

INTERNATIONAL TRAINING ON TOPONYMY MANUAL GUIDES

19 - 23 JUNE 2023

BALI, INDONESIA



United Nations
Group of Experts on
Geographical Names



BADAN INFORMASI
GEOSPASIAL

MANUAL GUIDE

Data Collection using EpiCollect5

2.1 Introduction

EpiCollect5 is a comprehensive mobile and web application designed to simplify and streamline the process of data collection. Users can access EpiCollect5 through both mobile apps and web browsers. The mobile app is available for both iOS and Android.

Overall, users create projects by using the web application at five.epicollect.net. Afterward, these projects can be downloaded onto devices for conducting data collection tasks.

2.2 Installment

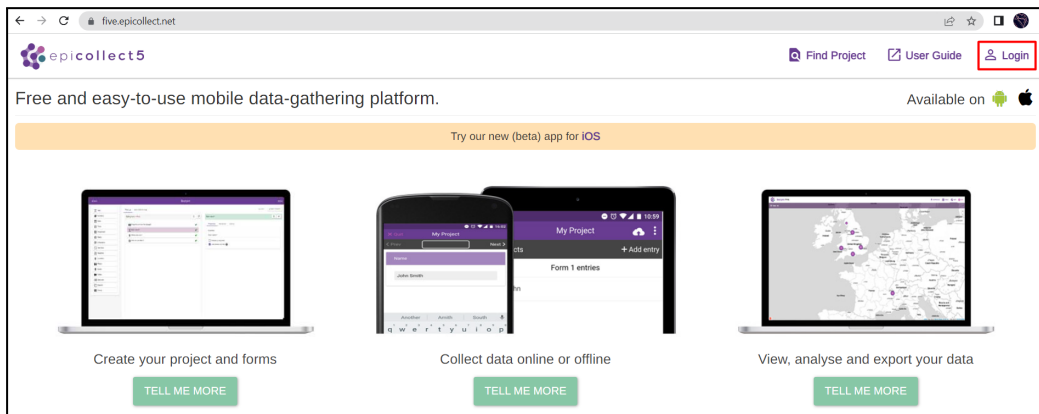
To download the mobile app, follow these steps:

1. Go to the Google Play Store (for Android) or App Store (for iOS) on your mobile device.
2. Go to the search bar and search "EpiCollect5".
3. The search will reveal the Epicollect5 app icon. Open, then click "Install".

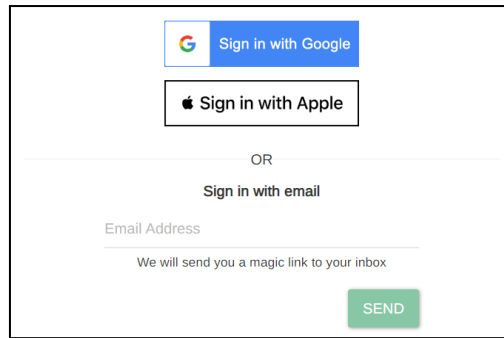
2.3 Project and Form Set-Up

The survey form is created through <https://five.epicollect.net/>. All the steps can be further learned on the page <https://docs.epicollect.net/>.

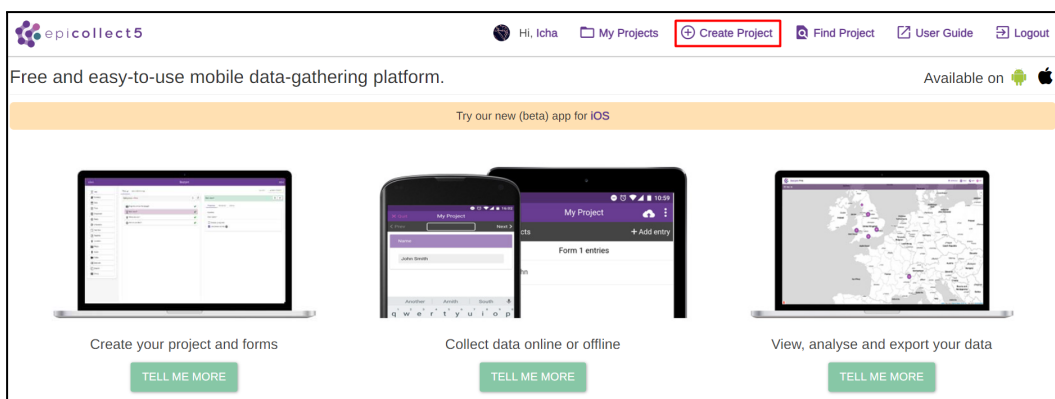
1. Open a web browser on your laptop >> Go to <https://five.epicollect.net/> >> Click on the "Login" button.



2. Login can be done using "Sign in with Google," "Sign in with Apple," or with an email address.



- In EpiCollect5, we first need to create a Project. With a project, we can create field survey forms, manage user access, edit data, and more. To start creating a project, click on "Create Project."



- Please fill in the Project Name as "International_Training_yourname" and provide the other necessary information as shown in the image below. Then click on "Create" to proceed.

[New Project](#) [Import Project](#)

Project name
International_Training_Icha
Max 50 chars

Small description *(A long description can be added later)*
International Training on Toponymy, Bali, 2023
Max 100 chars

Form name
toponim
Max 50 chars

Access
 Private Public

[CREATE](#)

***Notes**

Private: The project can only be accessed by the project creator and members added by the project creator.

Public: Anyone can access the project (view, add, delete, and download all data).

- After successfully creating the project, click on "OK, OPEN FORM BUILDER NOW" to start creating the survey form.

