDA/IBRD operations. Such engagements will entail support in establishing coordination mechanisms and governance systems for agriculture statistics and active implementation of survey activities.

The Initiative will also focus on **strengthening the capacity of countries to make use of their agriculture survey data to inform national and global policies** related to food sufficiency and security and agricultural sustainability. In this regard, a more nuanced approach to advocating for stronger data use will be launched in partner countries.

Strengthen strategic management and governance of the 50x2030 Initiative which will entail increasing resource availability by establishing stronger partnerships with World Bank Global Practices through its IDA/IBRD projects; strengthening partnerships with existing donors through joint activities and alignment of priorities and strategically engaging with new donors; revamping communication strategy and intensifying outreach and advocacy activities to highlight the importance of agricultural data in policymaking and enhance visibility of the Initiative.

Enhance the adoption of improved methods and tools in 50x2030 survey operations through the production of guidelines and implementation of research activities that respond to country needs and address methodological weaknesses in critical domains of agricultural survey data. Improved methods and tools on several topics such as on georeferencing of survey data and associated anonymization practices, crop-cutting, and measurement of crop damages and losses, and fisheries given the potential onboarding of several island nations will be developed.

- Operationalizing the new Theory of Change and conducting regular monitoring and reporting on overall program and country-specific implementation.
- Establishing partnerships in promoting 50x2030 outputs, supporting country capacity building, and advocating for wider data use.
- Fine-tuning financial management to pilot a new modality.

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1 New countries (seven) under exploration for possible engagement with World Bank IDA Project: Bangladesh, Equatorial Guinea, Morocco, Philippines, Sao Tome and Principe, Sri Lanka and Uzbekistan.
2 Potential engagement in Pacific region (11 countries) with World Bank IDA Project: Solomon Islands, Marshall Islands, Micronesia, Tuvalu, Tonga, Kiribati, Samoa, Palau, Fiji, Papua New Guinea and Vanuatu.

05. ANNEXES

Kayar, Senegal. / Photo by Simonetta Pugnaghi via Unsplash.

ANNEX 1. METHODOLOGY-RELATED RESEARCH PAPERS & PUBLICATIONS

The following research papers and technical documents have been developed under the Methods & Tools component during the reporting period (July 1, 2023 to June 30, 2024):
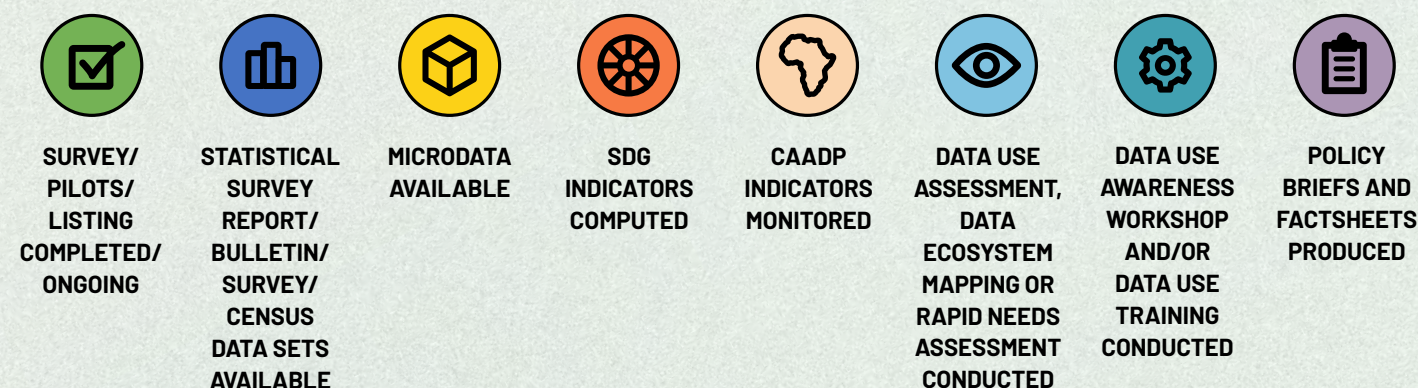
Sri Lanka. / Photo by Pascal Muller via Unsplash.

