

FAO Data in Emergencies (DIEM)

Data access user guide

Table of contents

Data in Emergencies (DIEM)	1
Data accessibility.....	1
Citation	2
DIEM-Monitoring System – An overview.....	2
DIEM questionnaire	3
DIEM microdata	4
Useful resources:.....	4
Remarks.....	5
Aggregated data license	5
Microdata license	5
How to manually download DIEM data: Step by step guide.	6
DIEM data API	16

Data in Emergencies (DIEM)

In recognition of the need to better understand the impact of shocks on agricultural livelihoods in food crisis contexts, the Food and Agriculture Organization of the United Nations (FAO) established Data in Emergencies (DIEM) in 2020. Driven by regularly collected primary data in food crisis countries, its objective is to inform decision making in support of agricultural livelihoods in fragile and shock-prone environments. Since the launch of the DIEM Hub in June 2020, DIEM surveys have been completed in over 30 countries reaching approximately 150 000 households per year. At the centre of DIEM is the DIEM-Monitoring System which performs regular, standardized and frequent household surveys.

DIEM-Monitoring provides open, accessible and reusable data. As a proactive partner to the research and humanitarian communities, DIEM is pioneering new approaches to data sharing and open data. DIEM is committed to supporting researchers and programme designers while they engage with DIEM data.

Data accessibility

All DIEM users have access to DIEM survey data **aggregated at the lowest possible administrative level** (either administrative level 1 or 2, depending on the sample of

each specific survey). DIEM accounts can be created at the top of the DIEM homepage, or on [this dedicated page](#). Automated procedures will assign user privileges. Please note that it typically takes around 10 minutes from account creation for full user privileges to activate.

Users who need access to data **at household level** (DIEM Microdata) are encouraged to download it from the [FAO Microdata Platform \(FAM\)](#). All DIEM survey microdata are anonymized and published on FAM within six months after the aggregated data is made available on the DIEM Hub. If more rapid access is required for operational or research purposes (i.e. when data are needed within six months after the end of the survey before becoming available on FAM), users can submit a request for direct access to anonymized microdata after creating a DIEM account [using this online form](#). Requests will be evaluated within two working days, and direct access to anonymized microdata will be granted in exceptional and justified cases, exclusively to users with institutional email addresses. This permission will be valid for one year, with the possibility of extension if proven to be useful and justified.

Please refer to the [latter section](#) of this document for instructions on downloading aggregated data or microdata (in cases where access to microdata is granted).

Citation

All products or publication that mention or include DIEM data, should include the following citation:

- Source of data: FAO. 2025. **Name of the country**: DIEM-Monitoring assessment results (**Month and Year**). In: *FAO Data in Emergencies Hub*. Rome. [Cited **Date**]. <https://data-in-emergencies.fao.org>

It would be greatly appreciated if you could inform the [DIEM Hub team](#) of the release of any product based on DIEM data.

DIEM-Monitoring System – An overview

- Data are collected multiple times a year in the most food insecure countries through the DIEM-Monitoring System. DIEM-Monitoring provides a regularly updated and highly accessible picture of agricultural livelihoods and food insecurity in fragile environments, triggering mitigating and response actions.
- Data are collected at household level through computer-assisted telephone interviews or face-to-face surveys. Semi-automatic processes of data cleaning, aggregation, analysis and validation ensure that the surveys inform decision making in a timely and effective manner.
- The main target population under the DIEM-Monitoring surveys are typically agricultural producers of all kinds (crop, livestock, forestry, fisheries and aquaculture) and farm labourers. In order to capture all of the households

concerned, the entire rural population of countries with high levels of food insecurity is typically targeted.

- All DIEM indicators are displayed on maps and dashboards on the DIEM Hub and are updated in near real time. Aggregated datasets are available to download three weeks following data collection, at household and subnational levels.
- Stratification typically occurs at administrative level 1, with an increasing number of surveys representative at administrative level 2.
- The system boasts a precision level of 8.5 percent with a confidence level of 95 percent.
- To ensure accurate representation of the surveyed population, the datasets are weighted. The weights use information on administrative level population distribution (weight_base), on the proportion of agricultural households in a given administrative level (weight_quota) and on baseline sociodemographic characteristics for post-stratification weights (weight_wealth). These are used for administrative level aggregation (seen in the “weight_final” field).
- The regularity of DIEM surveys enables swift identification of key trends, prompting early action and mitigation.

