

## National electrofishing data entry protocol: FishObs DPU

This protocol describes data entry using the Data Processing Utility (DPU) for the MSS FishObs database, with the 'FishObs DPU v32 User Guide' giving detailed worked examples of data entry via the DPU. There is also a video user guide available for download. The DPU can be used on a laptop in the field, alternatively field datasheets have been produced which replicate the tabs within the DPU to allow paper data recording in the field. In this protocol the bold headings refer to tabs in the DPU, with the associated field datasheets in brackets, text in italics refers to the relevant DPU box to complete.

The FishObs DPU is a new tool for many NEPS collaborators. As such, please first upload one completed single pass and one completed multi-pass electrofishing file using the 'file request link' for the region. MSS-FFL will then provide feedback to prevent any data entry issues being replicated across all data files and potentially time consuming corrections. Note that when data is uploaded using the 'file request link' MSS-FFL will receive an email notification. For queries on this protocol please contact [neps@marlab.ac.uk](mailto:neps@marlab.ac.uk) or the MSS-FFL main office ([FL\\_Admin@gov.scot](mailto:FL_Admin@gov.scot), 0131 244 2900) and request to speak to someone about data entry for the National Electrofishing Programme.

### Installing the DPU on your computer

- An up to date version of the DPU can be downloaded from the DPU folder link provided by MSS.
- Save the contents of the download into a folder named 'FishObsDPU' on the computers C drive
  - Contained in this folder you should see the following 4 objects: 'FishObsDesktop' 'FishObsDesktop.exe' 'Settings.FOB' and a folder 'NEPS\_Data'
  - The folder 'NEPS\_Data' contains a template .xml file. This template prevents the need to set-up the DPU each time data is entered as column attributes (e.g. visible columns, column order, width, sticky) and unchanging default values (e.g. 'Campaign' and 'Project') have already been set in the .xml file.
  - A fifth folder named 'Files' will be created after the DPU application has been opened for the first time. This is where the DPU saves automatic backup files and is where template files and site visit files can be saved. If the DPU crashes, back-up files can be loaded into the DPU from this folder (select the relevant user folder and then the most recent back-up file)
  - Note that if you have any earlier versions of the DPU on your machine these should be deleted or moved to a folder with a different name (e.g. FishObsDPU\_version\_number)
- For ease, create a shortcut to your Desktop – Right click on FishObsDesktop and click 'Send to' / 'Desktop (create shortcut)'
- Open the DPU by clicking on the icon on your Desktop

### Options – Load a DPU template file

- Click 'Load File' and navigate to the 'NEPS\_Data' folder within the 'FishObs\_DPU' folder where the 'NEPS\_Template.xml' file is saved
- Click on the file which loads it into the DPU
  - This ensures that all of the required fields are already selected and formatted (e.g. made sticky where they will be unchanging within a visit)

- Unchanging fields such as 'Campaign' and 'Project' have already been entered.

## Site Visit (Site & Team Datasheet)

### Site Visit Information

- *Start Date:* Enter start date and time
- *End Date:* Enter end date and time
- *Group:* Select your Organisation from the dropdown menu
- *Comments:* Add the Eastings and Northings recorded at the site
  - You can also use the comments box to enter any general information you wish to record, which cannot be stored elsewhere e.g. relevant weather and flow conditions.

### Site Information

- Select the relevant site from the Dropdown list
  - Note that if you start typing the site name it will jump to the site in the list
- Alternatively, you can click 'Advanced Site Selection' and 'Filter By Sepa Catchment' and 'Select Site' from a reduced list

## Proj / Camp / Proto / Contact (Site & Team Datasheet)

### Campaigns

- *Select a Campaign:* Select 'Nat.Juv.EF' from the dropdown menu and click 'Use this Campaign'
  - Note that the campaign list is not in alphabetical order
  - Note that if you are using the NEPS template this will have already been done

### Projects

- *Select a Project:* Select 'FWO2G' from the dropdown menu and click 'Use this Project'
  - Note that the project list is not in alphabetical order
  - Note that if you are using the NEPS template this will have already been done

### Protocols

- *Select a protocol:* Select relevant electrofishing protocol either "National multi-pass electrofishing" or "National single-pass electrofishing" and click 'Use this Protocol'
  - Note that you can uncheck the 'Protocol Met?' box if for any reason the protocol has not followed (e.g. only fished a 50m<sup>2</sup> site and not the minimum 100m<sup>2</sup> included in the protocol).
- *Select a protocol:* Select relevant fish processing protocol: "National fish processing" and click 'Use this Protocol'

## Contacts (Team section in the Site & Team Datasheet)

- *Select a Contact:* Select a team member from the dropdown list
- *Select a Contact type:* Select the relevant role from the dropdown list

- Click *Add this contact*
- Repeat the above for all team members /roles if possible
  - Note that at minimum this should record the name of the team member on the electrode.
  - If other team members are not available in the dropdown list record their name and role in the 'site visit comments'

### **Habitat (Habitat Datasheet)**

- Add percentages for each substrate and flow type
  - Note that these must add up to 100 and that hovering over a substrate or flow type will show the description