TABLE 3. PUBLISHED IN FY24

#	TITLE/DESCRIPTION	COMPLETION/DISSEMINATION STATUS
TECHNICAL NOTES		
1	Technical guidance note on land area measurement	Published (pending publication on 50x2030 website)
PAPERS & REPORTS		
1	Attenuating measurement errors in agricultural productivity analysis by combining objective and self-reported survey data	**Published** (Journal of Development Economics; here)
2	Making Time Count : A Machine Learning Approach to Predict Time Use in Low-Income Countries from Physical Activity Tracking Data	**Published** (World Bank Policy Research Working Paper Series; here)
3	Measuring Women's Empowerment in National Surveys: Development of the Women's Empowerment Metric for National Statistical Systems (WEMNS)	**Published** (IFPRI Discussion Paper; here)
4	Is dirt cheap? The economic costs of failing to meet soil health requirements on smallholder farms	**Published** (Agricultural Economics, here; previously published in World Bank Policy Research Working Paper Series)
5	Research on the measurement of harvest and post-harvest losses: Combining food loss modelling approaches with farm surveys to improve on-farm loss estimates and reduce data collection costs	**Published** (report; forthcoming on 50x2030 website)

TABLE 4. SUBMITTED FOR PEER REVIEW/PUBLICATION IN FY24

#	TITLE/DESCRIPTION
TECHNICAL NOTES	
1	Technical guidance note on georeferencing
2	Guidelines for collection of training data for satellite-based estimation of crop areas and yields
PAPERS & REPORTS	
1	Improving the Quality of Survey Estimates from Longitudinal Studies: An Application to UNPS
2	Filling Gaps in Survey Crop Yields Data: a Validation Exercise of Imputations of Plot-level Crop Yields
3	Paper on measurement error in farmer-reported information on cultivated crop varieties and attributes vis-à-vis objective identification
4	Adding soil sampling to household surveys: information for sample design from pilot data
5	Paper produced on phone survey results jointly with WEMNS team, to serve as an input to WEMNS Survey Tools and Protocols
6	Second paper produced on face-to-face results jointly with WEMNS team, to serve as an input to WEMNS Survey Tools and Protocols
7	Research paper on integration of surveys and satellites for high-resolution crop area mapping
8	Research paper on integration of surveys and satellites for high-resolution crop yield estimation

ANNEX 2.
COUNTRY ACTIVITIES

| | SURVEY/ PILOTS/ LISTING COMPLETED/ ONGOING | STATISTICAL SURVEY REPORT/ BULLETIN/ SURVEY/ CENSUS DATA SETS AVAILABLE | MICRODATA AVAILABLE | SDG INDICATORS COMPUTED | CAADP INDICATORS MONITORED | DATA USE ASSESSMENT, DATA ECOSYSTEM MAPPING OR RAPID NEEDS ASSESSMENT CONDUCTED | DATA USE AWARENESS WORKSHOP AND/OR DATA USE TRAINING CONDUCTED | POLICY BRIEFS AND FACTSHEETS PRODUCED |

Armenia
- AGRIS 2020 conducted
- Microdata available

Angola
- *Inquérito Anual à Produção Agro-Pecuaria* 2023/24 ongoing

Benin
- Survey preparation (ESA 2024)

Burkina Faso
- *Enquête Harmonisée sur le Conditions de Vie des Ménages*, Panel Survey 2021-2022, *Enquête Permanente Agricole* 2023 conducted; EPA 2024 preparation
- Microdata EHCVM-P[1] 2021/22 available
- CAADP indicators monitored (3.2i, 3.2ii, 4.1i)
- Rapid needs assessment

1 *Enquête Harmonisée sur le Conditions de Vie des Ménages*, Panel Survey 2021-2022.

and Data ecosystem mapping conducted
- Data use awareness workshops and data use trainings conducted
- Policy briefs and factsheets produced

Cabo Verde
- *Sistema de Inquéritos Permanentes* 2024 (listing) conducted
- Rapid needs assessment conducted
- Data use awareness workshop conducted

Cambodia
- Cambodia Inter-censal Agriculture Survey 2019; Cambodia Agriculture Survey 2020, 2021, 2022, 2023 conducted; CAS 2024 preparation
- Statistical survey reports available
- Microdata CIAS 2019, CAS 2020; CAS 2021 available
- SDG indicators 2.3.1

- Data use assessment conducted
- Data use awareness workshop and data use trainings conducted

Cameroon
- Onboarding

Central African Republic
- Onboarding

Chad
- Onboarding

Cote d'Ivoire
- Survey preparation (EAA 2024)

Ethiopia
- Ethiopia Socio-Economic Survey 2018/19, 2021/22; Agriculture Sample Survey 2022/23 conducted
- Statistical survey report available
- Microdata ESS4 2018/19, ESS5 2021/22 available

- SDG indicators 2.3.1, 2.3.2 and 5.a.1 computed
- CAADP indicators monitored (3.1ii, 3.1vi, 3.2iii, 3.2i, 3.2ii, 4.1i
- Data use assessment conducted
- Data use awareness workshop and data use training conducted

