# Standard Operating Procedure

Number: **019**

Name: **Data visualisation**

Title: Procedure for visualising data on the EU Pollinator Hub

Category: Data management

Status: Approved

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# 1 Document history

## 1.1 Current Release

### 1.1.1 Drafted

Submitted on 2023-06-28 by Michael Rubinigg, quality manager.

### 1.1.2 Reviewed

Reviewed on 2023-06-30 by Noa Simòn Delso, general manager.

### 1.1.3 Approved

Approved on 2024-02-07 by Michael Rubinigg, quality manager.

## 1.2 Change history

n.a.

# 2 Abbreviations

| | |
|---|---|
| EU | European Union |
| EUPH | EU Pollinator Hub |
| n.a. | not available |
| SOP | Standard Operating Procedure |
| WI | Work Instruction |

# 3 Introduction

The current document describes the process of data visualisation with the aim to understand the characteristics of data provided to the EU Pollinator Hub, to describe these characteristics in the Dataset Report and to report inconsistencies found during this process.

# 4 Validity

## 4.1 Area

The of validity of this document is limited to process of data visualisation with the aim to understand the characteristics of data provided to the EU Pollinator Hub

## 4.2 Time

The period of validity of this SOP begins on 2024-02-07 and ends with its revocation.

## 4.3 Related Documents

| Document type | Number | Name |
|---|---|---|
| SOP | 001 | SOP instructions |
| SOP | 004 | Organisation chart |
| WI | 031 | Data visualisation |

## 4.4 Related Tasks

Persons who have been assigned one of the following tasks, as defined in SOP-004, assume a responsibility within this SOP:

- Data exploration

# 5 Procedure

## 5.1 Responsibilities

- The person responsible for data exploration, as defined by SOP-004. Is responsible for all processes described in this SOP.
- The task of carrying out certain parts of this process can be transferred to another person.

## 5.2 Visualisations using the EUPH visualisation tool.

### 5.2.1 EUPH visualisatiuon tool

- The task EUPH visualisation tool, as described in WI-030, is used to produce visualisations.

## 5.3 Visualisations using external software products

### 5.3.1 Simple linear regression

- The relationship between two variables (columns) considered useful for linear regression analysis is assessed and a graph is created using appropriate data visualisation software.
- If considered useful, results from this analysis may be reported in the Dataset Report according to SOP-003 in an appropriate way, including information on software used in the methods applied.
- Deviations from the expected results are reported in the Dataset Report according to SOP-003.
- All previous steps of section 5.3.1 are repeated for all columns in a table considered useful for linear regression analysis.
- All previous steps of section 5.3.1 are repeated for all tables of a dataset.

### 5.3.2 Time series

- The relationship between any variable (column) and a related time variable (column) representing a measures of time that is considered useful for describing the data is assessed and a graph is created using appropriate data visualisation software.
- If considered useful, results from this analysis may be reported in the Dataset Report according to SOP-003 in an appropriate way, including information on software used in the methods applied.
- Deviations from the expected results are reported in the Dataset Report according to SOP-003.
- All previous steps of section 5.3.2 are repeated for all columns in a table considered useful for creating time series.
- All previous steps of section 5.3.2 are repeated for all tables of a dataset.

### 5.3.3 Mapping

- Variables (columns) that are related to geographical data and that are considered useful to be analysed based on this criterion are inserted into a map using appropriate software.
- If considered useful, results from this analysis may be reported in the Dataset Report according to SOP-003 in an appropriate way, including information on software used in the methods applied.
- Deviations from the expected results are reported in the Dataset Report according to SOP-003.
- All previous steps of section 5.3.2 are repeated for all columns in a table considered useful for creating time series.
- All previous steps of section 5.3.2 are repeated for all tables of a dataset.

### 5.3.4 Clustering

- The relationship between sets of variables (columns) considered useful for clustering analysis are assessed and a graph is created using appropriate data visualisation software.
- If considered useful, results from this analysis may be reported in the Dataset Report according to SOP-003 in an appropriate way, including information on software used in the methods applied.
- Deviations from the expected results are reported in the Dataset Report according to SOP-003.
- All previous steps of section 5.3.4 are repeated for all columns in a table considered useful for cluster analysis.
- All previous steps of section 5.3.4 are repeated for all tables of a dataset.

### 5.3.5 Other visulisations

- Any other visualisation considered useful for describing the data may be adopted.
- If considered useful, results from this analysis may be reported in the Dataset Report according to SOP-003 in an appropriate way, including information on software used in the methods applied.
- Deviations from the expected results are reported in the Dataset Report according to SOP-003.
- All previous steps of section 5.3.5 are repeated for all columns in a table considered useful for linear regression analysis.
- All previous steps of section 5.3.5 are repeated for all tables of a dataset.

# 6 References

**There are no sources in the current document.**

# 7 Annexes

**There are no annexes in the current document.**