



Food and Agriculture Organization
of the United Nations

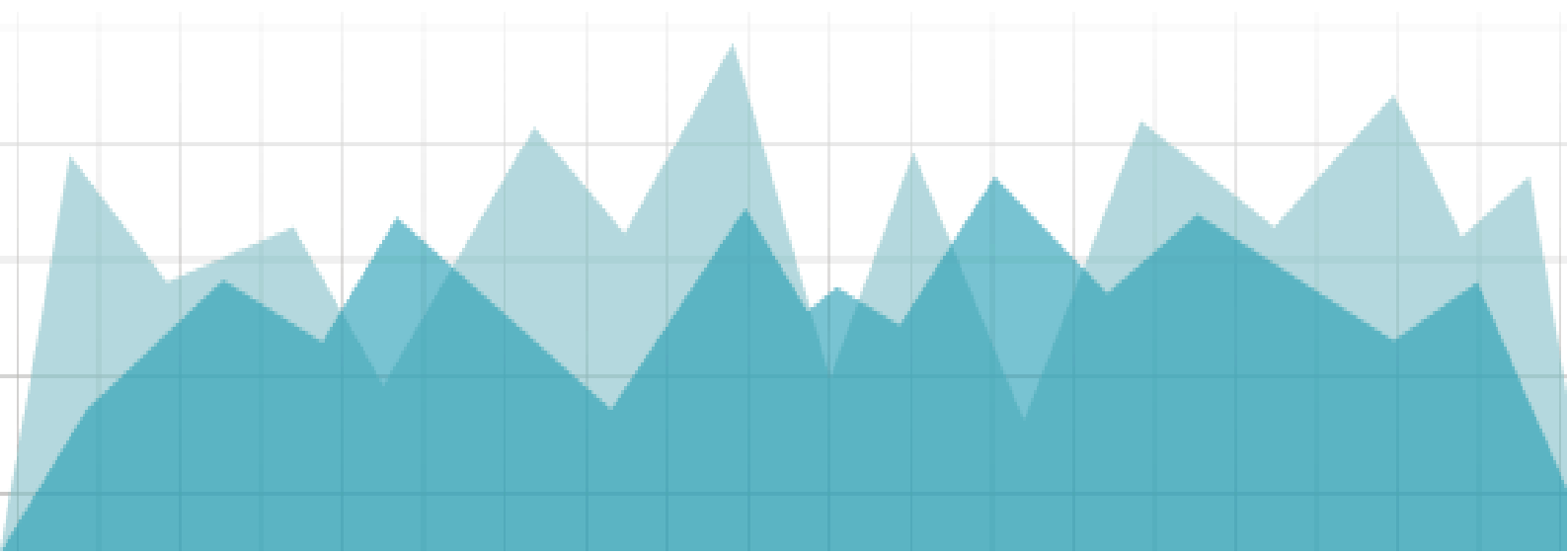
Statistical Standard Series

Microdata dissemination

Endorsed by the Inter-Departmental Working Group

Technical Task Force on Statistics

19 January 2021



This document outlines the processes and procedures for publishing micro datasets and related metadata through the Food and Agriculture Microdata (FAM) Catalogue.

The document was endorsed as FAO standard by the Inter-Departmental Working Group Technical Task Force on Statistics on 19 January 2021.

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Abbreviations and acronyms

FAM	Food and Agriculture Catalogue
MMCD	Metadata curation and dissemination
OCS	Office of Chief Statistician
SDC	Statistical disclosure control

Background and purpose

The Chief Statistician advocates the dissemination of all microdata collected by or supported by FAO. Disseminating and promoting user access to these datasets maximizes their value for evidence-based decision making by enabling further research and analysis. It also adds credibility and transparency to FAO's analytical work. As a result, FAO considers the dissemination of the microdata it collects, as well as those whose collection it supports or which are relevant to FAO's mandate, to be an important responsibility of the Organization.

