# INTRODUCING THE BULK DATA UPLOAD TEMPLATES FOR FSC BLOCKCHAIN

10/06/2024

**FSC**

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| Title: | Introducing the Bulk Data Upload Templates for FSC Blockchain |
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|---|---|---|
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# 1. Introduction

FSC Blockchain allows users to enter data either via direct entry using the online user interface, via bulk upload of spreadsheets, or via an Application Programming Interface (API). Using the bulk upload spreadsheets is also an excellent way to prepare your organisation for the data requirements of FSC Blockchain.

There are five different upload data templates used in the core operations of FSC Blockchain covering the different data sets used:

1. Trading Partners
2. Products Definition
3. Forest Sales
4. CoC Transactions
5. Processing Runs

Spreadsheets 3 through 5 are used by different kinds of businesses, and relate to the daily activities of those businesses. Spreadsheets 1 and 2 are critical configuration sheets that must be completed first before moving on to using the other templates.

Each spreadsheet consists of at least four sheets, accessed through the different coloured tabs at the bottom of the spreadsheet.

- **Instructions** - guidance notes applicable to that particular spreadsheet
- **Upload Data** - where you list the data to be uploaded to FSC Blockchain
- **Check** - a sheet that checks the format of the data you have listed on the **Upload Data** sheet
- **Reference** - a sheet of reference data used to perform the data format checks

It is recommended that you read through the **Instructions** for each template spreadsheet carefully. They explain the meaning of the different columns of data that you are requested to provide in the **Upload Data** sheet. This introduction highlights how the data in the different spreadsheets relates to one another.

Those fields which are mandatory are distinguished on the Instructions sheet, and in the Upload Data sheet those fields are indicated with an asterisk in the heading (see arrows in screenshot below). Cells relating to such fields are shaded in a light yellow when that data is missing from the row.

| D | E | F | G | H | I |
|---|---|---|---|---|---|
| FSC Product Category * | HS Code | Species * | | Sold By * | Unit Volume | Volume Unit |
| W12.12 Parts of furniture | | Pinus glabra | | Volume | 5,120.00 | cm3 |

When recording transactions or processing runs you must identify the Trading Partner and Product according to the ID or Code you previously listed in the relevant configuration file (no.s 1 and 2 above). The column headings for those fields are shaded in a dark green to remind you of that. Note that the spreadsheets are not cross-referenced against each other so no checks are performed within Excel on whether these entries actually match: such checks are only performed when you come to upload the data to FSC Blockchain.

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | Trading Partner ID * | Sales Document ID * | Invoice Date * | Transaction Type * | Product Code * | Product Name |
| 2 | FSC-C000002 | INV123214-5555 | 2023-08-23 | Purchase | ABC123456789 | Table Leg Pine |

Some of the fields listed are described as an "internal reference code" or similar, e.g. below. You should insert into these fields reference IDs from your own systems that you can use to relate the data from

your own systems to that which you put into FSC Blockchain. If you do not have any internal systems managing such data you can leave the field blank.

| Counterparty ID | Internal reference code used by your company, can be in any format. Must uniquely identify this trading partner within your company. |
| --- | --- |

Other fields are described as a "user friendly name" or similar, e.g. below. These fields are provided purely to make it easier to read the spreadsheets – they will not be referenced as part of the data processing.

| Product Name | User friendly name of the product. Providing this information makes the spreadsheet easier to read / understand for humans. However, it is ignored by FSC Blockchain, which will just use the Product Code field to identify the product being traded. |
| --- | --- |

# 2. Configuring FSC Blockchain

## Configuring your Trading Partners

This is the first step in preparing your data. Every Trading Partner with whom you transact and whose transactions you wish to record in FSC Blockchain should be listed here: this applies to both from whom you buy (Direct Suppliers) or to whom you sell (Direct Customers).

FSC Blockchain is only open to use by FSC Licence Holders, so each Trading Partner is identified through either the FSC Licence Code or their Full Certificate Code, plus their Site Code where applicable (i.e. if they belong to a Group or Multisite Certificate). These can be looked up on FSC Search. You can choose which of the two codes you use to identify your Trading Partners according to what is most convenient for you. All trades that you record must be listed against a Trading Partner that is identified through a FSC Licence Code or their Full Certificate Code, plus their Site Code, that has been previously configured using this spreadsheet template.

You will be able to add other Trading Partners at a later stage, so do not worry about listing them all on first use.

