

FAO Data in Emergencies (DIEM)

Data access user guide

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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:

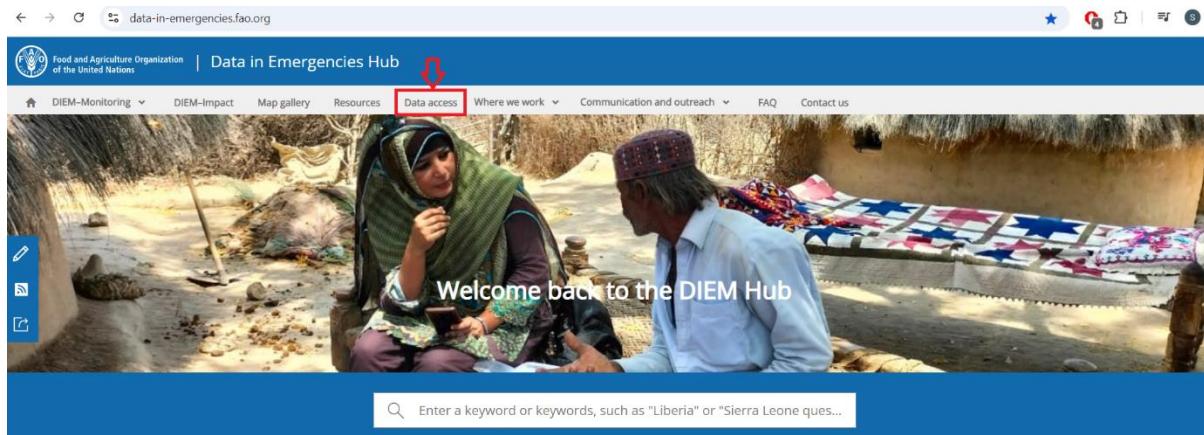
- The micro dataset will only be used for statistical and/or research purposes;
- Any results derived from the micro dataset will be used solely for reporting aggregated information, and not for any specific individual entities or data subjects;
- The users shall not take any action with the purpose 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



The Food and Agriculture Organization of the United Nations (FAO) established the [Data in Emergencies \(DIEM\)](#) information System in June 2020. Driven by regularly collected primary data, its objective is to understand the impact of shocks in food crisis contexts and inform decision-making in support of agricultural livelihoods. The DIEM Hub has been publicly available since June 2021.



[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-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 \(income, shocks and...\)](#)

Income shocks and needs thematic area

[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 \(food security thematic...\)](#)

Food security thematic area

[Explore and download](#)

OR

“DIEM Archived data”= 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 datasets.



[DIEM aggregated data
\(Crop Production...\)](#)

Archived data (2021-2022)



[DIEM aggregated data
\(Food Security Thematic..\)](#)

Archived data (2021-2022)



[DIEM aggregated data
\(Income Shocks and...\)](#)

Archived data (2021-2022)



[DIEM aggregated data
\(Livestock Production...\)](#)

Archived data (2021-2022)

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

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](#)

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

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 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...)
Income shocks and needs thematic areas. 

Explore and download

DIEM aggregated data (crop production...)
Crop production thematic area

Explore and download

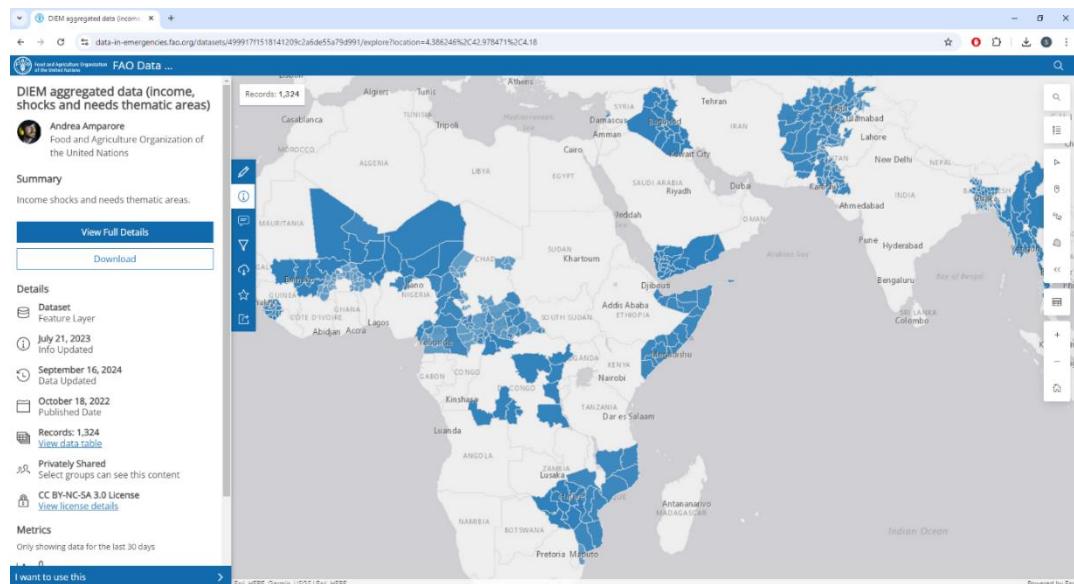
DIEM aggregated data (livestock production...)
Livestock production thematic area