Training Internasional 2023 project created! ×

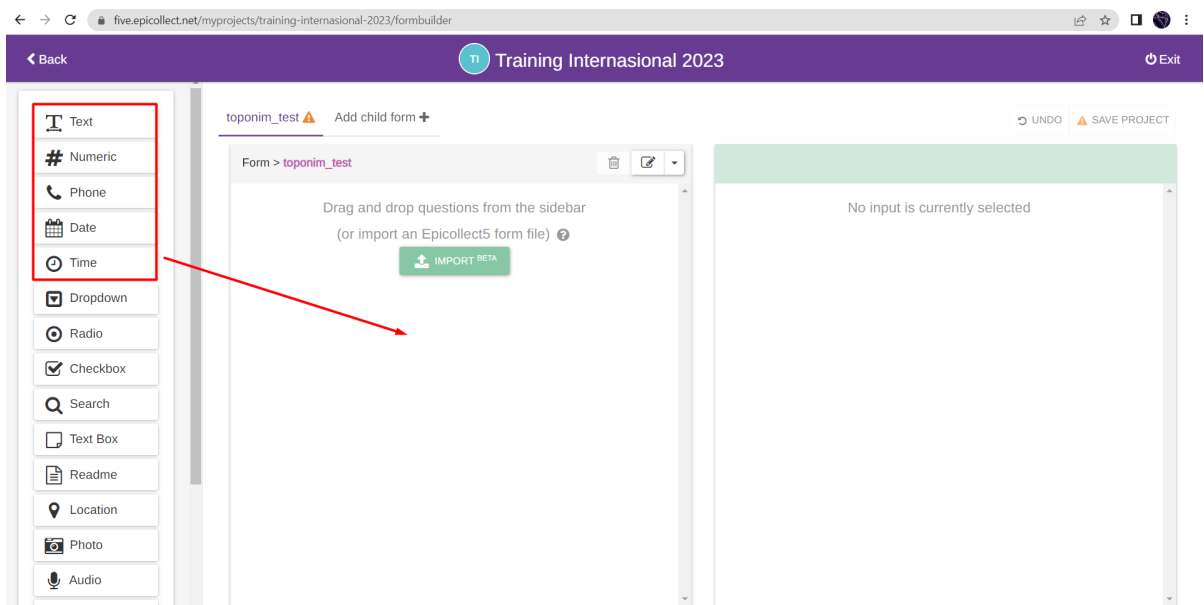
Congratulations, you have now created your project website!

Before submitting data you must add some questions to your form(s).

Click the "Ok, open formbuilder now" button below to open the formbuilder.

For further instructions, [please read our friendly User Guide](#).

- You will be redirected to the form creation page (Form Builder). On the Form Builder page, you can add questions by dragging and dropping various question types from the left side to the middle section of the form.



- The following is a table that contains a list of questions, question types, identifiers/column names, question properties, and notes. Please create the survey form according to the table below.

No.	Question	Question Type	Identifier (Column Name)	Mandatory	Notes
1.	Surveyor Name	Text	surveyor	Yes	Max. 254 character

2.	Survey Date	Date	date	No	Format: DD/MM/YYYY
3.	Geometry Type	Dropdown	geom_type	Yes	
4.	Feature Class	Dependent Dropdown	fclass	Yes	<u>Domain</u> Administrative Boundary, Hydrography, Leisure Area, Populated Place, Railway, Road, Building, Topography, Undersea, Vegetation
5.	Feature Type (Administrative Boundary)	Dependent Dropdown	ftype_admin	Yes	<u>Domain</u> Administrative Division
6.	Feature Type (Hydrography)	Dependent Dropdown	ftype_hydro	Yes	<u>Domain</u> Bay, Dock(S), Lakes, Ocean, Ponds
7.	Feature Type (Leisure)	Dependent Dropdown	ftype_leisure	Yes	<u>Domain</u> Business Center, Military Base, Mining Area, Park, Port
8.	Feature Type (Populated Place)	Dependent Dropdown	ftype_populated	Yes	<u>Domain</u> Farm Village, Populated Places, Populated Place, Abandoned Populated Place, Religious Populated Place
9.	Feature Type (Railway, Road)	Dependent Dropdown	ftype_road	Yes	<u>Domain</u> Oil Pipeline, Road, Railroad, Tunnel, Street
10.	Feature Type (Building)	Dependent Dropdown	ftype_building	Yes	<u>Domain</u> Airport, Cemetery, Castle, Religious Center, Historical Site, Palace, Pagoda, Religious Site,

					Ruin(S), Shrine, Temple(S), Restaurant, Building(S)
11.	Feature Type (Topography)	Dependent Dropdown	ftype_topo	Yes	<u>Domain</u> Beach, Cape, Desert, Hill, Mountain
12.	Feature Type (Undersea)	Dependent Dropdown	ftype_undersea	Yes	<u>Domain</u> Bank, Seamount, Basin, Moat, Trench
13.	Feature Type (Vegetation)	Dependent Dropdown	ftype_vegetation	Yes	<u>Domain</u> Bush(Es), Forest(s), Grassland, Tundra, Vineyard
14.	Place Name	Text	name	Yes	Max. 254 character
15.	Variant Names	Text	var_name	No	Max. 254 character
16.	Previous Name	Text	prev_name	No	Max. 254 character
17.	Language Origin	Text	lang_ori	No	Max. 254 character
18.	Name Meaning	Text	mean_name	No	Max. 254 character
19.	Naming History	Text	hist_name	No	Max. 254 character
20.	Latitude & Longitude	Location	latlon	Yes	
21.	Province/ State	Text	prov_state	Yes	<u>Domain</u> Bali
22.	Regency	Text	regency	Yes	<u>Domain</u> Gianyar Klungkung Kota Denpasar Badung