DIEM questionnaire

The DIEM-Monitoring System is built around a template survey questionnaire. This template is the outcome of thorough consultations with experts and stakeholders from all pertinent sectors, including those specializing in food security, as well as the crop, livestock, and fisheries and aquaculture sectors. This approach ensures that the DIEM-Monitoring System gathers information that is not only relevant but also presented in a manner that can be directly utilized for informed decision-making and policy formulation. For every new survey, the template questionnaire undergoes subtle adjustments to cater to country-specific and seasonal requirements, such as the local currency, administrative division names, the current crop season, the survey’s timing in relation to the main harvest period, and the primary crops and livestock in the area. Both the template and survey-specific questionnaires can be downloaded from the DIEM Hub and are listed in the [Useful resources](#) section later in this document.

The DIEM questionnaire spans five primary thematic areas:

1. **Income and shocks:** This module explores income changes and shocks experienced by households over the recall period (usually three months). Information is obtained on the type and magnitude of income change over the reference period for main income sources (agricultural and non-agricultural), and the main shocks likely to affect a household’s capacity to produce food or generate income.
2. **Crop production:** The crop module focuses on difficulties encountered by crop producers, and their impact on production and sales. They may include constrained access to crop inputs and marketing challenges. Production is

appraised as a relative change in the area planted and harvested (achieved or projected) compared to a typical year.

3. **Livestock production:** The livestock module focuses on difficulties encountered by livestock breeders, and their impact on production and sales. These can include a lack of access to feed and other inputs, or veterinary services, as well as marketing issues. Production is measured as a relative change in herd or flock size compared to the same time the previous year.
4. **Food security outcomes:** Standard indicators include the Food Insecurity Experience Scale (FIES), household dietary diversity score (HDDS) and the livelihood coping strategies index (LCSI), which are used as proxies of food insecurity and household livelihood disruption.
5. **Need for assistance:** The interviewees express their needs for short- to mid-term assistance in relation to agricultural livelihoods. They also provide information about food security and livelihood assistance received during the recall period.

DIEM microdata

Microdata is provided in a coded format and a dedicated codebook is available to match the labels with each code for every field. DIEM surveys produce a highly dimensional dataset with a vast number of variables. To better interpret this, a field description table is provided to explain the content of each field. As explained above, data from all surveys, whether from different countries or rounds, are collected using a similar questionnaire. The data structures and domains remain consistent over time and across areas. This consistency allows all survey data to be combined into a single master table. From this table, specific surveys can be extracted based on the country and round number.

The DIEM questionnaire follows its own internal logic with skip patterns for the questions. Not all questions are posed to every household because they might not be relevant to every type of household. If a question isn't asked to a specific household, the row associated with that household will lack data in that particular field. In other words, an empty field indicates that the household was not eligible for that question.

Useful resources:

- [DIEM Hub](#)
- [DIEM introductory video](#)
- [DIEM briefing note](#)
- [DIEM-Monitoring System](#)
- [DIEM Microdata codebook](#) detailing the association between codes and labels
- [Field descriptions table](#): Please refer to the first sheet for microdata fields. The subsequent four sheets pertain to aggregated data.
- [Template questionnaire in Kobo format](#)

- [Template questionnaire in GeoPoll format](#) (rows in grey are associated with optional questions, not included in the global dataset)
- [Survey specific questionnaires](#)
- Administrative divisions for DIEM surveys (derived from OCHA HDX):
 - Administrative reference [level 0](#)
 - Administrative reference [level 1](#)
 - Administrative reference [level 2](#)
- Survey-specific [data collection methodologies](#)
- [Additional metadata](#)
- [DIEM food security indicators](#)

Remarks

- In Yemen, DIEM introduced a High Frequency Monitoring (HFM) system alongside the standard DIEM surveys. These monthly surveys focus exclusively on two modules: Food security outcomes, and Income and shocks. HFM rounds are conducted in addition to the standard DIEM surveys, offering more detailed and timely monitoring of these specific variables.
- It is worth noting that the household sample involved in aquatic production (either fish catching or aquaculture farming) is frequently too limited, making administrative aggregation unfeasible.