Note that use of FSC Blockchain is optional, and you do not have to list those trading partners whose transactions you will not be entering into FSC Blockchain.

## Defining your Products

Next you must define all the Products that you buy or sell. Transactions for a Product that has not been defined using this template cannot be understood by FSC Blockchain, because this template is where you create the unique Product Codes that are used to identify the products that are traded. This avoids the problem of spelling errors in long product names, e.g. "*Eucalytpus grandis* plank 2x15x250" (sic), and ensures we can distinguish between similar but distinct products.

You define the Product Codes that suit your business. We recommend you list the same product codes you use in other business systems to enable you to relate the data between different IT systems you are using. The Product Codes that you use do not have to be the same or agreed with your Trading Partners – these are purely for reference within your own business. FSC Blockchain will validate trades based on other fields (such as Product Category and Species).

As with Trading Partners, you will be able to define other Products at a later stage, so do not worry about listing them all on first use.

Note that use of FSC Blockchain is optional, and you do not have to list those Products whose transactions you will not be entering into FSC Blockchain.

# 3. Recording Transactions

## Forest Sales

The Forest Sales template is used by FSC FM/CoC and CW/FM certificate holders to record sales of forest products harvested from their forest. It is also used by CoC certificate holders who are purchasing uncertified products under a Due Diligence System for use as Controlled Materials in the production of FSC Mixed Sources products. It is different from the CoC Transactions in providing also fields to capture harvesting origin data.

## CoC Transactions

The CoC Transactions template should be used to record all purchases and sales made by participants in FSC Blockchain who are downstream from the forest manager. Both purchases and sales can be recorded using the same template.

In order to track individual consignments through the supply chain each purchase must be assigned a Batch ID, and each sale must come from a designated Batch ID.

## Processing Runs

The Processing Runs template should be used to record manufacturing operations that transform a set of inputs into a set of outputs. Due to the complexity of the data involved, the inputs and outputs are recorded on different Upload Data sheets. Use the Process Run ID to relate one set of inputs to a particular set of outputs.

## The Role of Batches

Batches are an important concept in FSC Blockchain that enable exact traceability of a final product back to the actual forests which contributed to it. Batch IDs are used to track which inputs contribute to which outputs. They are thus appropriate to businesses using the Transfer materials accounting system and the creation of discrete products such as items of furniture. (A discrete product is one which can only be sold in whole amounts. E.g. you can 0.6l of liquid natural rubber but you would not sell 0.6 of a chair.) Batches are not relevant to businesses using the Percentage of Credit materials accounting system through continuous operations such as a pulping mill; for those products FSC Blockchain instead uses date ranges to indicate which forests *could* have contributed to the final product.

If you are operating a business which uses batches to keep track of your operations, then you should provide the following batch IDs:

- For **Purchases**, each line item should be assigned its own unique batch ID, but you can leave FSC Blockchain to do that if you so wish.
- For **Processing Operations**, you should indicate which batch each input line come from, and assign a unique batch ID to each output line, but you can leave FSC Blockchain to do that if you so wish.
- For Sales, you should indicate from which batch or batches in your inventory each line comes from.

# 4. Formatting Your Data

Correctly formatting your data for use in FSC Blockchain bulk uploads may take a little bit of work to start with, but then you should quickly get used to it. The **Check** sheet (see next section) can help by indicating those items where the spreadsheet can see the formatting is wrong, although these checks do not capture every problem. Some hints to help you are:

- Follow instructions precisely as given on the **Instructions** sheet
- Check keywords exactly match the options listed on the **Reference** sheet
- Pay attention to capitalisation
- Ensure no extra spaces (leading or trailing)
- Do not include units when entering numbers (the unit goes in the next column)

There is some sample data included in the top few lines of every Upload Data sheet. Those are for illustration purposes only, but may help you understand how to format your own data. They should be deleted before actual uploading to FSC Blockchain.

## Checking Data Formats

All the spreadsheet templates perform some basic data formatting to ensure it can be read by the FSC Blockchain system. For instance it can check that you have correctly referred to your Trading Partner as FSC-C012345 and not FSC-C12345 (where the zero has been omitted by accident). FSC certificate Licence Code always have six digits after FSC-C, so we know the first one is potentially valid and the second one is not. However, these formatting checks cannot check whether you really mean FSC-C012345 and not FSC-C012346, since both are properly formatted.

