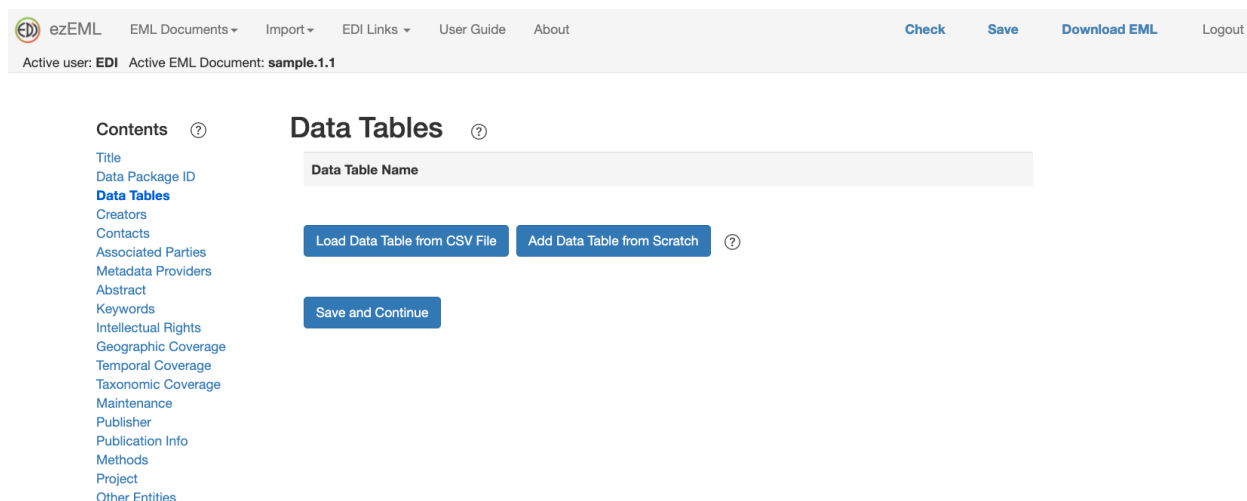


Uploading Data Tables

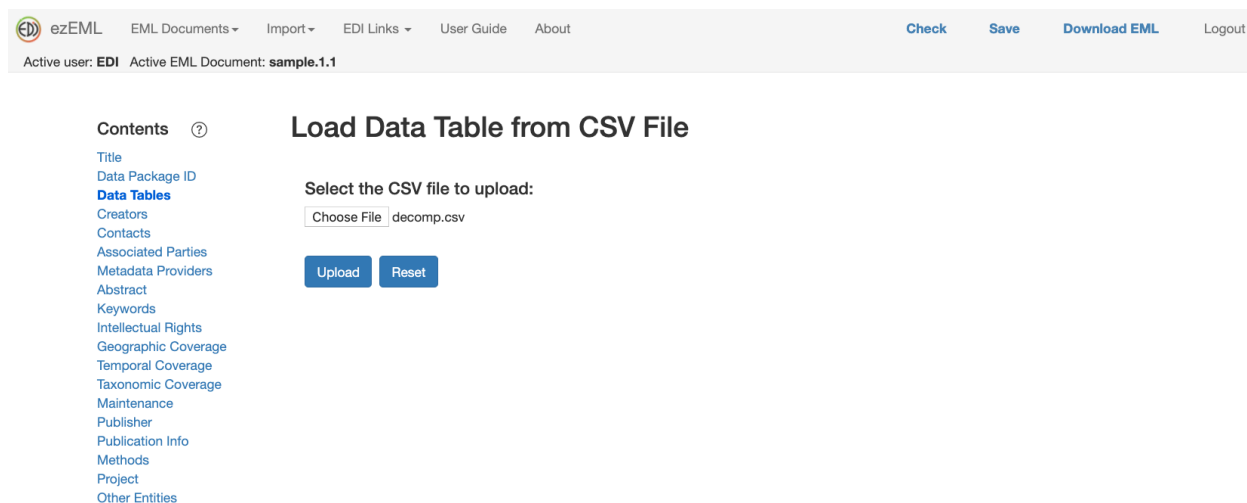
A data package typically contains one or more data tables. If so, these data tables need to be described in the EML metadata. Entering the needed metadata by hand can be laborious and error prone. ezEML assists in this process by letting you upload your data tables in CSV (comma-separated value) format. ezEML then infers many of the needed metadata attributes for you.

