



Urban Regeneration and the Environment Metadata Capture Tool User Guide.

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About this User Guide.

Purpose.

The purpose of this User Guide is to describe how to install the Metadata Capture Tool, enter metadata into the forms and produce reports of the data.

Authors.

The document has been prepared by Isabella Tindall and John Bosley of the Centre for Ecology and Hydrology, Wallingford.

Readership.

- The URGENT Data Committee
- The URGENT Data Centre Managers
- URGENT PI's & Project Data Managers

Version.

The version of URGENT Metadata Capture Tool covered by this document is the Beta Test release.

Amendment History.

Issue	Date	Authors	Description
V1.R1.M1	17/09/2001	CIT, JDB	First draft
V1.R1.M2	11/02/2002	CIT, JDB	Second draft

Assumptions.

The reader is assumed to be familiar with the aims and objectives of the URGENT Programme.

Contact.

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Copyright and IPR

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Introduction.

The URGENT Metadata Capture Tool provides a series of forms that allow you to enter the metadata for each of your datasets generated during your URGENT project. At this stage the tool is a beta release version and is provided to help you collate the information required by the Programme. It has been designed in Microsoft ACCESS 97, but an ACCESS 2000 version has also been created. Although these two versions require the correct version of ACCESS in order to work, data exported from one version can be imported into the other version. Please read this document through before starting to enter metadata.



Installing the database.

In order to install the correct version of the Capture Tool, you will need to know which version of Access you have installed on your machine. If you are unsure which version you have, open up Access, go to 'Help' on the menu bar, click 'About Microsoft Access' and it will tell you which version you have. Click on 'Start', then 'Run...' and if you have Access 2000 then type 'D:\MetadataCaptureTool2000\setup.exe' (replace 'D' with the letter of your CD-ROM drive, do not include the quotes). If you have Access 97 then type 'D:\MetadataCaptureTool97\setup.exe' (replace 'D' with the letter of your CD-ROM drive, do not include the quotes). This will begin the setup program. Now follow the instructions on screen. Once setup is complete, the Metadata Capture Tool will be added to your 'Start/Programs' menu. You can run the program by clicking on its icon.

Entering metadata

Follow the steps below to enter metadata for your datasets:

- 1) Open the Metadata Capture Tool by clicking on Start→Programs→Metadata Capture Tool. This automatically opens the main form, which should look like Figure 1. (If the Metadata Capture Tool doesn't automatically open on the Title form, click on the Title tab to open it.)

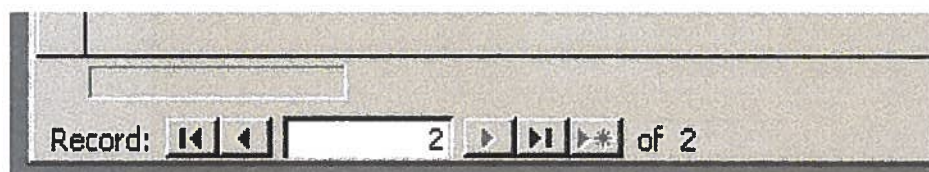
Figure 1: The Main Metadata Capture Tool Form

The screenshot shows the 'Metadata Capture Tool' interface. At the top, the title bar reads 'The WIS Metadata Capture Tool'. Below it, the main window title is 'Metadata Capture Tool' with the version '1.0.0 [Beta test release]'. The 'Current Dataset' is 'River Trent water quality dataset'. The 'Project ID' is 'ESPRC/0001'. There are tabs for 'Quality', 'Data Access', 'Supplier Details', 'Formats for data and presentations', and 'Samples and Associated Datasets'. The 'Quality' tab is active, showing fields for 'Title', 'Alternative Title', and 'Originator(s) of the Dataset'. The 'Title' field contains 'River Trent water quality dataset' and the 'Alternative Title' field contains 'Nutrient levels in the River Trent'. The 'Originator(s) of the Dataset' field contains 'A Principal Investigator'. There are buttons for 'Import Datasets', 'Export Datasets', 'New Dataset', 'Save Dataset', 'Help', and 'Quit'. A status bar at the bottom shows 'Record: 1 of 1'.