These checks are computed in the sheet called **Check**, described below. However, if you have not accidentally over-ridden any data formatting in the **Upload** sheet you will find that cells with badly formatted data will also be shown shaded in red. Just beware that it is very easy to over-ride the formatting any time you paste in data, so this is not so reliable and it is recommended that you explicitly review the **Check** sheet, especially when first getting to know FSC Blockchain.

Where an error is detected the **Check** sheet indicates which cell is at fault by highlighting it in red. The top part of the Check sheet helps you identify where problems are, both showing which columns have badly formatted data and the first row with a problem.

<table>
<tr><td></td><td>A</td><td>D</td><td>G</td><td>H</td><td>I</td><td>J</td><td>K</td><td>L</td><td>M</td><td>N</td></tr>
<tr><td>1</td><td>Correct Order</td><td>Has Data</td><td>Overall</td><td>Unique FSC Identifier</td><td>Licence Code</td><td>Certificate Code</td><td>Site Code</td><td>Counterparty ID</td><td>Name</td><td>Relationship</td></tr>
<tr><td>2</td><td>Actual Order</td><td></td><td>Correct</td><td></td><td>Licence Code</td><td>Certificate Code</td><td>Site Code</td><td>Counterparty ID</td><td>Name</td><td>Relationship</td></tr>
<tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>5</td><td>Num Entries</td><td>12</td><td>Inconsistent</td><td>11</td><td></td><td></td><td></td><td></td><td>12</td><td>12</td></tr>
<tr><td>6</td><td>Num Good Entries</td><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>7</td><td>Num Bad Entries</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>9</td><td>First Bad Row</td><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>11</td><td>Column Checks -----></td><td></td><td></td><td>ERROR</td><td>ERROR</td><td>ERROR</td><td></td><td></td><td>OK</td><td>ERROR</td></tr>
<tr><td>12</td><td>Row-by-Row Checks</td><td></td><td></td><td>Unique FSC Identifier</td><td>Licence Code</td><td>Certificate Code</td><td>Site Code</td><td>Counterparty ID</td><td>Name</td><td>Relationship</td></tr>
<tr><td>14</td><td>Row 2</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>Optional</td><td>Optional</td><td>TRUE</td><td>TRUE</td></tr>
<tr><td>15</td><td>Row 3</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>Optional</td><td>Optional</td><td>TRUE</td><td>TRUE</td></tr>
<tr><td>16</td><td>Row 4</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>Optional</td><td>Optional</td><td>TRUE</td><td>TRUE</td></tr>
<tr><td>17</td><td>Row 5</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>Optional</td><td>Optional</td><td>TRUE</td><td>TRUE</td></tr>
<tr><td>18</td><td>Row 6</td><td>TRUE</td><td>TRUE</td><td>FALSE</td><td>TRUE</td><td>TRUE</td><td>Optional</td><td>Optional</td><td>TRUE</td><td>TRUE</td></tr>
<tr><td>19</td><td>Row 7</td><td>TRUE</td><td>FALSE</td><td>FALSE</td><td>FALSE</td><td>TRUE</td><td>Optional</td><td>Optional</td><td>TRUE</td><td>TRUE</td></tr>
<tr><td>20</td><td>Row 8</td><td>TRUE</td><td>FALSE</td><td>FALSE</td><td>TRUE</td><td>FALSE</td><td>Optional</td><td>Optional</td><td>TRUE</td><td>TRUE</td></tr>
<tr><td>21</td><td>Row 9</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>TRUE</td><td>Optional</td><td>Optional</td><td>TRUE</td><td>TRUE</td></tr>
</table>

**Commented [SB1]:** Check whether we can add more options with and without capitalisation

- **Columns in Correct Order** – it looks to see if you changed the order of columns in the Upload Data sheet
- **Number of Entries is Consistent** – this checks to see if there are any rows missing data in one or more columns
- **Number of Good Entries** – a count of the number of rows where everything looks good
- **Number of Bad Entries** – a count of the number of rows where a problem has been found - you should aim for this to be zero
- **First Bad Row** – the row number of the first row of data which has a problem, for ease of location if you have a lot of rows of data
- **Column Checks** – identifies those particular columns where there is problematic data in one or more rows.
- **Row-by-Row Checks** – looks at each row individually to detect errors (errors are reported as FALSE)