Explore and download

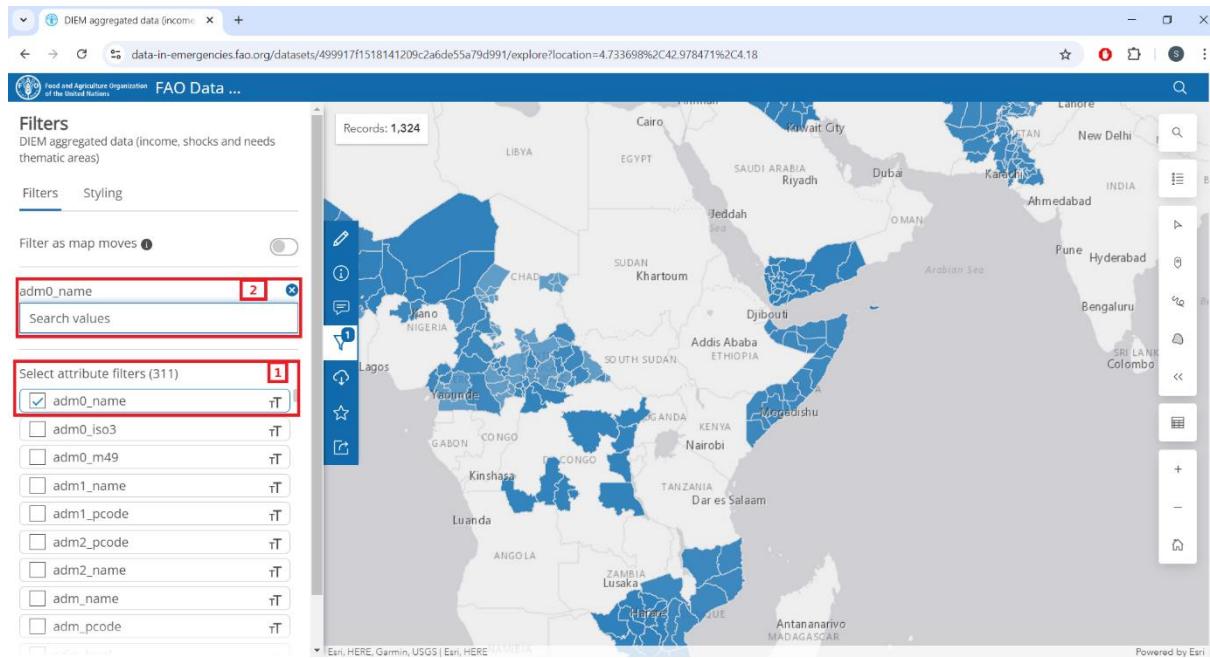
DIEM aggregated data (food security thematic...)
Food security thematic area

Explore and download

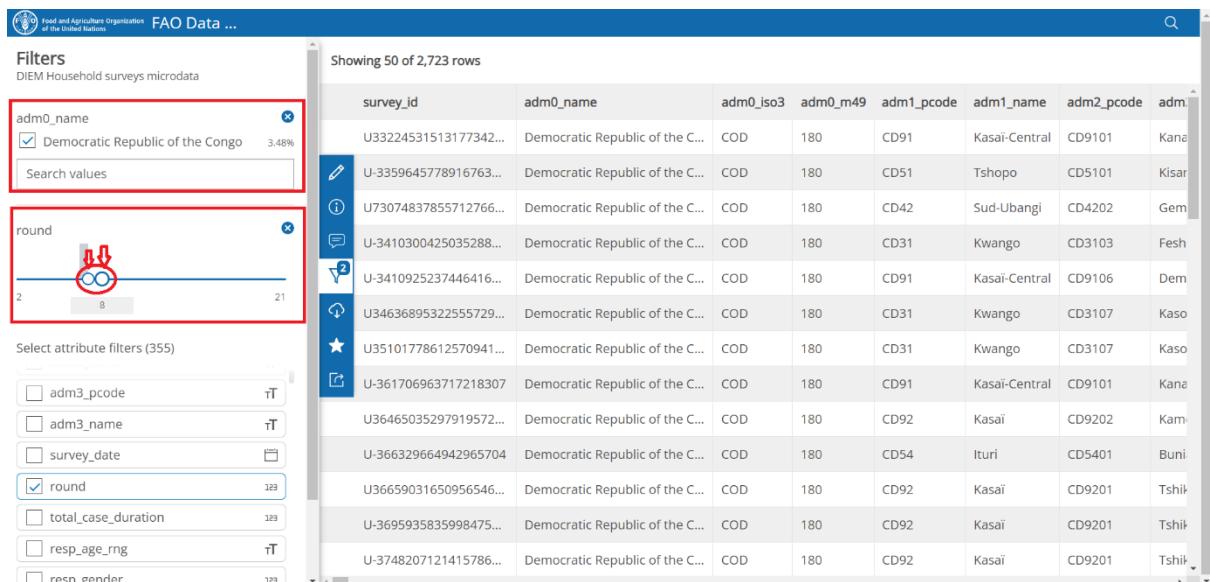
All the available data in different countries is indicated in colour.