Aggregated data license

DIEM aggregated data are made available under the Creative Commons Attribution-4.0 International license ([CC BY 4.0](#)). By using this database, you agree to be bound by the terms of this license and the [FAO Statistical Database Terms of Use](#)

Microdata license

Confidentiality

The users shall not take any action with the purpose of identifying any individual entity (i.e. person, household, enterprise, etc.) in the micro 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

Access conditions

Micro datasets disseminated by FAO shall only be allowed for research and statistical purposes. Any user which requests access working for a commercial company will not be granted access to any micro dataset regardless of their specified purpose. Users requesting access to any dataset must agree to the following

conditions:

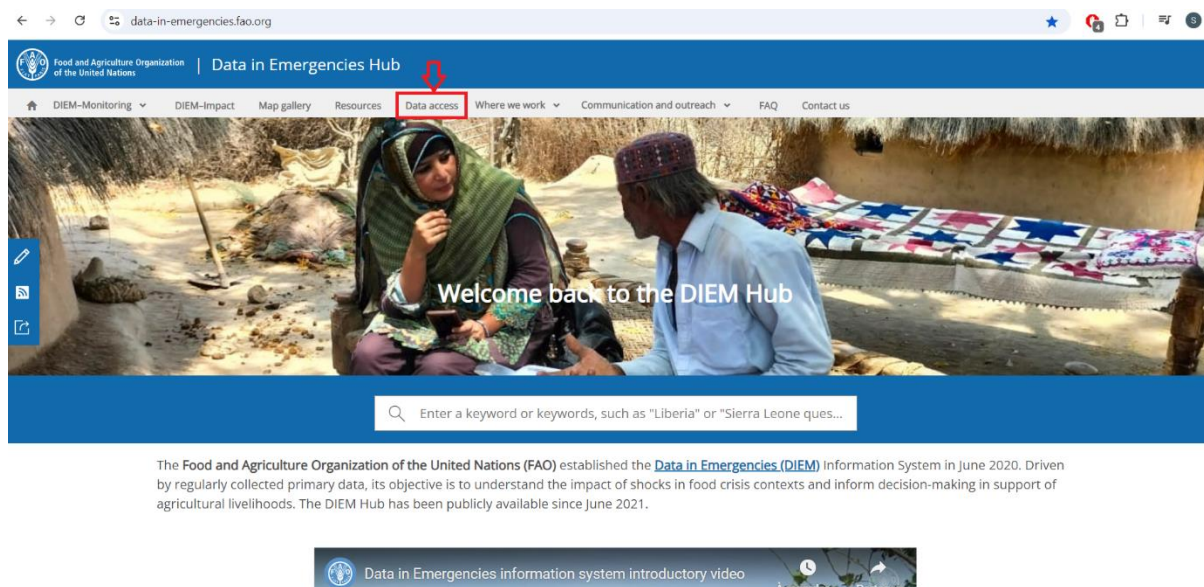
- The micro dataset will only be used for statistical and/or research purposes;
- Any results derived from the micro dataset will be used solely for reporting aggregated information, and not for any specific individual entities or data subjects;
- The users shall not take any action with the purpose of identifying any individual entity (i.e. person, household, enterprise, etc.) in the micro 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;
- The micro dataset cannot be redisseminated by users or shared with anyone other than the individuals that are granted access to the micro dataset by FAO.

Regarding the last point, please let the DIEM [Hub team](#) know if you plan to include other colleagues in your work so they can be granted access as well.

Additional information on FAO microdata dissemination is available [here](#).

How to manually download DIEM data: Step by step guide.

From the home page (<https://data-in-emergencies.fao.org>), sign in with your DIEM account, and click on the “Data access” page



[Click here to go to the “How to download aggregated data” section](#)

[Click here to go to the “How to download microdata” section](#)

How to download aggregated data

1/ Go to the “Aggregated data” section.

data-in-emergencies.fao.org/pages/data

Food and Agriculture Organization of the United Nations | Data in Emergencies Hub

DIEM-Monitoring | DIEM-Impact | Map gallery | Resources | **Data access** | Where we work | Communication and outreach | FAQ | Contact us

DIEM data

DIEM-Monitoring data is open, accessible and reusable. As a proactive partner to the research and humanitarian communities, the Data in Emergencies Information System is pioneering new approaches to data sharing and open data. DIEM is committed to supporting researchers and programme designers while they engage with DIEM data. DIEM hopes to shift the paradigm and make sharing humanitarian data the new normal.

Create a *Data In Emergencies* account and login to gain access to DIEM data.