To begin uploading data tables, click **Data Tables** in the **Contents** list to go the Data Tables page. It will look something like this:



The screenshot shows the ezEML interface. The top navigation bar includes the ezEML logo, a dropdown menu for 'EML Documents', and links for 'Import', 'EDI Links', 'User Guide', and 'About'. On the right, there are links for 'Check', 'Save', 'Download EML', and 'Logout'. Below the navigation bar, it says 'Active user: EDI' and 'Active EML Document: sample.1.1'. The main content area is divided into two sections. On the left, under the heading 'Contents' with a help icon, is a list of metadata fields: Title, Data Package ID, Data Tables (highlighted in blue), Creators, Contacts, Associated Parties, Metadata Providers, Abstract, Keywords, Intellectual Rights, Geographic Coverage, Temporal Coverage, Taxonomic Coverage, Maintenance, Publisher, Publication Info, Methods, Project, and Other Entities. On the right, under the heading 'Data Tables' with a help icon, is a form. It has a label 'Data Table Name' above a text input field. Below the input field are two buttons: 'Load Data Table from CSV File' and 'Add Data Table from Scratch' (with a help icon). At the bottom of the form is a 'Save and Continue' button.

We want to load the data table from a CSV file, not add it from scratch, so we click the button for that. This takes us to a page where we can select the CSV file to upload:



The screenshot shows the ezEML interface for the 'Load Data Table from CSV File' page. The top navigation bar is identical to the previous screenshot. The main content area is divided into two sections. On the left, under the heading 'Contents' with a help icon, is the same list of metadata fields as before, with 'Data Tables' highlighted in blue. On the right, under the heading 'Load Data Table from CSV File', is a form. It has a label 'Select the CSV file to upload:' above a text input field. The input field contains the text 'Choose File' and 'decomp.csv'. Below the input field are two buttons: 'Upload' and 'Reset'.

In this example, we've selected a file called **decomp.csv**. We click **Upload** to cause the file to be uploaded and analyzed by ezEML.

ezEML will display a page that contains the metadata pertaining to the data table as a whole. In part, it looks like:

Data Table ?

Please enter information about the data table object:

Name

 ?

Description (Recommended)

 ?

Data Object Name (e.g., filename)

 ?

Attribute Orientation

 ?

Field Delimiter

 ?

Size (Optional)

 ?

MD5 Checksum (Optional)

 ?

You see that ezEML has filled in a number of the values for you. It has done its best based on the CSV file. You will probably want to change some values and add others. In the screenshot above, for example, you might change **Name** and **Description** to something like:

Data Table ?

Please enter information about the data table object:

Name

 ?

Description (Recommended)

 ?

At the bottom of the form is information about the data table's **Attributes**, which correspond to the columns of the table. In this example, we have:

Attributes:

TYPE, YEAR_PLACED_IN_FIELD, ARM, NTRT, YEAR, PERCENT_LOSS

Edit Attributes

OK

Cancel

ezEML does its best to infer the needed metadata for the attributes, but you will need to do some tweaking. Clicking **Edit Attributes** brings up a page like:

Attributes for Decomposition data

Column #	Attribute Name	Variable Type	?				
1	TYPE	Categorical		▼	Edit	Remove	Change Type
2	YEAR_PLACED_IN_FIELD	DateTime	▲ ▼	▲ ▼	Edit	Remove	Change Type
3	ARM	Categorical	▲ ▼	▲ ▼	Edit	Remove	Change Type
4	NTRT	Categorical	▲ ▼	▲ ▼	Edit	Remove	Change Type
5	YEAR	DateTime	▲ ▼	▲ ▼	Edit	Remove	Change Type
6	PERCENT_LOSS	Numerical	▲		Edit	Remove	Change Type

Add Attribute - Categorical

Add Attribute - Numerical

Add Attribute - Text

Add Attribute - Datetime

Back to Data Table

Data table attributes can have one of four **Variable Types**: Categorical, Numerical, Text, or DateTime. ezEML infers the variable type based on the values in the uploaded data table, but there may be cases where you want to override the variable type inferred by ezEML for a given

attribute. To do so, click the **Change Type** button for the attribute in question and select the desired variable type.