5/ 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.



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

The screenshot shows the FAO Data Explorer interface. At the top, it says "Food and Agriculture Organization of the United Nations" and "FAO Data ...". Below that is a "Filters" section titled "DIEM Household surveys microdata". It shows two selected filters: "adm0_name" set to "Democratic Republic of the Congo" (3.48%) and "round" set to "2" (highlighted with a red oval). There is also a search bar for "Search values". To the right is a vertical toolbar with icons for edit, info, message, download (circled in red), star, and refresh.

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

The screenshot shows the "Download Options" page for the DIEM Household surveys microdata. It displays 235,266 records. A "Toggle Filters" button is present. On the left, there are four download options: CSV, Shapefile, GeoJSON, and KML, each with a "Download" button. On the right, a table lists 50 rows of survey IDs. The "Download" button for the first row (U33224531513177342...) is circled in red.

survey_id
U33224531513177342...
U-3359645778916763...
U73074837855712766...
U-3410300425035288...
U-3410925237446416...
Download 9322555729...
U35101778612570941...
U-361706963717218307
U36465035297919572...
U-366329664942965704
U36659031650956546...
U-3695935835998475...

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

The screenshot shows the 'FAO Data ...' interface. On the left, there's a sidebar with 'Download Options' for DIEM aggregated data (income, shocks and needs thematic areas). It lists four download formats: CSV, Shapefile, GeoJSON, and KML, each with a 'Download' button. A red box highlights 'Records: (Filtered) 29'. Below it is a 'Toggle Filters' button with a red arrow pointing to it. On the right is a map of Central Africa (Chad, Central African Republic, Congo, Democratic Republic of Congo, South Sudan, Uganda, Rwanda, Burundi) with a legend bar. A red box highlights 'Records: Filtering 29 of 1,367'.

8/ Select the format and hit “Download”.

How to download microdata

1/ Go to the ‘Microdata’ section.

The screenshot shows the 'Data in Emergencies Hub' website. The top navigation bar includes links for DIEM-Monitoring, DIEM-Impact, Map gallery, Resources, Data access (which is highlighted), Where we work, Communication and outreach, FAQ, and Contact us. The main content area is titled 'DIEM data'. It features a 'Create a DIEM account' button and a 'Login with your DIEM account' button. Below this is a section titled 'Aggregated data' with a large red arrow pointing down to a list of thematic areas: Incomes, Shocks and Needs; Crop production; Livestock production; and Food Security.

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.



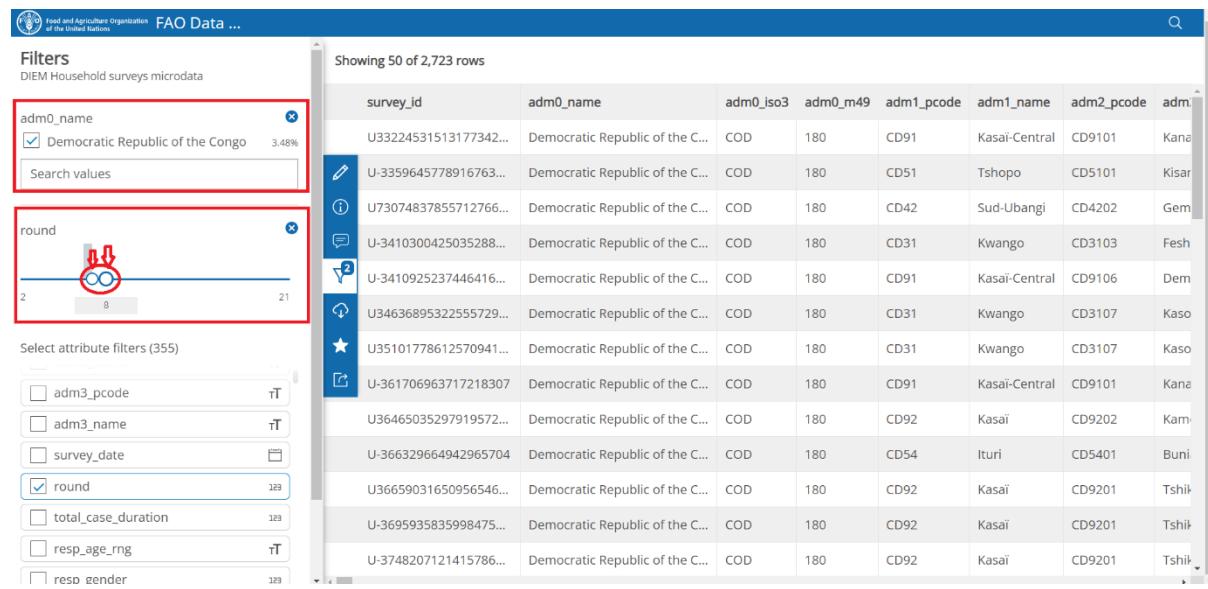
DIEM Household Surveys Microdata (archived)