23.	District (Gianyar)	Text	district_gianyar	Yes	<u>Domain</u> Blahbatuh Gianyar Tampaksiring Ubud
24.	District (Klungkung)	Text	district_klungkung	Yes	<u>Domain</u> Nusa Penida Banjarakan Dawan
25.	District (Kota Denpasar)	Text	district_denpasar	Yes	<u>Domain</u> Denpasar Selatan Denpasar Timur Denpasar Barat Denpasar Utara
26.	District (Badung)	Text	district_badung	Yes	<u>Domain</u> Abiansemal Kuta Kuta Selatan Kuta Utara Mengwi Petang
27.	Photo 1	Photo	photo_1	Yes	
28.	Photo 2	Photo	photo_2	No	
29.	Voice Recording	Audio	rec	No	
30.	Remark	Text	remark	No	Max. 254 character

a. Question Type: Text

- This question type includes questions about Surveyor Name, Place Name, Variant Names, Previous Name, Language Origin, Name Meaning, Naming History, Province/State, and Remark.
- If a question is mandatory, then the "Answer is required" option should be checked. **Refer to the Mandatory column in the table above to confirm the nature of each question.**
- Example: Surveyor Name is mandatory, so the "Answer is required" option is checked.

Surveyor Name

Properties Advanced Jumps

Question

Surveyor Name

Answer is required

Use answer as title ?

- Then, if the text has a maximum character limit, you can set it using the Match REGEX in the Advanced tab. Click on the icon ? >> select "limit the answer length" >> Apply This >> change the number 20 to the maximum limit. In this case, for Surveyor Name, the maximum limit is 254 characters, so the number 20 should be changed to 254. Refer to the Notes column in the table above to ensure any specific notes for each question.

Allow only letters APPLY THIS

Allow only digits APPLY THIS

Limit the answer length to 20 chars
(or any length you like, just replace 20 with the length you want) APPLY THIS

Properties **Advanced** Jumps

Initial answer

Match REGEX: ?

`^.{1,254}$`

- For the "Place Name" question, please check the "Use answer as title" checkbox.

Place Name 📄 🗑️ ⌵

Properties Advanced Jumps

Question

Place Name

Answer is required

Use answer as title ?

b. Question Type: Date

- This type is used to ask about the Survey Date. The Survey Date is not mandatory, so the "Answer is required" option should not be checked.

Properties Advanced Jumps

Question

Survey Date

Answer is required

Use answer as title ?

- Then, set the date format in the Advanced tab. The chosen date format is Day/Month/Year (DD/MM/YYYY). Select the option "Set initial answer to current date" so that when filling out the form, the recorded date is automatically set to today's date.

Properties **Advanced** Jumps

Date Format

Day/Month/Year

Month/Day/Year


Year/Month/Day

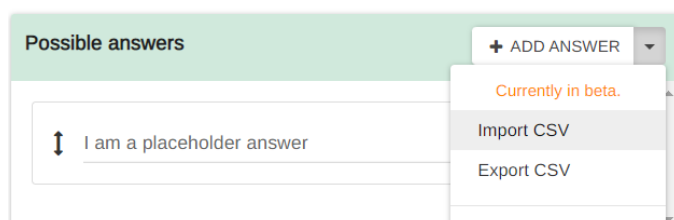
Month/Year

Day/Month

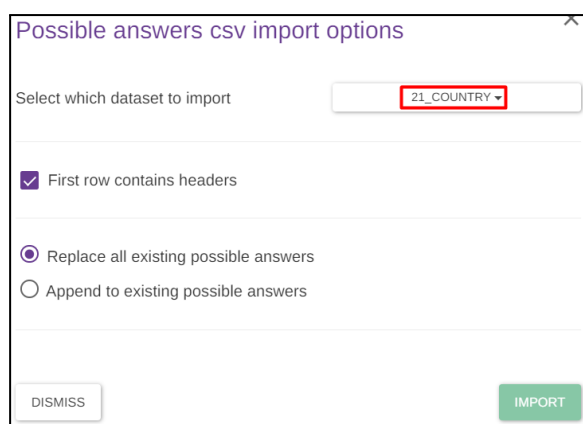
Set initial answer to current date

c. Question Type: Dropdown

- Dropdown answer options can be added using the **+ ADD ANSWER** button . However, for a large number of answer options, it would be more effective to use **Import CSV**.
- To import a CSV file, click on the  icon >> "Import CSV".



- Select the column in the CSV file that contains the data to be imported. Check "First row contains headers" if the first row contains column names. Leave it unchecked if the first row is not a column name. Then, click on "Import" to proceed.



d. Question Type: Dependent Dropdown

- Dependent Dropdown applies to the questions Feature Class and Feature Type. As stated in the table above, there are 9 Feature Classes, and each Feature Class has 3 - 5 Feature Types. This Dependent Dropdown will work in a way that the selected Feature Class will lead to the question of the corresponding Feature Type within that Feature Class.
- To enable the Dependent Dropdown, create a question about Feature Class with the question type Dropdown >> Add Answer >> enter the answer options. The various Feature Classes can be seen in the table above (Notes column).

Properties Advanced Jumps

Question

Feature Class

Answer is required

Use answer as title ?

Possible answers + ADD ANSWER ▾

- ADMINISTRATIVE BOUNDARY ×
- HYDROGRAPHY ×

- After that, create questions about Feature Type based on the 9 Feature Classes >> Add Answer >> enter the answer options. The various Feature Types can be seen in the table above (Notes column).

As shown in the image below, there are questions about the Feature Type of Feature Classes such as Hydrography, Leisure, Building, etc.