Gabon
- Survey preparation

Georgia
- Georgian Survey of Agriculture Holdings 2020, 2021, 2022, 2023; and Survey of Production Methods and Environment module 2021 conducted
- Statistical survey reports available
- Microdata GSAH 2020, GSAH 2021, PME 2021 available
- SDG indicators 2.3.1; 2.3.2; 2.4.1; and 5.a.1 computed

- Data use assessment conducted
- Data use awareness workshop and data use trainings conducted
- Policy briefs and factsheets produced

Ghana
- Ghana Annual Agricultural Survey 2023 (listing)

Guinea
- *Enquête Annuelle Agricole* 2023 conducted; *Enquête Pêche artisanale* 2024 preparation

Guinea-Bissau
- Survey preparation

Indonesia
- SITASI 2020, 2021, SITASI 2023 (pilot survey) conducted; SITASI 2024 preparation
- Statistical survey report available (Sitasi 2020 and 2021)

Penida Island, Indonesia / Photo by Christoffer Zackrisson via Unsplash.

- SDG indicators 2.3.1; 2.3.2; 2.4.1; and 5.a.1 computed

Liberia
- Agriculture Sample Census 2023 conducted; AAS 2024 preparation

Madagascar
- Survey preparation

Malawi
- Integrated Household Survey (IHS) 2019/20, Integrated Household Panel Survey (IHPS) 2019 conducted; National Census of Agriculture 2024 and National Survey of Agriculture 2025 preparation
- Statistical survey report available
- Microdata IHS 2019/20, IHPS 2019 (dataset includes full long-term panel, including year 2019) available
- SDG indicators 2.3.1, 2.3.2 and 5.a.1 computed
- CAADP indicators monitored (3.2i, 3.2ii, 4.1i)

Mali
- *Enquête Agricole de Conjoncture* 2023/24 conducted

Mauritania
- Pilot study survey on Harvest Losses 2023 conducted; *Enquête auprès des Ménages et Exploitants Agricoles et Agro-Pastoraux* 2024 preparation

Mozambique
- Onboarding

Nepal
- Pilot Agriculture Integrated Survey 2019, Commercial Livestock Survey 2021 conducted; Nepal Agriculture Survey 2023 preparation
- Statistical survey report available
- Microdata PAGRIS 2019,[2] CLIS 2021 available

Niger
- Survey preparation (suspended)

Nigeria
- General Household Survey Panel 2018/19 and Nigeria Agriculture Sample Census 2022 conducted; Integrated agricultural survey 2025 preparation
- National agricultural sample census report available

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2 Pilot Agriculture Integrated Survey 2019.

- Microdata GHS 2018/19, NASC 2022 available
- SDG indicators 2.3.1, 2.3.2 and 5.a.1 computed
- CAADP indicators monitored (3.1iv, 3.1vi, 3.2i, 3.2ii, 4.1i)

Republic of Congo
- Survey preparation

Senegal
- *Enquête Annuelle Agricole* 2017/18, 2018/19, 2019/20, 2020/21, 2021/22, 2022/23, 2023/24 conducted
- Statistical survey report available
- Microdata EAA 2017/18, EAA 2018/19, EAA 2019/20, EAA 2020/21, EAA 2021/22, EAA 2022/23 available
- SDG indicators 2.3.1; 2.3.2; 5.a.1 computed
- CAADP indicators monitored (2.4, 3.1i, 3.1ii, 3.1iv, 3.1vi, 3.2i, 3.2ii, 3.2iii, 4.1i)
- Data use assessment conducted
- Data use awareness workshop and data use training conducted
- Policy briefs and factsheets produced

Sierra Leone
- Sierra Leone Non-Standard Units Survey 2023 and Annual Agricultural Survey 2023 conducted
- Rapid needs assessment and data ecosystem mapping conducted
- Data use awareness workshop and data use training conducted

Tanzania
- Non-standard unit survey 2023 and Annual Agricultural Survey 2023 conducted; AASS 2024 preparation

The Gambia
- National Agriculture Sample Census 2025 (pilot) preparation

Togo
- *Pilote du Recensement national de l'Agriculture* 2023 conducted; *Système permanent d'Enquêtes* 2024 preparation

Tunisia
- Pre-onboarding

Uganda
- Annual agricultural survey 2018 second season, 2019, 2020;