[Create a DIEM account](#)

[Login with your DIEM account](#)

Aggregated data

DIEM survey data is aggregated at the first or second administrative level and organized into four thematic areas:

2/ Look for data of interest. There are two types:

“DIEM survey data aggregated” = Data referring to household interviews conducted after December 2022.

data | FAO Data in Emergencies

data-in-emergencies.fao.org/pages/data

Food and Agriculture Organization of the United Nations | Data in Emergencies Hub

DIEM-Monitoring | DIEM-Impact | Map gallery | Resources | Data access | Where we work | Communication and outreach | FAQ | Contact us

Aggregated data

DIEM survey data is aggregated at the first or second administrative level and organized into four thematic areas:

- Incomes, Shocks and Needs
- Crop production
- Livestock production
- Food Security

Following each round of data collection, data are cleaned, aggregated, analyzed, validated and appended to the four thematic-based datasets.

In order to fully leverage the dataset, it may be necessary to carefully read the [field descriptions](#), [questionnaires](#), and detailed [metadata](#)

[DIEM aggregated data \(income, shocks and needs\)](#)

Income shocks and needs thematic areas.

[Explore and download](#)

[DIEM aggregated data \(crop production\)](#)

Crop production thematic area

[Explore and download](#)

[DIEM aggregated data \(livestock production\)](#)

Livestock production thematic area

[Explore and download](#)

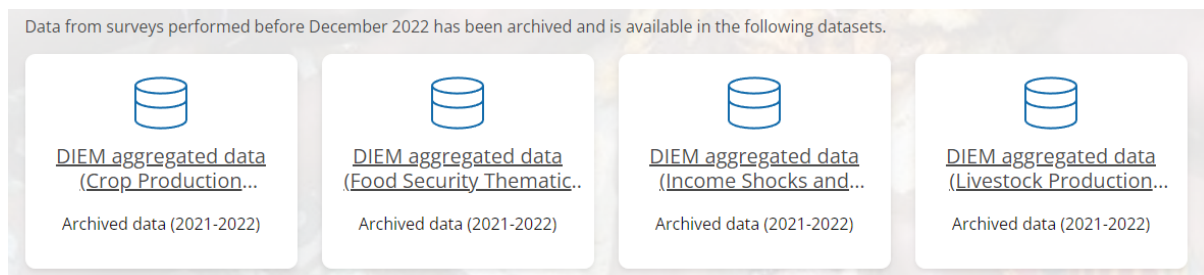
[DIEM aggregated data \(food security\)](#)

Food security thematic area

[Explore and download](#)

OR

“DIEM Archived data” = Data referring to household interviews conducted before December 2022.



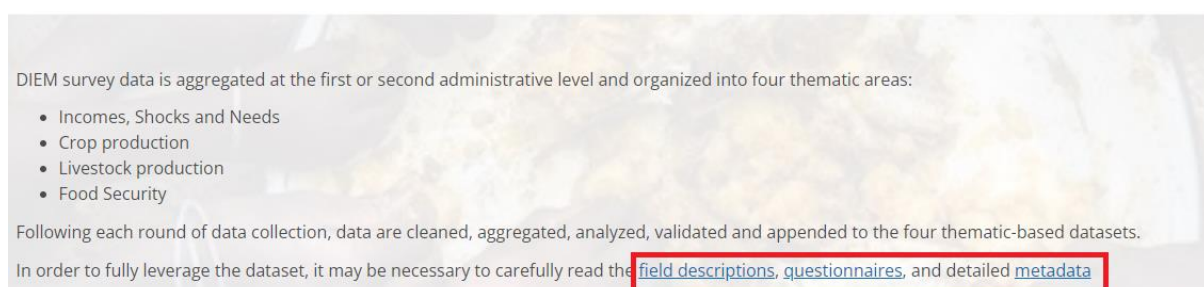
3/ Choose the thematic area that you would like to explore. Data are organized and stored in four thematic areas:

- Income, shocks and needs
- Crop production
- Livestock production
- Food security