<input checked="" type="checkbox"/> Feature Type (Administrative Boundary)	⊕	✓
<input checked="" type="checkbox"/> Feature Type (Hydrography)	⊕	✓
<input checked="" type="checkbox"/> Feature Type (Leisure)	⊕	✓
<input checked="" type="checkbox"/> Feature Type (Populated Place)	⊕	✓
<input checked="" type="checkbox"/> Feature Type (Railway, Road)	⊕	✓
<input checked="" type="checkbox"/> Feature Type (Building)	⊕	✓
<input checked="" type="checkbox"/> Feature Type (Topography)	⊕	✓
<input checked="" type="checkbox"/> Feature Type (Undersea)	⊕	✓
<input checked="" type="checkbox"/> Feature Type (Vegetation)		✓

***Arrange the order of Feature Type questions as shown in the image above.**

- Dependent Dropdown in EpiCollect5 is facilitated by the "Jumps" feature. With the "Jumps" feature, after selecting the Feature Class, you will be directed to a specific Feature Type that is part of the selected Feature Class (and disregarding other Feature Type questions).
- Untuk memungkinkan Dependent Dropdown bekerja, kita perlu menambahkan 1 pertanyaan dengan tipe Checkbox yang ditempatkan di antara pertanyaan Feature Class dan Feature Type (Administrative Boundary) >> Question: Yes/No >> Possible Answer: Yes, No. Pertanyaan ini nantinya tidak akan muncul pada formulir survey. Lalu mengapa pertanyaan ini perlu ditambahkan? Pertanyaan ini perlu ditambahkan agar Feature Class dapat melakukan "Jumps" ke Feature Type (Administrative Boundary). Hal ini dikarenakan EpiCollect5 tidak bisa melakukan "jumps" pada pertanyaan yang tepat berada atas-bawah.

- To enable Dependent Dropdown to work, we need to add 1 Checkbox question placed between the Feature Class and Feature Type questions (Administrative Boundary) >> Question: Yes/No >> Possible Answer: Yes, No. This question will not appear on the survey form. So why do we need to add this question? This question needs to be added to allow the Feature Class to perform "Jumps" to the Feature Type (Administrative Boundary). This is because EpiCollect5 cannot perform "Jumps" on questions that are placed exactly below the previous questions.
- Example: I placed the Yes/No question between the Feature Class and Feature Type (Administrative Boundary) questions. This allows the Feature Class to perform "Jumps" to the Feature Type (Administrative Boundary). If the Yes/No question is removed, the Feature Class can only perform "Jumps" to Feature Type (Hydrography) and Feature Type (Leisure).

- To start creating "Jumps", let's go back to the Feature Class question. Fill it in like this:

When: answer is

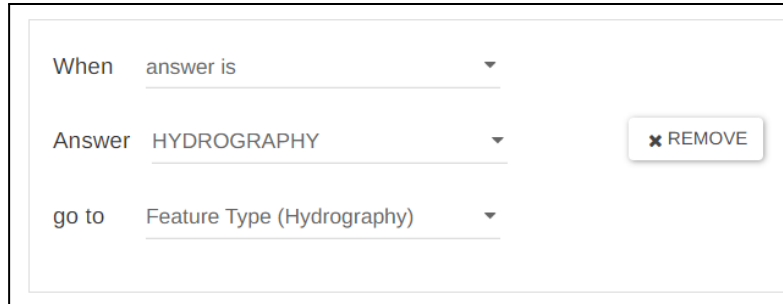
Answer: ADMINISTRATIVE BOUNDARY

Go to: Feature Type (Administrative Boundary)

- This means that if the Feature Class question is answered with "Administrative Boundary," EpiCollect5 will proceed to the Feature Type (Administrative Boundary)

question. If the Feature Class is answered with "Hydrography," EpiCollect5 will proceed to the Feature Type (Hydrography) question.

- Add additional jumps by clicking **+ ADD JUMP** . Continue this process until all Feature Types are connected with "Jumps".

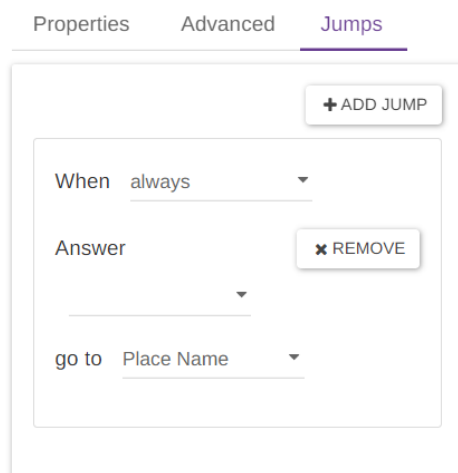


- Next, we access each Feature Type question one by one. Each Feature Type question also needs to be given "Jumps". However, for the Feature Type, fill it in like this:

When: always

Answer: blank

Go to: Place Name

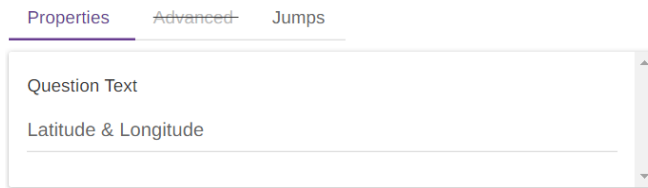


- This means that if the Feature Type question is answered, EpiCollect5 will proceed to the Place Name question. Please edit the "Jumps" tab for each Feature Type, except for the last Feature Type (Vegetation).

**Why is the last Feature Type not given jumps? This is because even without "Jumps", the questions will automatically proceed to the next question (Place Name). Additionally, please remember that jumps cannot be performed on questions that are immediately above or below.*

e. Question Type: Location

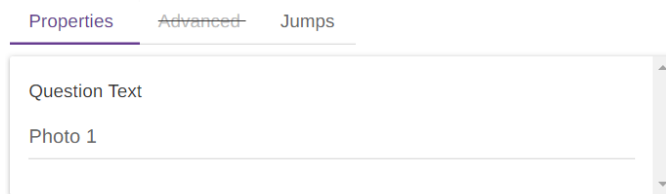
To record latitude and longitude coordinates, you can use a single question like the one below:



The screenshot shows a question editor interface with three tabs: 'Properties', 'Advanced', and 'Jumps'. The 'Properties' tab is selected. Below the tabs is a text input field containing the text 'Latitude & Longitude'. Above the input field is the label 'Question Text'.

f. Question Type: Photo

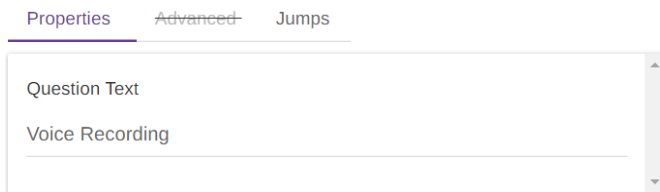
This question type allows surveyors to capture photos using the survey form. There are two questions with the Photo type: Photo 1 and Photo 2.