In this context, the Office of Chief Statistician (OCS) launched a corporate platform for disseminating microdata, called the Food and Agriculture Microdata (FAM) catalogue in July 2019. Although some units were able to disseminate microdata earlier, there were no corporate level protocol on disseminating microdata at the FAO and hence OCS developed a set of protocols and procedures to define every step from data procurement to dissemination through FAM. Due to the complexity of the workflow and technical issues that surround each step, two protocols were developed: 1. Statistical disclosure control (SDC) protocol, and 2. Micro and metadata curation and dissemination (MMCD) protocol.

Technical details in the protocols may change due to new technological and methodological developments. Accordingly, the protocols are subject to change and therefore considered "living documents". However, the major steps in the integrated workflow (including quality assurance) and the user access policies in these protocols are unlikely to change. This standard focuses on those.

This statistical standard contains three parts:

- terms and definitions
- integrated workflow
- user access

It is important to note here that this microdata dissemination standard and the two protocols mentioned above incorporates the FAO Personal Data Protection Principles (FAO Administrative circular No. 2021/01) and they are in accordance with the principles.

The reference list provided at the end summarizes the main sources for the SDC and MMCD Protocols. The exhaustive lists of sources are provided in the respective protocols.

1. Terms and definitions

A **data subject** is an individual, group of individuals, business, farm, etc. whose information is contained in a dataset. In a microdata set, each record registers information on a data subject. In FAO, data subjects are typically individual people, however, in some agricultural or forestry survey programs, data subjects may be individual trees, sample plots or agricultural holdings.

Data provider is the technical unit, officer, individual or institution that submits a microdata along the metadata for publication in the FAM catalogue because they don't have a platform for their own dissemination. A data provider could be internal (within the FAO) or external (individuals or institutions outside of the FAO).

Data user refers to an individual or institution that accesses the microdata sets disseminated in the FAM catalogue or consults the metadata shared on the platform.

Data curator is the officer or unit that will process and prepare the information submitted by the data provider for dissemination. In most all cases, the data curator will be an officer of OCS or another technical division of FAO.

Microdata set is a dataset that contains unit-level information collected in-situ¹ and associated with an individual, group of individuals, or with legal entities collected for statistical, research, or scientific purposes. Here, group of individuals refers to refers to group data that can be considered as unit data (data from community survey for instance) or groups of individuals created in the process of anonymizing the data to protect the confidentiality of some sensitive data which cannot be protected otherwise. In the case of FAO, microdata come almost exclusively from household or farm surveys or field inventories. However, microdata can come from administrative reporting systems, or from other types of registers as well.

Metadata are data about data, or information which describes a particular dataset. In the context of microdata, metadata describe important information about how the microdata were collected. The Data Documentation Initiative (DDI, 2021)² is the metadata standard that FAO has adopted for microdata. Metadata should aim to guide the data user towards maximum reproducibility of aggregated results based on the microdata.

The **FAM catalogue** is the IT platform that FAO will use to disseminate microdata, accessible at <https://microdata.fao.org>. Many of the processes described in this document will actually be implemented using FAM. FAM is based on the National Data Archiving (NADA, 2021) platform, developed by the World Bank in order to assist countries in publishing household survey datasets. It provides a global web-based cataloguing system where users can search all country level NADA instances for survey data. The DDI XML-based metadata standard and the Resource Development Framework (RDF) are built-in to NADA to maximize interoperability.

The **data deposit system** is a back-end component of the FAM catalogue providing a user interface, which allows data providers to submit datasets, along with the required metadata and related materials (i.e. reports, questionnaires, manuals, etc.).

¹ Microdata do not include data collected through aerial or satellite remote sensing.

The **Internal archive** is the place where all of the microdata, related materials, and programs for processing will be stored.

The **metadata publisher** is the software used to create or edit the DDI metadata document in XML.

DDI XML Document is a file generated by the metadata publisher that contains information related to the metadata, in XML format.

Related materials are all additional documents, such as questionnaires, technical reports etc., that correspond to a dataset and can help users analyze the corresponding microdata sets.

