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Food and Agriculture Organization of the United Nations



# AFRICAN COMMISSION ON AGRICULTURAL STATISTICS

28<sup>TH</sup> SESSION

4–8 December 2023 Johannesburg (South Africa) AFCAS 28 LEVERAGING DATA & STATISTICS FOR AGRIFOOD SYSTEMS TRANSFORMATION IN AFRICA

# AGENDA ITEM 9:

## IMPROVING FOOD AND AGRICULTURE DATA DISSEMINATION



#### FAO Food and Agriculture Microdata Catalogue: Unlocking the power of microdata

Presenter: Clara Aida Khalil Office of the Chief Statistician FAO.





# <u>Outline</u>

- Introduction: disseminating agricultural microdata through FAM
- FAM main features
- How Member countries can use the FAM
- A quick tour of the Catalogue
- Conclusions and recommendations

Metadata FAOsDGs Forest Inventory Agricultural Census Agricultural Surveys Data in Emergencies Impact assessment Food security Microdata Nutrition



# Introduction:

- The FAO and member states increasingly rely on microdata for monitoring and evaluation, designing programs and interventions and assessing important development outcomes such as the SDGs.
- Collecting microdata through surveys and censuses is an expensive endeavor that can be justified by enhancing data dissemination and data use.
- Donors and development partners are often conditioning resources and assistance on the dissemination of collected microdata
- Disseminating microdata helps enhancing the transparency around the statistical production process and promotes open data values. In addition, it makes results and research reproducible by a larger audience, fostering the credibility of producing institutions.

# The Food and Agriculture Microdata (FAM) Catalogue



The Food and Agriculture Microdata Catalogue aims to be a one-stop shop for finding micro datasets related to food and agriculture.



The <u>FAM</u> is the corporate microdata dissemination platform of the Food and Agriculture Organization of the United Nations (FAO).

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- It was launched in July 2019 with the initial support of the the Bill and Melinda Gates Foundation, and the United States Agency for International Development.
- As of today, it documents and disseminates the microdata and/or metadata related to 1314 surveys and censuses from 183 countries



# **Types of studies in FAM**

- <u>Category 1</u>: Studies submitted by FAO's data providers through a data deposit system. Data are disseminated as licensed files in most cases.
- <u>Category 2</u>: Studies submitted by external data providers (e.g. NSOs) via email. Data producers need to sign a license to redistribute form, authorizing FAO to disseminate the microdata and metadata. Data are disseminated as licensed files.
- Category 3: Metadata harvested from external and compatible platforms



# FAM's Featured Collections



Agricultural Surveys and Censuses (423 studies)



Agricultural Censuses Metadata (126 studies)



Food Security (696 studies)



Nutrition (5 studies)



Data in Emergencies Monitoring Surveys (39 studies)

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IFAD Impact Assessment Surveys (18 studies)



Forest Inventory Data (3 studies)



Fishery surveys (4 studies)

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# **IT Platform and corporate standards**

	Fo	od and Agriculture Microdata Catalogue		
Keywords		Search		
		Browse Citations		
Years	~	Showing 1-15 of 1,314 Variable view Popularity Variable View		
Countries	~			
Collections	~	Comprehensive Food Security and Vulnerability Analysis and Nutrition Survey 2012		
License	~	Rwanda, 2012 National Institute of Statistics of Rwanda Collection: Food Security ID:RWA_2012_CFSVANS_v01_EN_M_v01_A_OCS Last modified: Sep 02, 2020 Views: 531747            ① Data available from external repository		
		Cuador, 2010  National Institute of Statistics and Censuses (INEC), Agricultural Statistics Unit Collection: Agriculture Census and Surveys  D: ECU_2010_ESPAC_v01_EN_M_v01_A_OCS Last modified: Feb 18, 2020 Views: 518167  Data available from external repository		

- The FAM catalogue follows well-known international standards and best practices.
- Internal workflow regulated by a Corporate Quality Standard on Microdata Dissemination and a clear legal framework for data dissemination and redistribution.

The Catalogue leverages on the <u>National Data</u> <u>Archiving (NADA)</u> platform, an open-source web-based application developed and maintained by the WB.

NADA is widely used by several NSOs and International Organizations

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# Metadata Standard

Home / Food and Agriculture Microdata Catalogue	/ EMERGENCIES-MONITORING-SURVEYS / IRQ_2021	_DEMHS-R6_V01_EN_M_A_OCS

The second secon	Data in Emergencies Monitoring Household Survey (DIEM) – Round 6, Iraq, 2021				
	-		LAST MODI		
	Iraq, 2021	🛓 GET MICRODATA	Nov 16, 202		
			PAGE VIEW		
	Reference ID	IRQ_2021_DEMHS-R6_v01_EN_M_A_OCS	8806		
	Producer(s)	Food and Agriculture Organization of the United Nations, Data in Emergencies Hub			
	Collections	Data in Emergencies Monitoring Surveys			

DATA DICTIONARY DOWNLOADS . GET MICRODATA	DATA DICTIONARY	DOWNLOADS	GET MICRODATA
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STUDY DESCRIPTION

Identification	Identification				
Scope					
Coverage	SURVEY ID NUMBER				
Producers and	IRQ_2021_DEMHS-R6_	/01_EN_M_A_OCS			
sponsors	TITLE				
Sampling	Data in Emergencies Monitoring Household Survey (DIEM) - Round 6, Iraq, 2021				
Data Collection	COUNTRY				
Questionnaires	Name	Country code			
Data Processing	Iraq	IRQ			
Access policy	STUDY TYPE				
Disclaimer and copyrights	Agricultural Survey [ag	/oth]			
Metadata	ABSTRACT				
production	The FAO has developed a monitoring system in 26 food crisis countries to better understand the impacts of various shocks on agricultural livelihoods, food security and local value chains. The Monitoring System consists of primary data				

collected from households on a periodic basis (more or less every four months, depending on seasonality). The FAC

The NADA platform supports the use of the Data Documentation Initiative (DDI) metadata standard: XML-based international standard for microdata documentation.