Uganda National Panel Survey 2019/20; Uganda Harmonized and Integrated Survey 2021/22 conducted
- Statistical survey reports available
- Microdata AAS 2018, UNPS 2019/20 available
- SDG indicators 2.3.1; 2.3.2; and 5.a.1 computed
- CAADP indicators monitored (2.4, 3.1i, 3.1ii, 3.1iv, 3.2i, 3.2ii, 3.2iii, 4.1i)
- Data use assessment conducted
- Data use awareness workshop and data use training conducted
- Policy briefs and factsheets produced
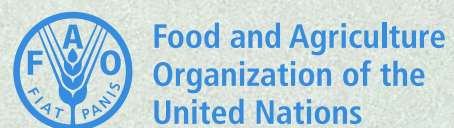
Zambia
- Onboarding

ANNEX 3.
LIST OF ABBREVIATIONS

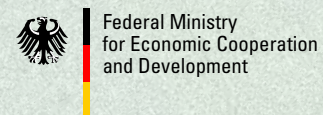|	
AAAE	African Association of Agricultural Economists
AAS	Annual Agricultural Survey
AFCAS28	African Commission on Agricultural Statistics 28th session
AGRIS	Agricultural International Survey
APCAS30	Asia and Pacific Commission on Agriculture Statistics 30th session
AWS	Automatic weather stations
BMGF	Bill and Melinda Gates Foundation
BMZ	Germany's Federal Ministry for Economic Cooperation and Development
CAADP	Comprehensive Africa Agriculture Development Programme
CAPI	Computer-Assisted Personal Interview
CAS	Cambodia Agriculture Survey
CFS	Committee on World Food Security
CIAS	Cambodia Inter-censal Agriculture Survey
CLIS	Commercial Livestock Survey
CLS	Commercial Livestock Survey (Nepal)
COM	Community and household survey (Liberia)
DAPSA	Direction de l'Analyse, de la Prévision et des Statistiques Agricoles
DFAT	Australia's Department of Foreign Affairs and Trade
DFS	Development Frame Survey
EAC	Enquête Agricole de Conjoncture (Mali)
EAA	Enquête Annuelle Agricole (Cote d'Ivoire, Guinea)
EHCVM-P	Enquête Harmonisée sur le Conditions de Vie des Ménages, Panel Survey
EMAP	Enquête auprès des Ménages et Exploitants Agricoles et Agro-Pastoraux (Mauritania)
EPA	Enquête Permanente Agricole (Burkina Faso)
ESA	Enquête Statistique Agricole (Benin)
ESS	Ethiopia Socio-Economic Survey
EU	European Union
FY	Fiscal Year
GAAS	Ghana Annual Agricultural Survey
GHS	General Household Survey
GPS	Global Positioning System

GSAH	Georgia Survey on Agricultural Holdings
GSARS II	Global Strategy to improve agricultural and rural statistics - Phase II
IAS	Integrated agricultural survey (Nigeria)
IBRD	International Bank for Reconstruction and Development
ICAE	International Conference of Agricultural Economists
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IHPS	Integrated Household Panel Survey
IHS	Integrated Household Survey
ILP	Income and labor productivity
IT	Information Technology
LOSS	Pilot Test Losses (Mauritania)
M&E	Monitoring & Evaluation
MAECI	Italy's Ministry of Foreign Affairs and International Cooperation
MEAE	France's Ministry of Europe and Foreign Affairs
MEPA	Ministry of Environmental Protection and Agriculture (Georgia)
NAS	Nepal Agricultural Survey
NASC	National Agricultural Sample Census
PAGRIS	Pilot Agriculture Integrated Survey
PIP	Program Implementation Plan
PME	Production Methods and Environment
RNA	Pilote du Recensement national de l'Agriculture (Togo)
SDG	Sustainable Development Goal
SIP	Sistemo de Inquéritos Permanentes (Cabo Verde)
SITASI	Survei Pertanian Terintegrasi Indonesian Statistical Integrated Survey
SLAAS	Sierra Leone Annual Agricultural Survey
SLLIST	Sierra Leone Listing Survey
SLNSU	Sierra Leone Non-Standard Units Survey
SPE	Système permanent d'Enquêtes (Togo)
UN	United Nations
UNGA	UN General Assembly 78th Session
UNPS	Uganda National Panel Survey
UNSC	United Nations Statistical Commission
USAID	United States Agency for International Development
WEMNS	Women's Empowerment Metric for National Systems

ANNEX 4.
PARTNERSHIPS

IMPLEMENTING AGENCIES

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

Food and Agriculture
Organization of the
United Nations

IFAD

DONORS

USAID
FROM THE AMERICAN PEOPLE

FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

BILL & MELINDA
GATES foundation

Federal Ministry
for Economic Cooperation
and Development

ITALIAN AGENCY
FOR DEVELOPMENT
COOPERATION

MINISTÈRE
DE L'EUROPE
ET DES AFFAIRES
ÉTRANGÈRES
Liberté
Égalité
Fraternité

Australian Government

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