External contributor is a country, NGO, or any other institution willing to share their microdata (along with their metadata) in the FAM catalogue providing only the link to their own microdata catalogue to be included in FAM. This is different from a data provider, as no microdata is deposited in FAM; they are only accessible via the platform of the contributor and the FAM catalogue will provide the link.

While external contributors are encouraged to link their microdata to FAM, it is possible that a country, non-governmental organization, or any other institution to be considered as an external contributor even if they provide only the metadata and not the microdata in the FAM catalogue for different reasons (in general they are not willing to publish their microdata).

Data collector: When the internal data provider is not the original data collector, another metadata field (data collector) will be included in the DDI to indicate the original data collector that actually conducted the data collection exercise.

2. Integrated workflow

This section combines the workflows defined in the SDC and MMDC protocols and identifies the role/responsibility related to each step.

Step 1: Prepare dataset by removing direct identifiers and extremely sensitive variables

As a first step for preparing a dataset, the data provider shall remove all direct identifiers and extremely sensitive variables. Direct identifiers are variables that directly identify a data subject (e.g. name, phone number, address or other type of geolocation information, ID number, etc.). Extremely sensitive variables are variables which if disclosed could result in significant harm to the data subject. Depending on the context, this could include data on political affiliation, sexual orientation, immigration status, species taxonomy, etc. In most cases, direct identifiers and extremely sensitive variables are not needed for performing statistical analyses, and the retention of this information unnecessarily exposes FAO to liability.

Roles/Responsibilities

Data provider

Step 2: Microdata and metadata curation

As the OCS does not have a comprehensive list of microdata sets, the technical units have the responsibility of identifying the microdata sets collected by FAO. In this regard, FAO staff members have access to a data deposit system when they login into FAM using their corporate credentials. The deposit system allows FAO staff to create a request to publish a dataset. This request requires submission of all the metadata and relevant documentation defined in the data deposit interface.

Only FAO staff members have access to the data deposit system. Accordingly, any other institution wishing to disseminate microdata through FAM will have to send a request to “fam-catalogue@fao.org” with a general description of the dataset(s) to be disseminated through FAM. If approved, the OCS will send a legal template (“License to redistribute dataset”. When necessary this template may contain annexes on SDC Protocol to be implemented on the data) to be signed by the data provider, granting FAO the right to disseminate the dataset through FAM. Lastly, the data provider must complete an Excel-based template capturing all the metadata, and provide the datasets as well as the related materials.

In case of external data providers or the internal data provider is not the original data creator, it is important to include signature of the license to redistribute along with the related materials (Annex III).

Roles/Responsibilities

Data provider

Step 3: Internal archiving

When a dataset from an external data provider or from an external contributor (metadata only) is deposited through the data deposit system, a folder will be created for it in the internal archive. This internal archive is a protected area on the FAO corporate shared drive. Its structure, including the coding system of folders, sub-folders, etc., are described in detail in Annex II of the MMCD Protocol.

Roles/Responsibilities

Data curator

Step 4: Quality assurance

The first step of quality assurance addresses the metadata. If the data are provided by an internal provider, the information collected from the data deposit is exported and then imported into the Metadata Publisher. On the other hand, if the data are provided by an external institution, the information is copied and pasted from the Excel template into the Nesstar²⁴ publisher. Then, the data curator checks that the information is clear and complete, at least for the **following DDI elements**:

- ☐ full name of the study
- ☐ abstract
- ☐ kind of data
- ☐ unit of analysis
- ☐ description of the scope
- ☐ countries
- ☐ geographical coverage
- ☐ sampling strategy
- ☐ weighting
- ☐ dates of collection
- ☐ primary investigators
- ☐ confidentiality
- ☐ access conditions
- ☐ contacts

The next level of quality assurance addresses microdata. The data curator will check the quality of the dataset to ensure it meets the **following minimum criteria**:

