

README

In this repository we uploaded file “Full dataset on macroplastic mobilization and transport.xlsx”, which is our main data file that contains processed data from the video analyses. The following files were uploaded as well:

1. GOPR3248.MP4
2. GOPR3248-A&B.mkv *
3. GOPR3248-A.xlsx
4. GOPR3248-B.xlsx
5. The bottles sheet.xlsx
6. Coordinate_conversion.m

* The GOPR3248-A.mkv is a file created by the Kinovea software and can therefore only be opened in Kinovea. Kinovea is an online open software that can be downloaded here <https://www.kinovea.org/download.html>. We used the version 0.8.15.

The reason we uploaded these additional six files is to provide an example of the full video analysis procedure. The analysis starts with a video file from an experiment (in this case GOPR3248) and ends with a quantification of the distance travelled by the plastic items in the video (written to the main data file: “Full dataset on macroplastic mobilization and transport.xlsx”). The figure below shows where these five files were created and what they are used for.

First the video file is opened in Kinovea. Then the plastic items are tracked in Kinovea (for instructions see Supplementary Information). Subsequently, the tracked path of the plastic items are saved in an .mkv file (in this example: “GOPR3248-A&B.mkv”). The pixel coordinates of the tracked path of the plastic items are exported to an .xml file (in this example: “GOPR3248-A” and “GOPR3248-B.xlsx”). “The bottles sheet.xlsx” file was made manually and contains for each video the initial pixel coordinates of the plastic items and the pixel coordinates of the reference points (for details on coordinate conversion see Supplementary Information). “The bottles sheet.xlsx”, the “GOPR3248-A.xlsx”, and the “GOPR3248-B.xlsx” files are required input for the Matlab script named “Coordinate_conversion.m”. Here, the pixel coordinates that describe the path of both plastic items are converted to real-life coordinates. The values in “duration_A”, “duration_B”, “travelled_dist_A”, and “travelled_dist_B” are then (manually) copied to the first sheet (‘All data’) in the file “Full dataset on macroplastic mobilization and transport.xlsx”.