In addition, the NADA uses the **Resource Description Framework (RDF) standard** for cataloguing and documenting related resources (datasets, questionnaires, reports, methodological documents)



## **Data Protection**

- Most data collected by NSOs and International Organizations cannot be disseminated directly due to confidentiality and privacy concerns.
- Need to implement Statistical Disclosure Control (SDC) techniques: set of procedures to treat microdata files so that these can be published without disclosing the confidential information it contains, while limiting the information loss due to the anonymization process
- The FAO has developed a well-structured SDC Protocol regulating the <u>anonymization of all</u> <u>microdata files disseminated through FAM</u>. In addition, a Corporate Data Protection Policy is in place at FAO.



## FAM Usage Statistics



Total users:68000

Registered users: 2824

Published datasets: 1314

Data requests: 4947

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# How can FAM be useful to countries?

## 1) Disseminate or redistribute microdata

- FAM can disseminate countries' microdata when no microdata dissemination platform is available at country level.
- As a result of FAO's international profile and high visibility, the FAM is likely to receive more traffic than any single national platform. Accordingly, this makes microdata/metadata shared through FAM more visible.
- All of FAM metadata are translated and presented in English which makes it easier for users to find and use the data.



# How can FAM be useful to countries?

## 2) Access studies from other countries/organizations

- Microdata and metadata produced by other countries can help improving or designing national data collections
- They provide an opportunity to strengthen collaborations and south-south cooperation
- Microdata from other countries with similar characteristics can be used to inform policy design through comparative analysis of microdata from similar contexts.



# How can countries contribute to the FAM?

#### 1) Disseminate metadata only

**Step 1:** A collaboration or communication is established between FAO and the data owner. No legal agreement is required.

**Step 2:** The FAM team in OCS harvests the DDI metadata from the national platform. In cases where the original metadata is not in English, the FAO translates the metadata document.

**Step 3:** The metadata is reviewed and published on FAM, along with the data dictionary and relevant documents.

**Step 4:** A link to the microdata on the national platform is provided, for users to access the data.



# How can countries contribute to the FAM?

## 2) Disseminate microdata and metadata

**Step 1**: A legal agreement is established between the FAO and the external provider/national institution, using a license to redistribute form.

**Step 2**: OCS supports the country in preparing the dataset to meet well established quality standards and perform suitable SDC procedures.

**Step 3:** OCS reviews the relevant documentation (e.g. methodological notes, reports, questionnaires, etc.) in order to develop a DDI metadata document.

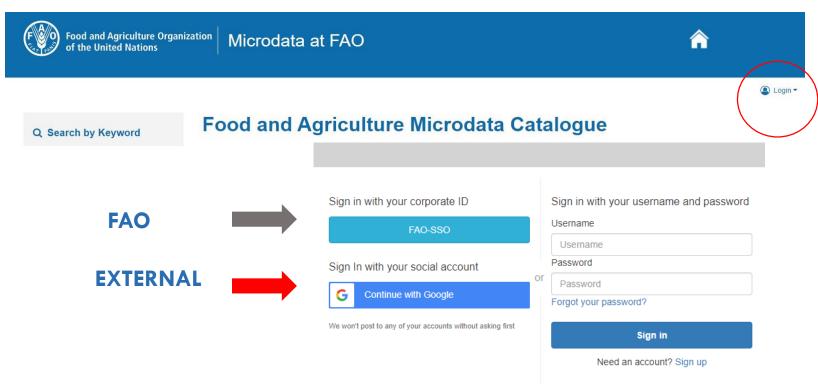
**Step 4:** The DDI metadata document and anonymized microdata files are shared with the national institution for final review and validation.

**Step 5:** The study is published on FAM as licensed file, along with the relevant documentation.



# How can countries contribute to the FAM?

#### 3) Access microdata/metadata from other countries





# **<u>Quick Tour of FAM Catalogue</u>**

#### https://microdata.fao.org

#### To show:

- Accessing FAM
- FAM filters and functionalities
- > Exploring DDI metadata elements
- Downloading relevant documentation
- Requesting access to microdata on FAM
- Downloading microdata







- Since its launch in 2019, the FAM catalogue has become a reference point for the dissemination of microdata related to food and agriculture.
- The Office of Chief Statistician has put in place different standards and protocols to guide the curation, anonymization and dissemination of microdata on the FAM Catalogue to make sure that microdata and metadata are disseminated in line with international standards and best practices.
- AFCAS Members are encouraged to take advantage and benefit from this activity, by disseminating or redistributing their data in FAM, as well as exploring the data catalogue. Organizations that would like to contribute to FAM, can send an email to FAM-Catalogue@fao.org.
- OCS will also be in touch with countries that are currently disseminating microdata and in which a collaboration has not yet been established.



## **Questions and invitations to AFCAS Members**

AFCAS Members are requested to express their views and recommendations to FAO on the following:

- The primary legal, political, and technical (e.g., IT infrastructure, anonymization, documentation) constraints for microdata dissemination, and the role that the FAO can play in helping to address them.
- Their perceived utility and relevance of the FAM catalogue, and their willingness to disseminate or redistribute their microdata and metadata through the platform with the support of FAO.

## Thank you for your attention!

For further information, kindly visit: <u>https://50x2030.org</u>

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