- ☐ The microdata files do not contain any variables that directly identify a data subject.
- ☐ The data file does not contain any extremely sensitive information using the Statistical disclosure protocol developed for FAM (Annex IV).
- ☐ All the variables and values for categorical variables are labelled. If the dataset has less than 50 variables, it can be provided in .csv, .xls or .xlsx format, with a codebook. If the dataset is larger than 50 variables, it must be provided in STATA, SPSS, or Rdata format and all the variables must be properly labelled.
- ☐ Each dataset contains a unique ID or a combination of variables that uniquely identifies every record.
- ☐ Missing values are clearly coded, and labelled.
- ☐ In case of a sample survey, a weighting factor for every record is provided.
- ☐ Numerical variable ranges meet realistic thresholds (e.g. age cannot be greater than 120 and area planted cannot be negative).
- ☐ The microdata sets do not contain any variables with all values missing.
- ☐ Relationships between hierarchical datasets are clear and contain unique identification variables for merging.

The microdata quality checks are performed using an R markdown³ template that ensures proper

² This is a software tool that is used to document studies to be published in the Food and Agricultural Microdata (FAM) catalogue. The tool is used to prepare and edit survey microdata e.g. recoding variables. It is also used to provide detailed information (metadata) about the different aspects of the survey and data processing, using different templates and in compliance with the Data Documentation Initiative (DDI).

³ This is a file/script in R that contains different code chunks used in processing/analyzing a dataset. It is used for generating documents and reports in text, readable formats, such as PDF and word. In FAM, we use the R markdown file to document the anonymization process and procedures of a dataset.

documentation and consistency across datasets.

The final level of the quality assurance addresses the supporting materials. They must meet the **following minimum standards**:

- ☐ The questionnaires provided correspond to the dataset, and any labels, codes, etc. are consistent.
- ☐ The language used in the data files is the same as in the questionnaire.
- ☐ All the supporting documents (technical reports, etc.) pertain to the dataset.

If any of the quality assurance criteria are not met, the data provider will be contacted and asked to re-submit.

[Roles/Responsibilities](#)

Data curator

Step 5: Anonymization and documentation

The data curator will use the key variables and the disclosure scenarios defined by the data provider in the data deposit form to anonymize the dataset. The first step is to measure the level of risk in the dataset which should be agreed between the data curator and data provider. The next step is to apply statistical disclosure techniques, assess the level of information loss, and measure the level of risk of the protected dataset. When the data curator determines that adequate protection has been achieved, the protected dataset will be saved and the documentation finalized. The same Rmarkdown template is used for steps 4 and 5.

Upon completion of these steps, the Rmarkdown document will be converted to Portable Document Format (PDF) and saved in the internal archive.

Please see SDC Protocol for much more detailed steps and technical procedures. (Annex IV)

[Roles/Responsibilities](#)

Data curator and provider

Step 6: Validation by the data provider

After completing the previous steps, OCS will create a PDF version of the DDI XML document. The data curator will provide the data provider with the metadata, anonymized microdata, and a summary of the anonymization processing, including the methods applied, parameters (if applicable), and approximate number of records changed. The Rmarkdown file documenting the quality assurance and anonymization procedures can also be provided upon request. **The data provider will be asked to validate the following:**

- ☐ accuracy of DDI XML document (i.e. metadata)
- ☐ anonymization (i.e. no highly valuable analytical information was removed)

[Roles/Responsibilities](#)

Data provider

Step 7: Approval and publication

After the validation, the data curator will ask the Chief Statistician for final approval to publish in the FAM catalogue. Once approved, the dataset will be published in the FAM catalogue and an email will be sent to notify the data provider, providing the URL in the FAM.