The screenshot shows a question editor interface with three tabs: 'Properties', 'Advanced', and 'Jumps'. The 'Properties' tab is selected. Below the tabs is a text input field containing the text 'Photo 1'. Above the input field is the label 'Question Text'.

g. Question Type: Voice Recording

This question type allows surveyors to record audio using the survey form. Write the question as follows:

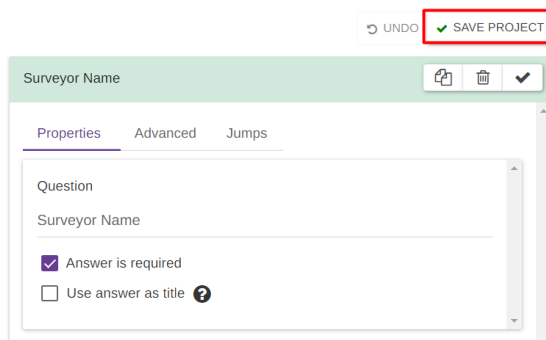



The screenshot shows a question editor interface with three tabs: 'Properties', 'Advanced', and 'Jumps'. The 'Properties' tab is selected. Below the tabs is a text input field containing the text 'Voice Recording'. Above the input field is the label 'Question Text'.

8. After creating all the questions, make sure the order of the questions matches the table as shown in the image below.

<input type="text"/>	Surveyor Name	✓
<input type="text"/>	Survey Date	✓
<input checked="" type="checkbox"/>	Feature Class	⌵ ✓
<input checked="" type="checkbox"/>	Yes/No	✓
<input checked="" type="checkbox"/>	Feature Type (Administrative Boundary)	⌵ ✓
<input checked="" type="checkbox"/>	Feature Type (Hydrography)	⌵ ✓
<input checked="" type="checkbox"/>	Feature Type (Leisure)	⌵ ✓
<input checked="" type="checkbox"/>	Feature Type (Populated Place)	⌵ ✓
<input checked="" type="checkbox"/>	Feature Type (Railway, Road)	⌵ ✓
<input checked="" type="checkbox"/>	Feature Type (Building)	⌵ ✓
<input checked="" type="checkbox"/>	Feature Type (Topography)	⌵ ✓
<input checked="" type="checkbox"/>	Feature Type (Undersea)	⌵ ✓
<input checked="" type="checkbox"/>	Feature Type (Vegetation)	✓
<input type="text"/>	Place Name	✓
<input type="text"/>	Variant Names	✓
<input type="text"/>	Previous Name	✓
<input type="text"/>	Language Origin	✓
<input type="text"/>	Name Meaning	✓
<input type="text"/>	Naming History	✓
<input type="text"/>	Latitude & Longitude	✓
<input checked="" type="checkbox"/>	Country	✓
<input type="text"/>	Province/State	✓
<input type="text"/>	Photo 1	✓
<input type="text"/>	Photo 2	✓
<input type="text"/>	Voice Recording	✓
<input type="text"/>	Remark	✓

9. If everything is correct, click on "Save Project" to save your project.

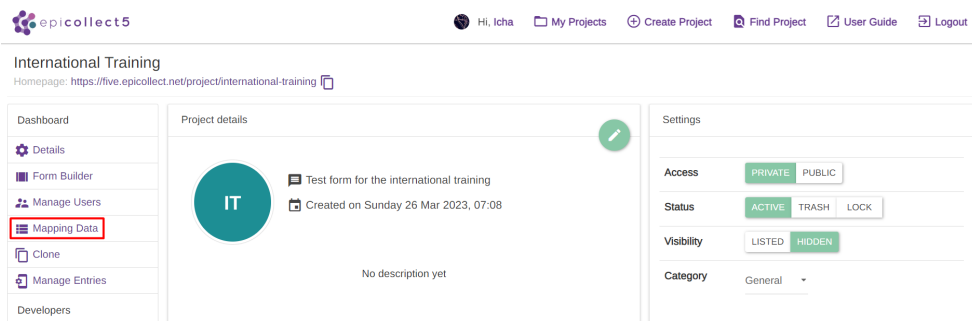


10. Click on "Exit" button  in the top right corner to go back to the **Project** page.

11. On the Project page, click on "Mapping Data". Mapping Data is a feature in EpiCollect5 that allows users to assign identifiers to each question, which will become the column names when the data is downloaded.

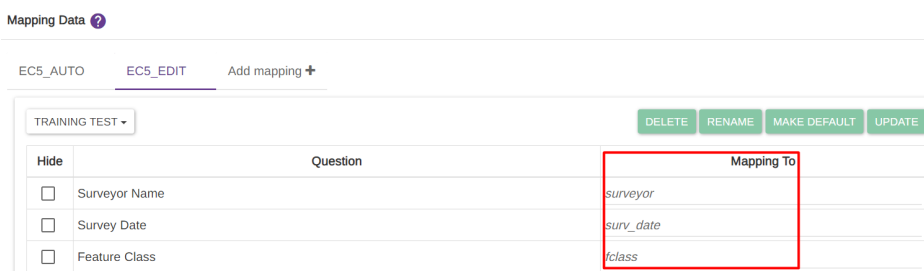
For example, for the question "Surveyor Name", the identifier used could be "name". So, when downloaded, the column name will be "name".