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.

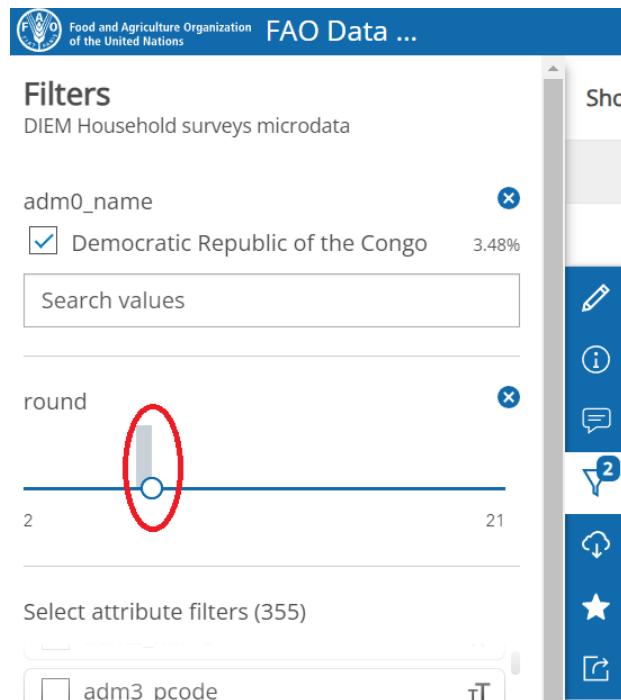


The screenshot shows the FAO Data interface with the following filters applied:

- adm0_name**: Democratic Republic of the Congo (3.48%)
- round**: A range from 2 to 21, with the slider handles swapped (the left handle is at 21 and the right handle is at 2).

The main table displays 50 rows out of 2,723, showing survey data for the Democratic Republic of the Congo across various administrative levels (adm0 to adm4) and survey dates.

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**: A range from 2 to 21, where the two slider handles are overlapping at the value 10.

The main table displays 50 rows out of 2,723, showing survey data for the Democratic Republic of the Congo across various administrative levels (adm0 to adm4) and survey dates.

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

The screenshot shows a web browser window with the URL data-in-emergencies.fao.org/datasets/2d15e5b7768949b4905e452fcc5e0440/ex. The page title is "FAO Data ...". On the left, there's a sidebar titled "Download Options" with sections for "Hosted Downloads" and "DIEM Household surveys microdata". It shows "Records: 235,266" and a "Toggle Filters" button. Below are four download options: "CSV" (with a "Download" button), "Shapefile" (with a "Download" button), "GeoJSON" (with a "Download" button), and "KML" (with a "Download" button). To the right is a main content area titled "Showing 50 of 2,723 rows" with a table header "survey_id". A row in the table has its "Download" button circled in red.

survey_id
U33224531513177342...
U-3359645778916763...
U73074837855712766...
U-3410300425035288...
U-3410925237446416...
Download (circled in red)
U35101778612570941...
U-361706963717218307
U36465035297919572...
U-366329664942965704
U36659031650956546...
U-3695935835998475...

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

The screenshot shows the same "Download Options" page as before, but with a red arrow pointing to the "Toggle Filters" button. The text "Records: (Filtered) 19,054" is displayed above the filters. The sidebar and download options are identical to the previous screenshot. The main content area shows the same table of survey IDs, but the "Download" button for the first row is now highlighted with a red circle.

survey_id
U33224531513177342...
U-3359645778916763...
U73074837855712766...
U-3410300425035288...
U-3410925237446416...
Download (highlighted with a red circle)
U35101778612570941...
U-361706963717218307
U36465035297919572...
U-366329664942965704
U36659031650956546...
U-3695935835998475...

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](#).