- 2) There should already be a dataset stored in the database as an example for you to browse. Its title is 'River Trent Water Quality dataset'. This should be visible in the 'Title' field of the **Title** form.
- 3) Click on the 'New Dataset' button on the right of the form to start entering information for a new dataset. You know you are typing into a new dataset because the 'Record' number rises to 2 in the bottom left hand corner of the Tool. You can use the arrows to move through the datasets as you generate them. (See Figure 2)

Figure 2: The Record Counter



- 4) Just below the main title on the main form is a box which allows you to enter your Project ID. Datasets can be grouped by having the same project ID. Click the arrow on the right hand side of the box to select your Project ID. You will be shown a list of all the existing Project ID's from which you can select the one you want. The lead Researcher's name is also displayed to help you find your project.
- 5) To the right of the Project ID box is the model output check box. If the metadata you are entering refer to a dataset which includes the output of a model, then check this box. Otherwise leave the box blank.
- 6) You will notice that there are 12 tabs that open up different forms allowing you to enter various aspects of the required metadata. It is suggested that you start with the form called **Title**, so if the Metadata Capture Tool doesn't automatically open on the **Title** form, click on the **Title** tab to open it.
- 7) Fill in the 'Title' and 'Alternative title' fields. This will cause the dataset title to appear in the Current Dataset box at the top of the tool.

Note: If you want to delete an entry or clear a field at any time whilst entering metadata, see the section on 'Deleting a record or full metadata dataset' on page 13.

- 8) To complete the 'Originator(s) of the Dataset' field, you must either select an existing name from the drop down menu or enter a new originator and their details by clicking on the 'Add to/Update Address Book' button at the bottom of the form. An 'Address Book' form should appear that looks like Figure 3 overleaf).
- 9) Click on the 'New Contact' button at the bottom of the form to create a new record. Type in the details of the originator of the dataset and then click on the



'Save Edit' button followed by the 'Close button'. This should take you back to the

Figure 3: The Address Book Add to / Update Form

Title form where you should then find the name of person you have just entered, in the 'Originator of the dataset' field drop down menu.

- 10) Now click on the **Description** tab to see a form with a single field in it. Use the headings listed down the left-hand side of the form to describe the purpose of the dataset, what was measured when and where, by whom and how and the quality of the data. If the dataset includes the output of a model, then please also include details about the initial model conditions, boundary conditions, validation and results and/or conclusions, as indicated on the form.

Figure 4: The Keywords Form



- 11) Now click on the **Keywords** tab to reveal a form that looks like Figure 4 (Above). Type into the 'Keywords' field, a keyword that describes your dataset. As you start typing the arrow to the left of the field turns into a pen and another field opens up below it for you to enter a second keyword. Enter as many keywords as appropriate.
- 12) Click on the **Spatial Ref. System for data** tab. Use the drop down menu to select an entry for the 'Geographic referencing system for the data' field e.g. Latitude and Longitude.
- 13) Click on the **Geographic Extent** tab to reveal a form that looks like Figure 5. At the top of the form you are presented with two bulleted options of how to describe the spatial extent of your dataset, by 'Text description' or by 'Bounding rectangles'. If you know or can find out both sets of information, please fill in both descriptions.

Figure 5: The Geographic Extent Form

- 14) In the 'Text description' bullet option, select an entry from the 'Extent type' field drop down menu e.g. Admin area extent and then type in a name e.g. Birmingham City in the 'Extent name' field.
- 15) In the 'Bounding Co-ordinates' bullet option (See Figure 6), you must first select the 'System of Spatial Referencing' from the drop down menu e.g. British National Grid. This is the spatial referencing system for the bounding box. It may be that the dataset is recorded in latitude and longitude (see step 12 above) but that the bounding box is reported using co-ordinates in the British National



Grid. Now fill in the co-ordinates for the rectangle that bounds your dataset in the relevant fields (see Figure 6). National Grid References should take the full six-digit form e.g. 650000, 349500 not the letter/number system. If your dataset is for a single point only, enter the grid reference in the 'West Coord/Longitude' and 'South Coord/Latitude' fields. To specify height co-ordinates for atmospheric datasets, select the height co-ordinate system (e.g. Altitude (m)) and enter the upper and lower height boundaries for the dataset.