[Roles/Responsibilities](#)

Chief Statistician and data curator

3. User access

All metadata information are publicly accessible without registration. Metadata are also available for machines to harvest in XML and JSON (Open standard: JavaScript Object Notation) format through an open Application Programming Interface (API). However, **in order to download a microdata set, an application must be completed, providing the following information:**

- first name
- last name
- organization
- email
- dataset requested
- receiving organization
- telephone number
- intended use
- expected outputs
- expected completion date
- other research team members which will have access
- whole dataset, or specific subset of variables required

The user must also agree with the following terms of use:⁴

- **The Lead Researcher's organization and other researchers who will be involved in using the data at that organization must be identified.** The Lead Researcher certifies that he/she is authorized to sign on behalf of the Lead Researcher's organization. If not, a suitable representative must be identified. Any violation of the Terms of Use of this agreement will be considered to have occurred on behalf of the Lead Researcher's organization, and FAO will take appropriate measures to sanction such misconduct, which may include denying any further and future access to FAM by the Lead Researcher organization or any other researchers involved in using the data.
- **The microdata set will only be used for the stated statistical and/or research purpose.** It shall not in any way be used for other purposes, including any administrative, commercial or law enforcement purposes.
- **Any results derived from the microdata set will be used solely for reporting aggregated information,** and not for reporting about any specific entities or data subjects.
- **Neither the Lead Researcher nor anyone else authorized in this agreement shall take any action with the purpose of identifying any individual entity** (i.e. person, household, enterprise, etc.) in the microdata set(s). If such a disclosure is made inadvertently, no use will be made of the information, and it will be reported immediately to FAO.
- **The microdata set and other materials provided through the FAM Catalogue will not be re-disseminated, nor sold, nor otherwise shared with anyone other than the Lead Researcher** (or the other researchers authorized in this agreement) **without the written agreement of FAO.**
- **No attempt will be made to produce links or matches** among datasets provided by FAO and any other datasets that could identify individuals or organizations.
- **Any books, articles, conference papers, theses, dissertations, reports, or other publications that employ data obtained from FAO will cite the source of data** in accordance with the citation requirement provided with each dataset.

⁴ Note that these terms of use were drafted in collaboration with FAO's Office of Corporate Communications (OCC) and Legal Unit (LEGA).

- **An electronic copy of all reports and publications based on the requested data will be sent to FAO.**
- **The Lead Researcher shall implement security measures to prevent unauthorized access to this microdata set.** The microdata set must be destroyed upon the completion of the research, unless FAO obtains satisfactory guarantee that the microdata set(s) can be secured and provides written authorization to the Lead Researcher in this respect.
- **FAO may monitor, at its discretion, the use of datasets obtained from the FAM Catalogue, and decide whether an abuse has taken place under these Terms of Use.** In such case, FAO may sanction users for violations. Penalties may include restrictions or denial of further access to the FAM Catalogue.
- **The designations employed in the dataset do not imply the expression of any opinion whatsoever on the part of FAO** concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Information contained in the dataset is provided on an "as is" and "as available" basis. No guarantee is given that the information is correct, complete or up-to-date. FAO does not represent or endorse the accuracy, completeness, authenticity or reliability of any information contained in the dataset. FAO shall not be held liable for any loss or damage arising from, or directly or indirectly connected to, the use of, reference to, or reliance on any dataset, including, but not limited to, any liability arising from any interpretation or inferences based upon the data, nor from any intentional or negligent misuse, error, disclosure, undue transfer, loss or destruction of data that may occur.
- **The Lead Researcher will ensure that the Terms of Use are shared with any individual authorized to download datasets.**
- **FAO reserves the right to amend these Terms of Use at its own discretion.** Any amendment affecting the conditions agreed upon under these Terms of Use will be notified to the Lead Researcher. Moreover, any amendments made will also be shared with the data provider.
- **Nothing contained in or related to these Terms of Use shall constitute or be interpreted as a waiver, express or implied, of the privileges and immunities of FAO.**

If the requester is an employee of FAO and is requesting access to more than five datasets, the officer can submit one single application through FAM and send a request to FAM-Catalogue@fao.org. OCS will create a bulk download zip file in this case. Also, note that FAO officers are automatically registered based on their FAO email credentials, so there is no need to register.