Users with CREATOR or MANAGER status can access this function. For more information about Mapping Data, you can refer to <https://docs.epicollect.net/web-application/mapping-data>.

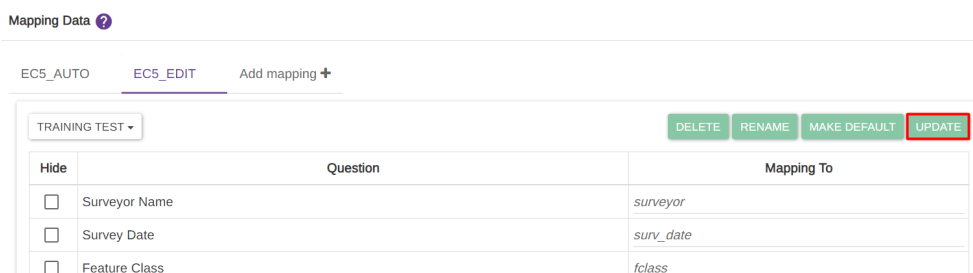


12. In the Mapping Data, there is already a default format called **EC5_AUTO**. To start defining identifiers, click on **Add mapping +** >> and name it "EC5_EDIT".

13. In **EC5_EDIT**, enter the identifier in the Mapping To field. The identifier refers to the information in the "Column Name" column of the table above.





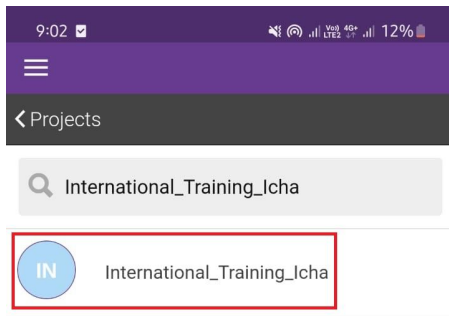
14. If all the identifiers have been defined, click on "Update" to save the changes.



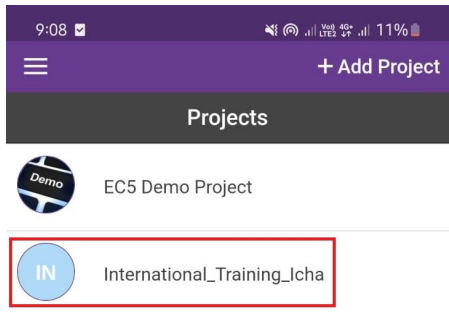
15. You're all set!

2.4 Survey Procedure

1. Open the EpiCollect5 application on your respective smartphones.
2. Click on the  icon in the top left corner of the application, then click on "Login".
3. Click on  >> and type the name of the project that was previously created. Click on the project that appears in the search results.

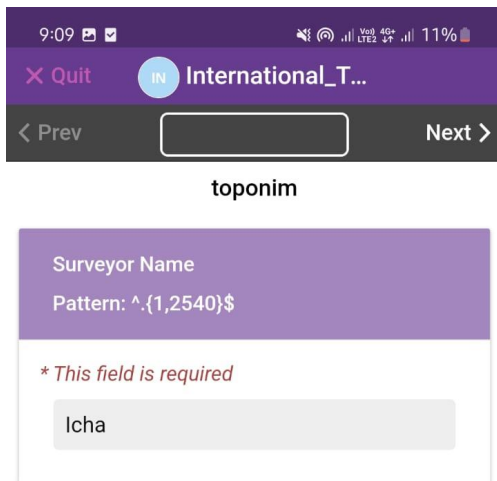


4. After successfully adding the project, click on the project itself.

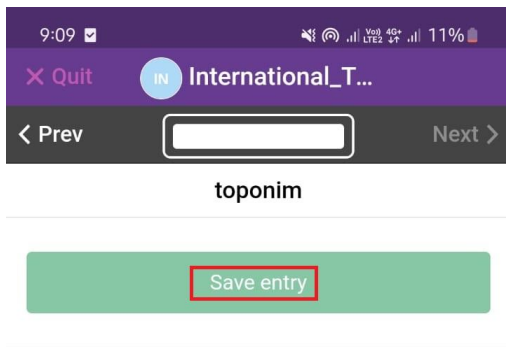



5. To start collecting data, click on **+ Add entry**

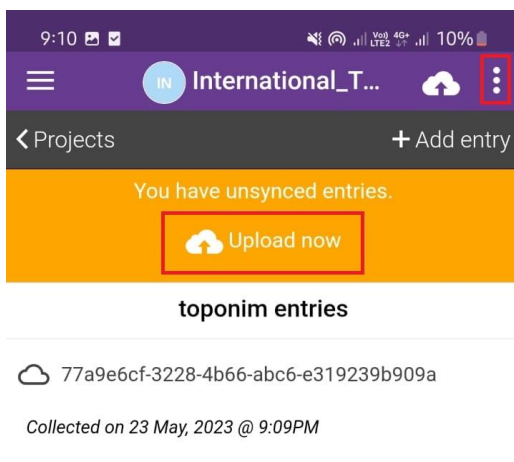
6. "Answer Questions" and then click "Next". Try to answer each question, even if they are not mandatory.



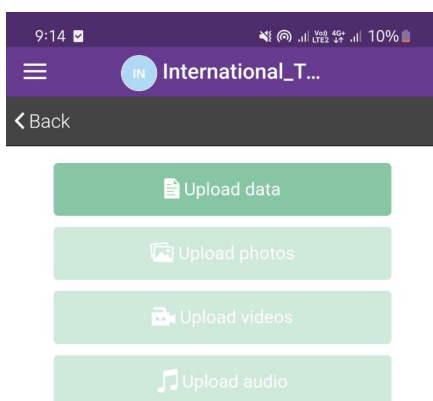
7. If all the questions have been answered, click on "Save Entry".