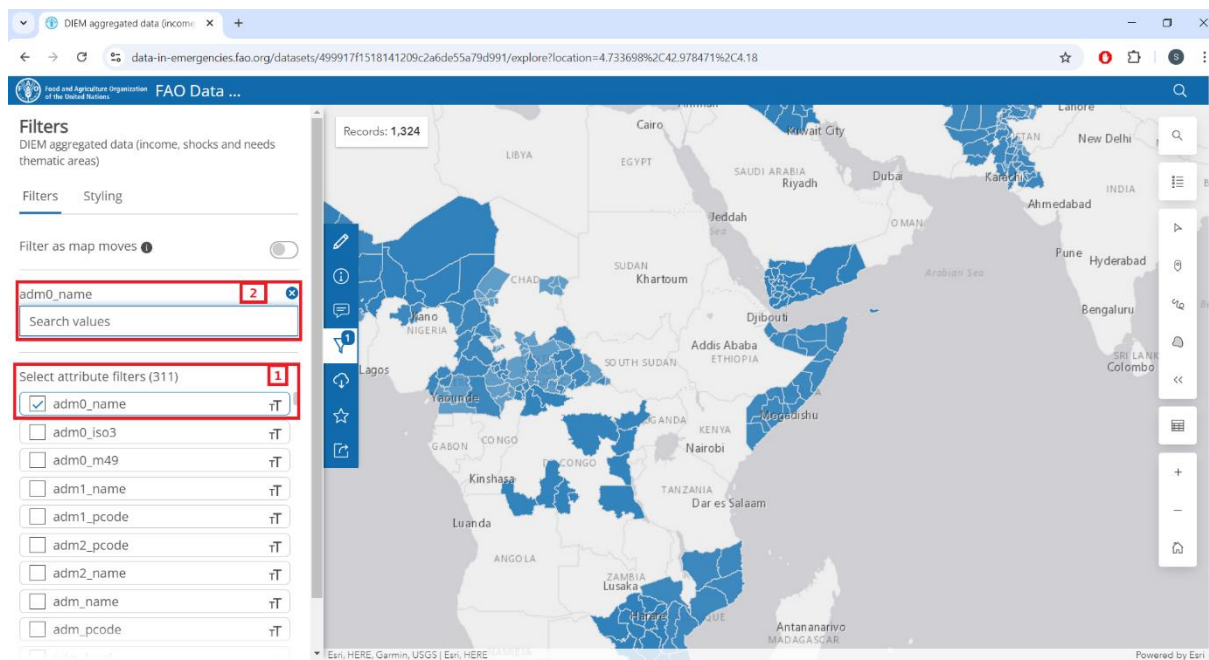
Data are aggregated at administrative level 1 or administrative level 2, depending on the country and round of data collection.

To better understand the datasets you are about to explore, refer to the field descriptions, questionnaires used for data collection and detailed metadata.

Aggregated data



4/ For example, we chose to explore the income, shocks and needs dataset with the data collection that happened after December 2022.



Tip: When you want to filter by data collection “Round” number, you need to move the two round sliders.

Showing 50 of 2,723 rows

survey_id	adm0_name	adm0_iso3	adm0_m49	adm1_pcode	adm1_name	adm2_pcode	adm2_name
U33224531513177342...	Democratic Republic of the C...	COD	180	CD91	Kasai-Central	CD9101	Kana
U-3359645778916763...	Democratic Republic of the C...	COD	180	CD51	Tshopo	CD5101	Kisar
U73074837855712766...	Democratic Republic of the C...	COD	180	CD42	Sud-Ubangi	CD4202	Gem
U-3410300425035288...	Democratic Republic of the C...	COD	180	CD31	Kwango	CD3103	Fesh
U-3410925237446416...	Democratic Republic of the C...	COD	180	CD91	Kasai-Central	CD9106	Dem
U34636895322555729...	Democratic Republic of the C...	COD	180	CD31	Kwango	CD3107	Kaso
U35101778612570941...	Democratic Republic of the C...	COD	180	CD31	Kwango	CD3107	Kaso
U-361706963717218307	Democratic Republic of the C...	COD	180	CD91	Kasai-Central	CD9101	Kana
U36465035297919572...	Democratic Republic of the C...	COD	180	CD92	Kasai	CD9202	Kam
U-366329664942965704	Democratic Republic of the C...	COD	180	CD54	Ituri	CD5401	Buni
U36659031650956546...	Democratic Republic of the C...	COD	180	CD92	Kasai	CD9201	Tshik
U-3695935835998475...	Democratic Republic of the C...	COD	180	CD92	Kasai	CD9201	Tshik
U-3748207121415786...	Democratic Republic of the C...	COD	180	CD92	Kasai	CD9201	Tshik

Filters
DIEM Household surveys microdata

adm0_name

☒ Democratic Republic of the Congo 3.48%

Search values

round

Select attribute filters (355)

☐ adm3_pcode

☐ adm3_name

☐ survey_date

☒ round 229

☐ total_case_duration 129

☐ resp_age_rmg

☐ resp_gender 129

If you are interested in one round, then the two sliders should be on top of each other.