An officer in the OCS will review each application. **The following criteria will be used to determine whether or not access is granted:**

1. Is the requester qualified and/or employed by an institution with reputation in the proposed domain of study?
2. Is the dataset fit-for-purpose for the research or statistical project proposed?

If OCS is not able to determine the answers to those two questions, OCS will consult the data provider.

If a request is rejected, the requester will be informed by email and a justification will be provided. In case the request is approved, an email will be sent to the requester providing a link to download the microdata sets.

Annexes

Annex 1: Document history (for internal purposes)

Version	Date	Author	Description of changes/status
0	20-11-2019	Michael Rahija Anidi Oluwakayode	Draft 0
1	27-11-2020	Yakob Seid	Draft 1
2	11-1-2021	Yakob Seid	Draft 2

Annex 2: Metadata and microdata curation and dissemination (MMCD) protocol (FAO, 2021)

Data collected through surveys, and administrative systems form the foundation of official statistics, and are an invaluable source for research. They are aggregated to generate national estimates by official statisticians, and analyzed by researchers and policy analysts to gain scientific insights which can be translated into policy. These data are commonly referred to as microdata defined as to unit-level information on individual people or entities (such as individuals, households, business enterprises, farms, or even geographic areas).

The power of microdata stems from its granularity. Because microdata contain individual level information, they allow an analyst to investigate the unique ways a certain phenomenon may effect sub-populations. For example, a particular agricultural policy may effect male and female agricultural holders differently. Likewise, a social protection scheme may benefit a particular demographic and disadvantage another. This type of analysis is impossible without highly granular datasets which allow for the analyst to stratify a dataset by a one or more variables.

It is important to note here that this protocol incorporates the FAO Personal Data Protection Principles (FAO's administrative circular No. 2021/01) and it is in accordance with the principles.

Annex 3: License to redistribute datasets

Viale delle Terme di Caracalla, 00153
Rome, Italy

Fax: +39 0657053152

Tel: +39 0657051

www.fao.org

Our Ref.: [insert division]/xxxx/xx

Your Ref.: XXXX

LICENSE TO REDISTRIBUTE DATASETS

This license agreement is made between:

THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Viale delle Terme di Caracalla, 00153 Rome, Italy

(hereinafter referred to as 'FAO')

and

[Name of the Organization]

[address of the Organization]

(hereinafter referred to as 'the Contributor')

1. Background and purpose

FAO is the developer and maintainer of the Food and Agriculture Microdata ("FAM") catalogue which archives and distributes microdata relevant to FAO's global mandate to defeat hunger. Microdata are unit-level data obtained usually through sample surveys, censuses, and administrative systems. These data provide information on individual people or entities (otherwise known as "data subjects") such as households, business enterprises, facilities, farms, trees or even geographic areas such as villages or towns. Accordingly, FAM provides the global knowledge base of highly detailed and granular microdata on food and agriculture.

The purpose of this License to Redistribute Datasets (hereinafter "the Agreement") is to define the terms and conditions agreed upon between FAO and the Contributor in order to publish the following dataset(s) and corresponding documentation in the FAM catalogue:

[INSERT NAME OF SURVEY]

[YEAR(S) OF IMPLEMENTATION]

(hereinafter referred to as 'the datasets' or 'the Contribution')

2. Warranties of contributor

The Contributor represents and warrants to FAO that:

- (a) That they are legally entitled to grant the rights referenced in this Agreement, that the Contribution is original and contains no violation of any existing copyright or other thirdparty right or any material of an obscene, libellous or otherwise unlawful nature.
- (b) The data included in any datasets have been collected and compiled in compliance with any legal or regulatory requirements as applicable to the Contributor;
- (c) The data contained in the dataset(s) were collected in full informed consent⁵ of the responsible entities for the data subject(s).
- (d) Aside from common data cleaning, or anonymization techniques, no records in the dataset(s) have been altered.
- (e) No individual records, or observations have been removed from the dataset(s) without notifying FAO and providing corresponding detailed documentation.
- (f) If the dataset(s) has already been anonymized (i.e. all information which can directly identify a data subject has been removed), due diligence has been made to protect dataset(s) from any divulgence of confidential data in line with any legal or regulatory requirements as applicable to the Contributor.