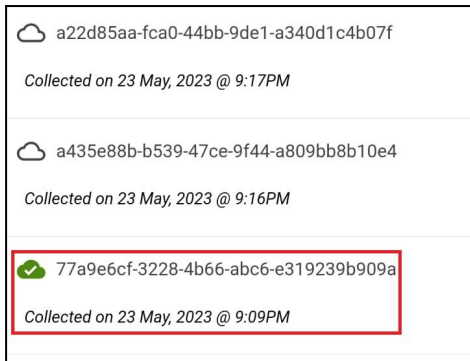
8. If the survey is completed, click on . This option can also be found by clicking the button in the top right corner.



9. Upload the data, upload photos (if any), upload videos (if any), and upload audio (if any).

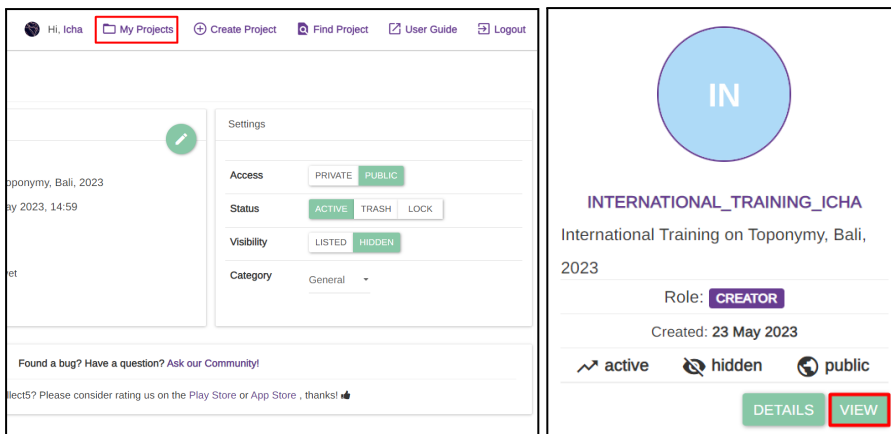


10. Data that has been successfully uploaded will be marked with a green cloud icon. Meanwhile, data that has not been uploaded will be marked with a white cloud icon.
11. Uploaded data can be viewed, edited, and deleted through the EpiCollect5 web. On the other hand, data that has not been uploaded cannot be accessed through the web.



2.5 Data Extraction and Processing

1. To access the survey data, click on "My Projects" and then select "View" for the respective project. From there, you can click on "View Data" to access the survey data.



2. On the "View Data" page, you can view, delete, and edit the survey data collected.

View	Delete	Edit	Title	Created At	Surveyor Name
			77a9e6cf-3228-4b66-...	23rd May, 2023	Icha

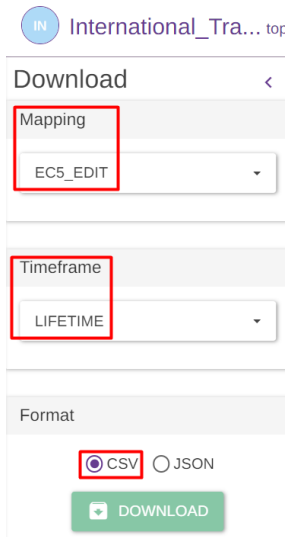
3. If your data is ready for download, click on the **Download** button and specify the download options as follows:

Mapping: EC5_EDIT

Timeframe: Adjust it according to the desired time range. For practice purposes, let's select "LIFETIME."

Format: CSV

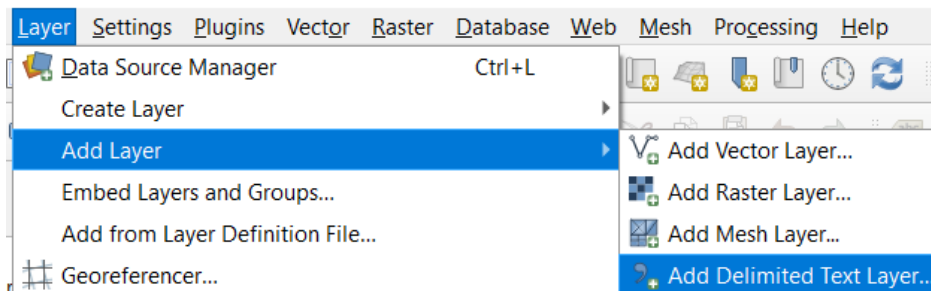
4. These settings will ensure that you download the data with the specified mapping, including the desired timeframe, in CSV format.




Then click  **DOWNLOAD**

5. The CSV file will be downloaded in a zip file >> extract it.
6. This CSV file then needs to be converted into GeoJSON format. First we need to open QGIS. Then click on Layer >> Add Layer >> Add Delimited Text Layer.

To install QGIS, please refer to page 52 on this document.