FAO Data ...


Filters

DIEM Household surveys microdata

adm0_name ×

☒ Democratic Republic of the Congo 3.48%

round ×



2 21

Select attribute filters (355)

☐ adm3_pcode TT

6/ Click on the “Download”  button once the filters have been selected.

DIEM Household surveys microdata

data-in-emergencies.fao.org/datasets/2d15e5b7768949b4905e452fcc5e0440/ex


FAO Data ...


Download Options


Hosted Downloads


Records: 235,266


Toggle Filters: ☐


 CSV


 Download


 Shapefile

 Download



 GeoJSON

 Download

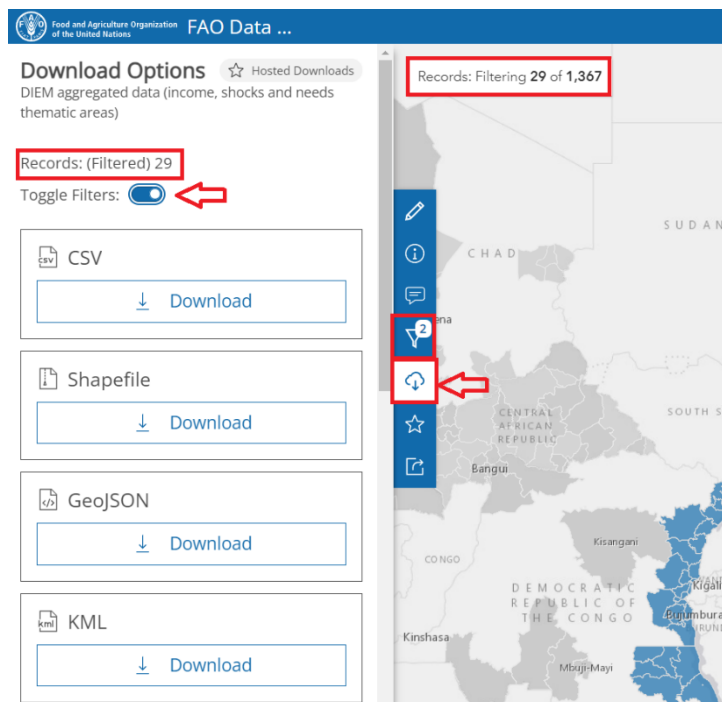
 KML

 Download

Showing 50 of 2,723 rows

survey_id	
U33224531513177342...	
U-3359645778916763...	
U73074837855712766...	
U-3410300425035288...	
U-3410925237446416...	
 	U-3322555729...
U35101778612570941...	
U-361706963717218307	
U36465035297919572...	
U-366329664942965704	
U36659031650956546...	
U-3695935835998475...	

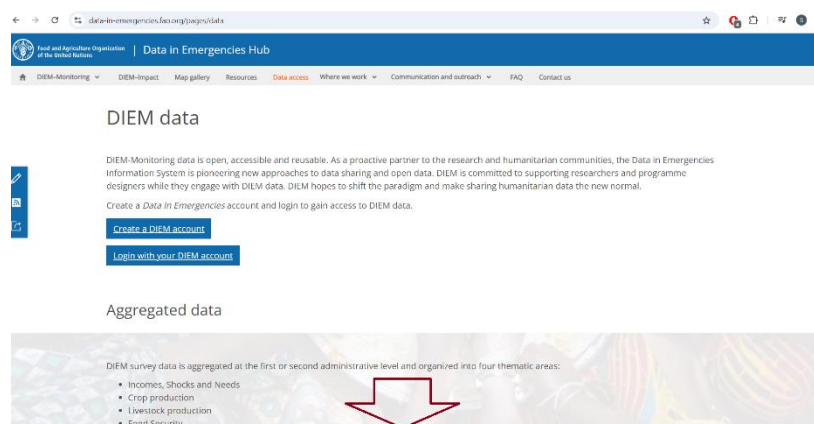
7/ Activate the option “Toggle Filters” to download only the filtered data.



8/ Select the format and hit “Download”.