3. Obligations of contributor

- (a) The Contributor shall provide FAO with all metadata or supporting documents pertaining to the dataset(s).
- (b) The Contributor shall provide FAO with the dataset(s) in one or more of the following formats: .dta, .sav, .rdata, .csv, .tab.
- (c) The Contributor shall inform FAO about which variables in the dataset(s) can be used to personally identify data subjects, and/or could otherwise be sensitive.
- (d) The Contributor shall provide FAO with anonymized data. If FAO is to undertake the anonymization process, the Contributor shall agree that this step will be performed by FAO, in accordance with FAO's internal rules, regulations and policies.

4. Obligations of FAO

Prior to publication, FAO shall undertake the following:

- (a) Ensure that the dataset(s) meet FAO's Statistical disclosure control (SDC) standards, including the removal of all personally identifiable information, sensitive variables, and application of SDC techniques to variables which otherwise may be used to reveal confidential information including, but not limited to, the ones specified in 3 (c).
- (b) Prepare metadata compliant with the Data Documentation Initiative (DDI) international standard.

FAO will collect contact information on any individual requesting to access the dataset(s) including their name, email address, and respective institution.

FAO will ensure that access to dataset is only granted to users who have agreed to the conditions set forth by the applicable Terms of Use, as referred to in Article 5.

⁵ Informed consent: Consent is an expression of human autonomy. For such expression to be genuine, it must be informed and meaningful.

5. Terms of use

Only users which agree to the following (minimum) conditions shall be granted access:

- (a) The dataset(s) will only be used for statistical and/or research purposes. Commercial users will be prohibited.
- (b) Any results derived from the dataset(s) will be used solely for reporting aggregated information, and not for any specific individual entities or data subjects.
- (c) The users shall not take any action with the purpose of identifying any individual entity (i.e. person, household, enterprise, etc.) in the dataset(s). If such a disclosure is made inadvertently, no use will be made of the information, and it will be reported immediately to FAO.
- (d) The dataset(s) cannot be re-disseminated by users or shared with anyone other than the individuals that are granted access to the dataset(s) by FAO.
- (e) Any other terms and conditions as set forth in the "Application for Access to Licensed Dataset" if applicable.

6. Additional rights granted by contributor to FAO

- (a) The license provided under this Agreement includes FAO's right to publish the dataset(s), metadata and relevant documents in the FAM catalogue.
- (b) The Contributor explicitly grants FAO the right to create derivative works, including indicators, from the Contribution.

7. Intellectual property rights

- (a) Copyright in the dataset(s) will remain with the Contributor or copyright holder. FAO shall own any inventions and/or derivative works resulting from or including the dataset(s), to the extent that these are a result of FAO's independent use of the dataset(s).
- (b) FAO undertakes to retain any copyright notices and other proprietary notices included with the dataset(s) in their original form and to make due acknowledgement to the Contributor where appropriate.

8. Removal of contribution and termination

- (a) The Contributor may request removal of the Contribution from FAM by requesting termination of this Agreement with written notice at any time. In such case, FAO undertakes to withdraw the Contribution from FAM without unreasonable delay.
- (b) FAO may remove the whole or any part of the Contribution from FAM at any time at its discretion. If the whole Contribution is removed, FAO may terminate this Agreement with written notice.
- (c) Should any Party fail to comply with its obligations under this Agreement, the other Party may terminate the Agreement at any time with written notice.