### **Equipment (Site & Team Datasheet)**

- Click on '*Change Fields*' and place a tick in the following boxes, at minimum (you can record more detailed information if you wish): EquipmentNo, Equipment\_Type, EFcond, EFpass, EFvolts, EquipmentDescription, ElectrodeTime, PassTime, StopNets
  - Note that if you are using the NEPS template this will have already been done
- Add the relevant information to the columns for each pass.
  - The number of rows in this window should be the number of electrofishing passes. The 'EquipmentNo' field should match the 'EquipmentLink' field on the 'Fish' tab to associate fish with a particular electrofishing pass. E.g. for 3-pass fishing, 'EquipmentNo' will be 1, 2, or 3, referring to the first, second and third pass. Fish caught on the first pass will have 'EquipmentLink' 1 in the Fish tab to match up with the first row in this tab.

### **Fish (Fish Datasheet and Site & Team Datasheet)**

- Untick 'No Fish Caught' unless no fish were caught
- Click on '*Change Fields*' and place a tick in the following boxes, at minimum (you can record more detailed information if you wish): DayProcNo, EquipmentLink, DateCaptured, DateProcessed, Species, LifeCycleStageID, SedatedID, Length, ScaledID, Count, Comments, ScalePacketID (if different to the day processing number), ScalePacketStorageLocation, TissueSampleLink (lets you jump to tissue sample screen)
  - Note that if you are using the NEPS template this will have already been done
- Complete one row for each row on the fish datasheet
  - Note that once you have completed your first entry (row), you can use 'sticky' tabs for things which are the same for every fish e.g. Date, SedatedID
  - You can then hide these unchanging fields by unticking them in '*Change Fields*' and the information will still be saved. You can then hide the '*Change Fields*' menu to give you more space to view the DPU.
  - Note that red cells may require your attention (e.g. a date entered incorrectly)
- If you have taken a tissue sample (for genetics) click 'TissueSampleLink' so you create a Tissue Sample field. You can then fill in the tissue sample information (see section Tissue Sample)

### Tissue Sample (Fish Datasheet)

- Click on *'Change Fields'* and place a tick in the following boxes: TissueSampleID, DayProcNo, TissueSampleNumber, TissueType, TissueBoxNumber
  - Note that if you are using the NEPS template this will have already been done
- Enter the information in each column for each fish where a tissue sample was taken (rows with a Tissue sample tube number)
  - 'DayProcNo' is automatically generated and provides the link between individual fish entered on the fish tab, tissue samples and scale packets.
  - If using the NEPS template the 'TissueType' and 'TissueBoxNumber' columns are 'sticky' so will be automatically copied to all rows after the first row has been entered
  - If using the NEPS template the 'TissueSampleNumber' will increment automatically once 'TissueSampleLink' has been clicked, after the first 'TissueSampleNumber' has been added. If you have worked sequentially through the sample tube box (so that the genetics sample tube numbers follow on from each other, starting with the lowest number) once you click 'TissueSampleLink' you will not need to update any of the columns in the Tissue Sample tab, after the first row has been completed.
  - If samples are not collected in order 'TissueSampleNumber' **must** be corrected in the Tissue Sample tab.
- Click 'FishObLink' to return to the 'Fish' tab and continue entering fish data

### Site Measures (Site & Team Datasheet)

- Click on *'Change Fields'* and place a tick in the following boxes: MeasurementId, Measurement, MeasurementType, Units, MeasurementNumber, DistanceAlong, MeasuredAlong
  - Note that if you are using the NEPS template this will have already been done
- Enter the information in each columns for each site measurement

### Options – SAVING ALL YOUR DATA

- Click on *'Save File'* and save the file as a .xml with the filename being "sitename\_fishingdate" where the site name is the site name provided by MSS-FFL and selected in the DPU
- Close DPU, re-open DPU, re-open template file and enter your next site
- Note that the DPU will ask you to save your file when you go to close it, if you have already clicked on *'Save File'* and saved the .xml you do not need to save again here
- Upload all .xml files using the 'file request link', for the region, provided by MSS-FFL.
  - As the FishObs DPU is a new tool for many NEPS collaborators, please first upload one completed single pass and one completed multi-pass electrofishing file using the 'file request link' for the region. MSS-FFL will then provide feedback to prevent any data entry issues being replicated across all data files and potentially time consuming corrections.
  - Note that you can upload files as you go (you do not need to wait until all sites have been fished and data entered into the DPU)

- When data is uploaded using the 'file request link' MSS-FFL will receive an email notification. You will also receive a notification of what was uploaded to the email provided
- If you have any problems please contact [neps@marlab.ac.uk](mailto:neps@marlab.ac.uk)

### **Returning Photographs**

- Site photographs can be stored in the FishObs database, however they cannot be loaded into the DPU
- Please name all site photographs with the filename being "sitename\_fishingdate\_direction" where the site name is the site name provided by MSS-FFL and selected in the DPU and the direction describes what the photographs shows (e.g. Caithness\_0901\_020719\_facing\_downstream)
- Upload all photographs using the 'file request link', for the region, provided by MSS-FFL
  - When data is uploaded using the 'file request link' MSS-FFL will receive an email notification. You will also receive a notification of what was uploaded to the email provided