How to download microdata

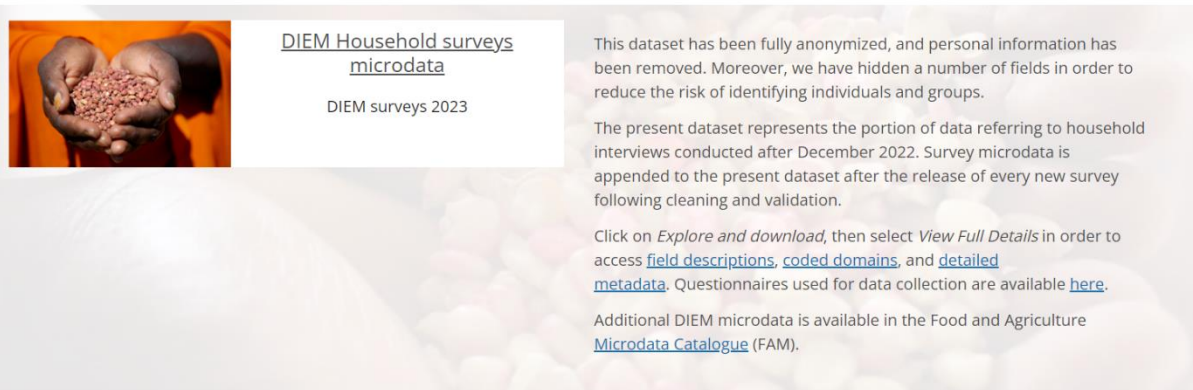
1/ Go to the ‘Microdata’ section.



2/ Fill in the data request form accessible [here](#). Your request will be evaluated within two working days and, if approved, access will be granted.

Microdata

Need household-level data from DIEM surveys? Fill out [this form](#) and get free access for one year (renewable).



DIEM Household surveys microdata
DIEM surveys 2023

This dataset has been fully anonymized, and personal information has been removed. Moreover, we have hidden a number of fields in order to reduce the risk of identifying individuals and groups.

The present dataset represents the portion of data referring to household interviews conducted after December 2022. Survey microdata is appended to the present dataset after the release of every new survey following cleaning and validation.

Click on *Explore and download*, then select *View Full Details* in order to access [field descriptions](#), [coded domains](#), and [detailed metadata](#). Questionnaires used for data collection are available [here](#).

Additional DIEM microdata is available in the Food and Agriculture [Microdata Catalogue](#) (FAM).

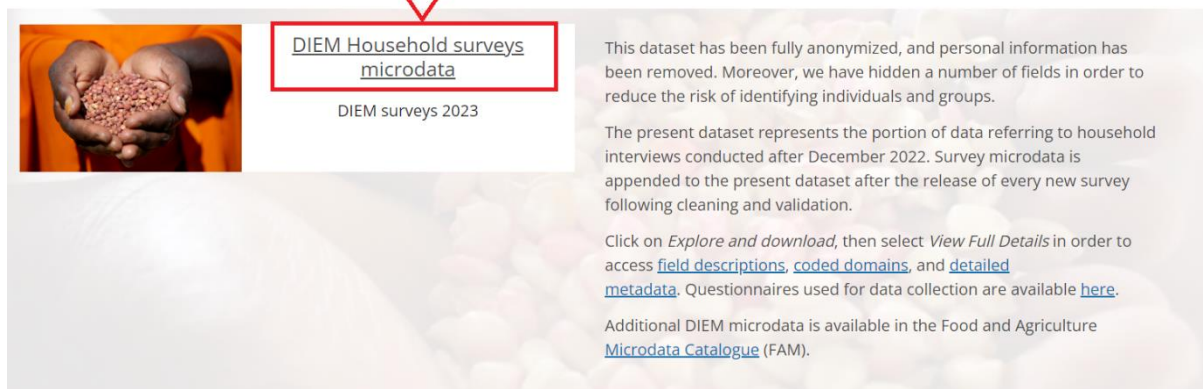
*** Once you have access ***

3/ Look for data of interest. There are two types:

“**DIEM Household surveys microdata**” = Data referring to household interviews conducted after December 2022.

Microdata

Need household-level data from DIEM surveys? Fill out [this form](#) and get free access for one year (renewable).



DIEM Household surveys microdata
DIEM surveys 2023

This dataset has been fully anonymized, and personal information has been removed. Moreover, we have hidden a number of fields in order to reduce the risk of identifying individuals and groups.