It is possible to avoid the problem of over-riding the formatting in the **Upload** sheet. To do this you should copy data as per normal from a source spreadsheet, but when you go to paste it into the bulk upload template select the option to **Paste Values**. Exactly where this is differs according to the version of Excel you are using (the screenshot to the right is from Microsoft 365 Excel v2308).
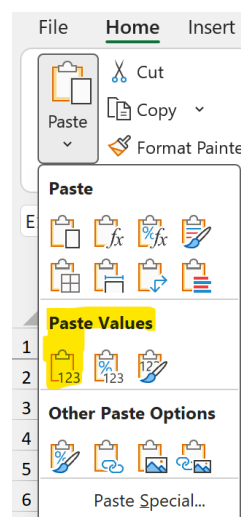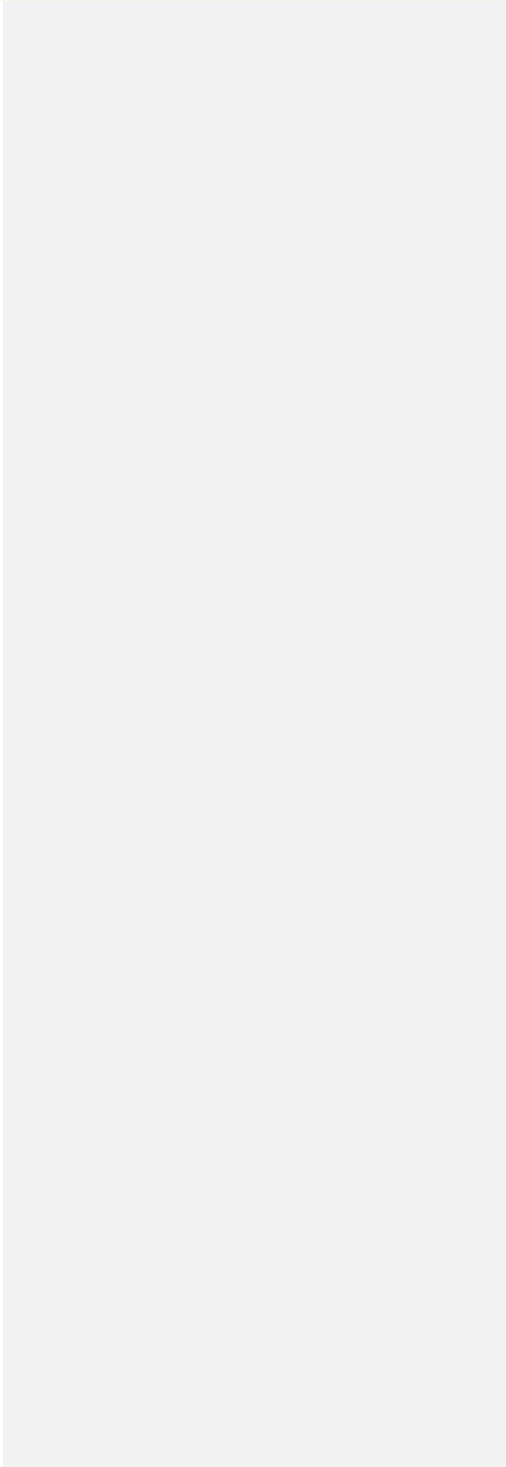
# 5. Technical Limitations

This spreadsheet template should work with all recent versions of Microsoft Excel. The **Check** sheet functions may not work as intended if using other spreadsheet tools (e.g. Google Sheets), but that does not mean you cannot use them to insert data into the Upload sheet. All checks performed in this template will also be performed by FSC Blockchain when you upload any data.

In order to avoid problems of huge, unwieldy spreadsheet files, the formatting checks are limited to only go down to row 1,000 in the **Upload** sheet (thus comprising the first 999 rows of data). You can add more rows than this if you like – FSC Blockchain will permit you to upload spreadsheets thousands of rows of data at one time – but as designed, the formatting checks will only be performed down to row 1,000. If you wish to extend these formatting checks to data rows >1,000 then this can be easily done: ask an Excel expert or your IT department for help.

The Upload Data sheet is unlocked. The other sheets are locked by default to prevent accidental edits, but without a password so you can easily amend them if you need to do so. Since no part of the spreadsheet is password protected you can change any reference data list or formulae if you think that would be helpful. FSC will not be responsible for any misleading results obtained as a consequence of any such edits. The ultimate determination as to whether any data is appropriately formatted for uploading to FSC Blockchain will be made by the FSC Blockchain application.