9. Liability

- (a) FAO shall not be liable for any losses, damages or expenses arising from, or directly or indirectly connected to unauthorized access to the dataset. In any event, the Contributor shall promptly inform FAO of any claim, incident or other circumstance that would constitute a breach of the data licensed to FAO under this Agreement.
- (b) FAO shall not be liable for the use and interpretation of data and corresponding documentation published and available in the FAM catalogue, and for any interferences based upon it, nor shall it be liable for any losses, damages or expenses arising from any intentional or negligent misuse, error, disclosure, undue transfer, loss or destruction of data that may occur.
- (c) In no event shall FAO be liable for any loss of business or profits, or for any indirect, incidental

or consequential damages arising out of the use of, or inability to use, the dataset(s) published or otherwise available in the FAM catalogue.

10. General conditions

(a) *Immunity.* Nothing in this Agreement or relating thereto shall be construed as constituting a waiver of privileges or immunities of FAO, or as conferring any privileges or immunities to the Contributor.

(b) *Applicable law and Settlement of disputes.* This Agreement and any dispute arising therefrom shall be governed by general principles of law, to the exclusion of any single national system of law. General principles of law shall include the UNIDROIT General Principles of International Commercial Contracts 2010. Any dispute, controversy or claim arising out of or in relation to this Agreement shall be settled by mutual agreement between the parties. If the parties are unable to reach an agreement on any question in dispute or on a mode of settlement other than arbitration, either party shall have the right to request arbitration in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL) as at present in force. The parties agree to be bound by any arbitration award rendered in accordance with the above-mentioned rules as the final adjudication of any such dispute. The Arbitral Tribunal shall have no authority to award punitive damages.

(c) *Indemnities.* Each party shall promptly inform the other of any claim made against either party, which, if sustained, would constitute a breach of any warranty made by the Contributor to FAO in this Agreement. The Contributor shall defend any such claim with counsel of its own selection. The above is without prejudice to the privileges and immunities of FAO. This provision shall survive the expiration or termination of this Agreement.

(d) *Correspondence.* All communications from FAO to the Contributor shall be directed to [name of person, title, email, address]. All communications from the Contributor to FAO related to this Agreement shall be addressed to [name of person, title, division, email], Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, 00153, Rome, Italy.

Signed for the Contributor:

Signature:.....
Name:.....
Title:.....
Date:.....

Signed for FAO:

Signature:.....
Name:.....
Title:.....
Date:.....

Annex 4: Statistical disclosure control (SDC) protocol (FAO, 2019)

The compilation and dissemination of official statistics is one of the core responsibilities of a nation's government. Statistics provide the foundation for evidence based decision making, and effective public administration cannot be undertaken without timely and accurate statistics. Traditionally, in order to compile official statistics, national statistical systems collect microdata which refers to unit-level data usually collected through surveys, experiments, censuses and administrative systems. These data provide information on individual people or entities (otherwise known as "data subject(s)") such as individuals, households, business enterprises, facilities, farms or even geographic areas. More often than not, microdata contain personally identifying and/or confidential information on the data subjects.

Statisticians have long acknowledged the importance of securing this information in order to maintain the trust of the populations they serve. In this regard, the 6th principle of the Fundamental Principles of Official Statistics states "Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes" (UNECE, 2019). Furthermore, FAO's Statistical Quality Assurance defines Principle 10 as "All data subject to national confidentiality policies (e.g. concerning people and legal entities, or small aggregates) are kept strictly confidential, and are used exclusively for statistical purposes, or for purposes mandated by legislation" (FAO, 2014).

However, while acknowledging the importance of securing individual data, the United Nations also advocates for the free dissemination of microdata. Disseminating microdata allows users to engage in research, increases the transparency and accountability of national statistical institutions, and generate quality improvements through feedback from users (UNSD, 2014).

The competing principles of data security and microdata dissemination are arbitrated through a domain of statistics called Statistical Disclosure Control (SDC). SDC methods allow for protecting a dataset through the application of statistical tools, allowing the institution to safely disseminate the micro dataset.

It is important to note here that this protocol incorporates the FAO Personal Data Protection Principles (FAO's administrative circular No. 2021/01) and it is in accordance with the principles.

References

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