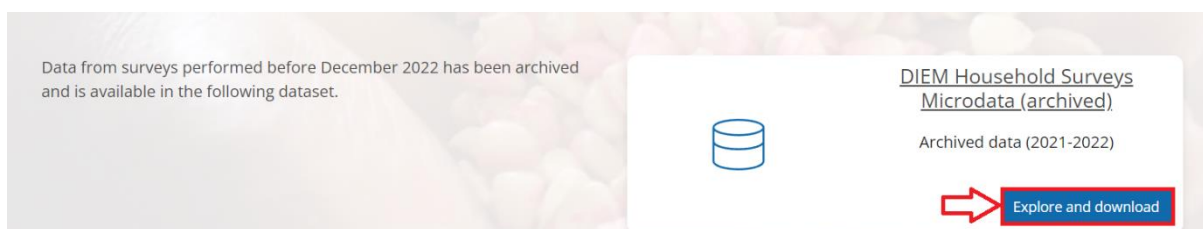
The present dataset represents the portion of data referring to household interviews conducted after December 2022. Survey microdata is appended to the present dataset after the release of every new survey following cleaning and validation.

Click on *Explore and download*, then select *View Full Details* in order to access [field descriptions](#), [coded domains](#), and [detailed metadata](#). Questionnaires used for data collection are available [here](#).

Additional DIEM microdata is available in the Food and Agriculture [Microdata Catalogue](#) (FAM).

OR

“**DIEM Household Surveys Microdata (archived)**” = Data referring to household interviews conducted before December 2022.



Data from surveys performed before December 2022 has been archived and is available in the following dataset.

DIEM Household Surveys Microdata (archived)
Archived data (2021-2022)

[Explore and download](#)

4/ Filter the data on the country/round/...

Tip: When you want to filter by data collection “Round” number, you need to move the two round sliders.

The screenshot shows the FAO Data interface with the following filters applied:

- adm0_name:** Democratic Republic of the Congo (3.48%)
- round:** Sliders at 2 and 21

The table displays 50 rows of survey data. The columns are: survey_id, adm0_name, adm0_iso3, adm0_m49, adm1_pcode, adm1_name, adm2_pcode, and adm2_name. The data shows various survey IDs and administrative levels within the Democratic Republic of the Congo.

If you are interested in one round, then the two sliders should be on top of each other.

The screenshot shows the FAO Data interface with the following filters applied:

- adm0_name:** Democratic Republic of the Congo (3.48%)
- round:** Sliders at 2 and 21

The table displays 50 rows of survey data. The columns are: survey_id, adm0_name, adm0_iso3, adm0_m49, adm1_pcode, adm1_name, adm2_pcode, and adm2_name. The data shows various survey IDs and administrative levels within the Democratic Republic of the Congo.

5/ Click on the “Download” button once the filters have been selected.

DIEM Household surveys micro x +

data-in-emergencies.fao.org/datasets/2d15e5b7768949b4905e452fcc5e0440/ex

Food and Agriculture Organization of the United Nations FAO Data ...

Download Options

☆ Hosted Downloads

DIEM Household surveys microdata

Records: 235,266

Toggle Filters: ☐

CSV

Download

Shapefile

Download

GeoJSON

Download

KML

Download

Showing 50 of 2,723 rows

survey_id
U33224531513177342...
U-3359645778916763...
U73074837855712766...
U-3410300425035288...
U-3410925237446416...
U-3322555729...
U35101778612570941...
U-361706963717218307
U36465035297919572...
U-366329664942965704
U36659031650956546...
U-3695935835998475...

6/ Activate the option “Toggle Filters” to download only the filtered data.

Download Options

☆ Hosted Downloads

DIEM Household surveys microdata

Records: (Filtered) 19,054

Toggle Filters: ☒

CSV

Download

Shapefile

Download

7/ Select the format and hit “Download”.

DIEM data API

Application Programming Interfaces (APIs) are essential for seamless system-to-system integration, enabling automated and efficient data exchange between platforms. By using the DIEM API, you can directly access datasets programmatically, facilitating dynamic workflows, data analysis and integration with your own systems.

To support this, we have created a [public GitHub repository](#) that includes a detailed Jupyter Notebook demonstrating how to perform automated data downloads from the DIEM API. This notebook provides installation instructions and step-by-step guidance, making it easy to implement and customize the integration for your specific needs.

To access the DIEM data API, it is necessary to first [create a DIEM account](#).