Let's suppose, though, that you are happy with the variable types as shown. You will still need to edit the attributes to fill in metadata that ezEML is unable to infer from the CSV file. In the screenshot above, suppose you click **Edit** for the TYPE attribute. You will see a screen like:

Categorical Attribute

Name

TYPE



Definition

Label (Optional)

TYPE

Define coded values and their definitions:

Codes: Sphagnum, Vascular

Edit Codes and Definitions

Enforce the code values



Optionally, enter up to 3 missing value codes with accompanying explanations:

Missing Value Code

Explanation

(Only part of the form is shown here.)

ezEML has used the column name (TYPE, in this case) for the **Name** and **Label** fields. Change them, as desired. The attribute's **Definition** is not something ezEML can infer from the data table, but it is required. We can fill in something like:

Definition

Vegetation type: Sphagnum fuscum or vascular plant tissue

The TYPE variable is a categorical variable with two category codes: Sphagnum and Vascular. ezEML is able to pick up the codes from the table, but it cannot supply the code definitions. Click **Edit Codes and Definitions** to go to a page where the codes are listed:

Code Definitions for TYPE

Code	Definition			
Sphagnum		▼	Edit	Remove
Vascular		▲	Edit	Remove

Add Code DefinitionBack to Attribute

We see that the definitions are missing for the codes, so we click **Edit** for each, bringing up forms like:

Code Definition for TYPE

Please enter a code and its definition:

Code



Definition

Optionally, enter an order value, e.g. '1', '2', '3', etc. (meaningful only for ordinal attributes):

Order (Optional)

OK

Cancel

Enter the definition for the code and click OK. Do that for each code. When you are done editing the attribute, click OK to return to the attribute list.

Proceeding in this way, one attribute at a time, you can supply the attribute metadata required by EML.

In our example, there was a numerical attribute called PERCENT_LOSS. Numerical attributes require their units to be specified. Click **Edit** for the PERCENT_LOSS attribute to bring up a form like:

Numerical Attribute

Name

PERCENT_LOSS



Label (Optional)

PERCENT_LOSS

Definition

Enter a standard unit value or a custom unit value:

<p>Standard Unit</p> <input type="text"/>	<p>Custom Unit</p> <input type="text"/> <p>Description (Recommended)</p> <input type="text"/>
---	--

Number Type

real

(Only part of the form is shown here.)

EML defines a list of standard units, mainly from the SI standard. If the appropriate unit for the variable in question is a standard unit, select it from the list. In this example, PERCENT_LOSS is a dimensionless percentage, so we select dimensionless from list – and we’ve also filled in the attribute’s **Definition**:

Definition

Amount of mass lost expressed as a percent of original mass

Enter a standard unit value or a custom unit value:

<p>Standard Unit</p> <input type="text"/>	<p>Custom Unit</p> <input type="text"/>
---	---

In some cases, the variable’s unit is not among the standard units. In such a case, fill in a **Custom Unit** and **Description**, as in this example taken from a different data table:

Definition

Mass of 1-cm lengths of Sphagnum stems beneath the capitula per m2

Enter a standard unit value or a custom unit value:

Standard Unit <div></div>	Custom Unit <div>gramsPerSquaredMeterPerCentimeter</div> Description (Recommended) <div>gramsPerSquaredMeterPerCentimeter</div>
-------------------------------------	--

How do you know when you've made all of the needed modifications to an uploaded data table's metadata to satisfy EML's requirements and recommendations? ezEML's **Check** feature can check the metadata for you. See **Checking Your Metadata** in the User Guide.