7. Click on  >> select the extracted CSV file >> choose CSV file format >> Fill as follows:

File format: CSV

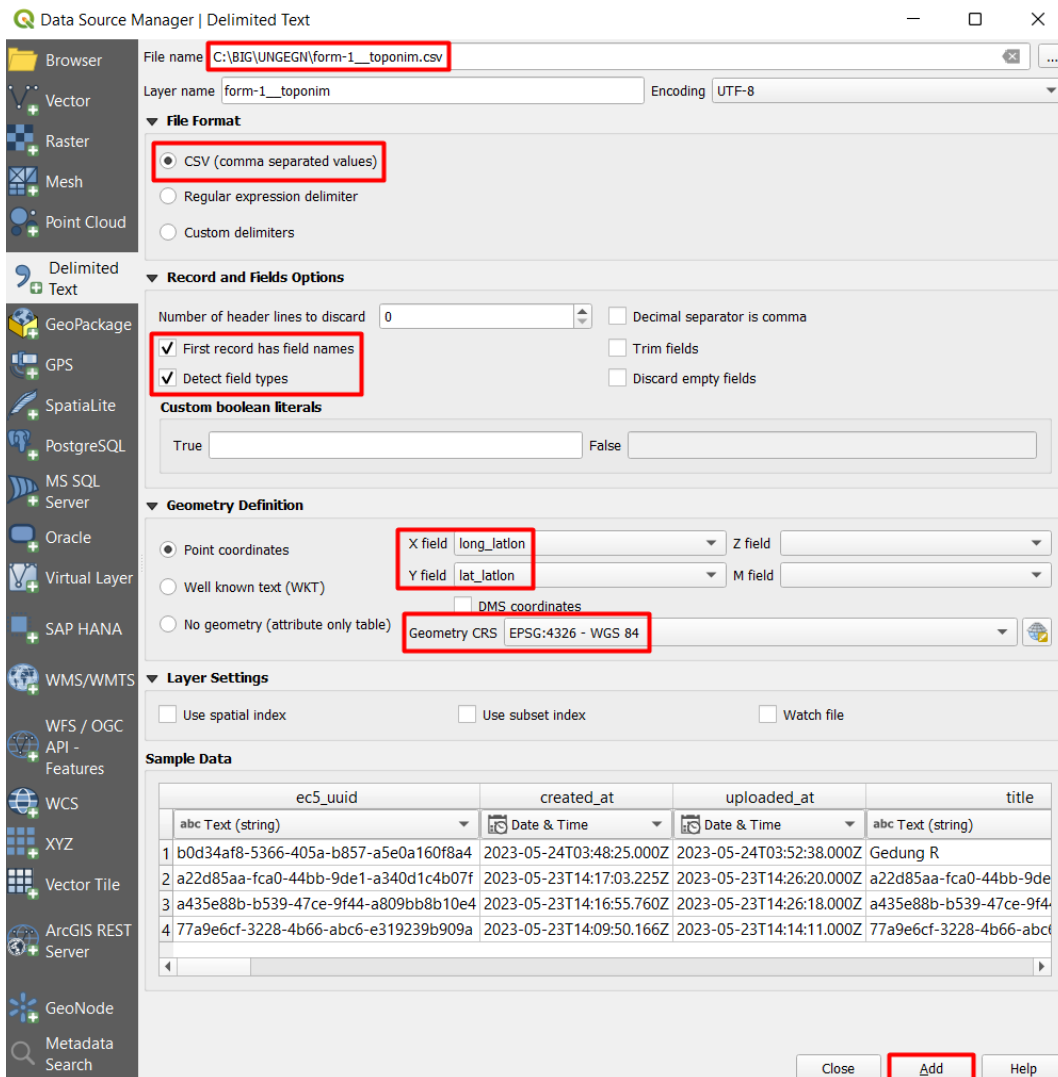
First record has field names: check

Detect field types: check

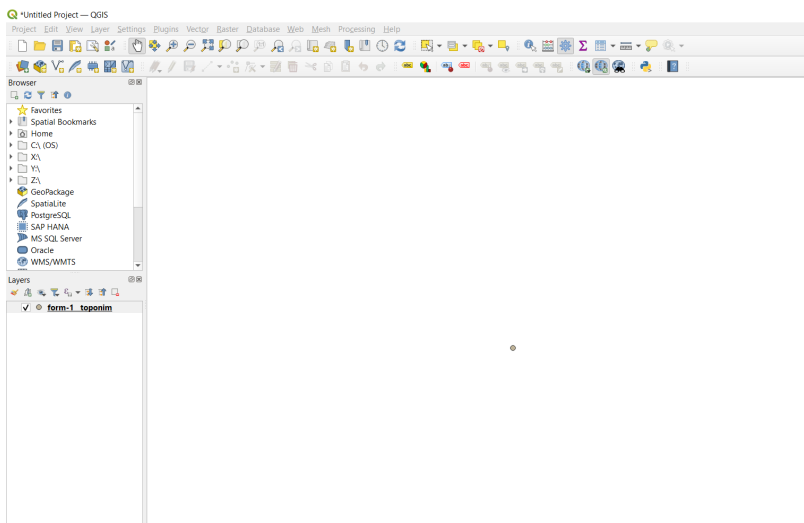
Point coordinates (x field): long_latlon

Point coordinates (y field): lat_latlon

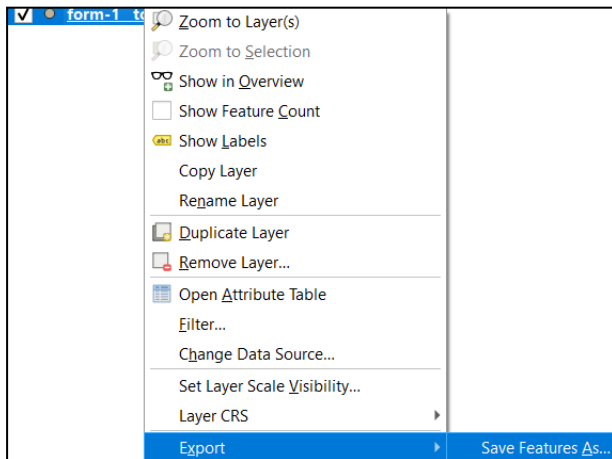
Geometry CRS: EPSG:4326 - WGS 84



Then click “Add”. Your data will be displayed on the screen.



8. Right-click on the data layer >> Export >> Save Feature As



9. Provide the specific information as below,

Format: GeoJSON

File name: provide the desired output file name and the folder storage

CRS: EPSG:4326 - WGS 84



For the lat_latlon and long_latlon fields, define their export names as "lat" and "lon" respectively.

Name	Export name
<input checked="" type="checkbox"/> hist_name	hist_name
<input checked="" type="checkbox"/> lat_latlon	lat
<input checked="" type="checkbox"/> long_latlon	long
<input checked="" type="checkbox"/> accuracy_latlon	accuracy_latlon