Figure 6: The Bounding Co-ordinates Option

The screenshot shows the 'Metadata Capture Tool' interface. The 'Current Dataset' field is empty. The 'Project ID' is 'No Project ID'. The 'Model output included?' checkbox is checked. The 'Spatial extent of dataset' section has 'Bounding co-ordinates' selected. The 'Area' section includes a 'System of Spatial Referencing' dropdown set to 'British National Grid'. Below this are fields for 'North Coord/Latitude', 'West Coord/Longitude', and 'South Coord/Latitude', all containing '0'. The 'Height' section includes a 'Height co-ordinate system' dropdown and fields for 'Max height' and 'Min height', both containing '0'. The 'Level of Spatial Detail' field is empty. The interface includes a sidebar with buttons for 'Import Datasets', 'Export Datasets', 'New Dataset', 'Save Dataset', 'Help', and 'Quit'. The status bar at the bottom shows 'Record: 14 | 4 | 2 | 1 | 2 | of 2'.

- 16) Now click on the **Temporal Extent** tab to reveal a form that looks like Figure 7. Use this form to describe the start and end dates for *time series datasets*. Select an entry from the 'Calendar' field drop down menu. It is likely that you will want to use the Gregorian calendar, which is the default. When you click in the 'Start Date' field, the formatting of the date appears i.e. __/__/____ Enter the date as dd/mm/yyyy. Do the same for the 'End Date' field.

Figure 7: The Temporal Extent Form

The screenshot shows the 'Metadata Capture Tool' interface with the 'Temporal Extent' tab selected. The 'Calendar' dropdown menu is set to 'Gregorian calendar (Current)'. The 'Start Date (dd/mm/yyyy)' and 'End Date (dd/mm/yyyy)' fields are empty. The interface includes the same sidebar and status bar as Figure 6. The status bar at the bottom shows 'Record: 14 | 4 | 2 | 1 | 2 | of 2'.



- 17) Now click on the **Data Capture Period** tab to show a form that looks like Figure 8. If the 'Start Date of Capture' for a *spatial dataset* is known, then enter it in the first field of the form in the same format as for the Temporal Extent date (See step 16 above). If however the date is not known or not applicable, choose one of these options from the drop down menu in the 'Status of Date' column. The other two fields for 'Start Date of Capture' should then disappear, as they are no longer relevant.

Figure 8: The Data Capture Period Form

The screenshot shows the 'Metadata Capture Tool' interface, Version 1.0.0 (Beta test release). The 'Current Dataset' section is active, displaying a 'Project ID' dropdown menu set to 'No Project ID' and a 'Model output included?' checkbox. Below this, a series of tabs are visible: 'Data Access', 'Supplier Details', 'Formats for data and presentations', 'Samples and Associated Datasets', and 'Related Terms'. The 'Data Capture Period' tab is selected, showing a form with the following fields:

- Start Date of Capture:** A text input field with a placeholder 'dd/mm/yyyy e.g. 05/06/2001', a 'Status of Date' dropdown menu set to 'Known', and an 'Accuracy of data' dropdown menu.
- End Date of Capture:** A text input field, a 'Status of Date' dropdown menu set to 'Known', and an 'Accuracy of data' dropdown menu.
- Metadata Update Frequency:** A dropdown menu.

On the right side of the form, there is a vertical toolbar with buttons for 'Import Datasets', 'Export Datasets', 'New Dataset', 'Save Dataset', 'Help', and 'Quit'. At the bottom of the window, a status bar indicates 'Record: 14 | 2 | of 2'.

- 18) For the 'End Date of Capture' there is also an option to state that capture or production is 'Ongoing'.
- 19) Select an entry from the 'Metadata Update Frequency' field drop down menu e.g. Annually.
- 20) Now click on the **Quality** tab. In the fields, describe the completeness of the dataset, the extent to which the dataset has been validated and provide a brief history of the data.
- 21) Now click on the **Data Access** tab. Select an entry from the 'Access Constraints' field drop down menu e.g. Free/cost of delivery for research or type in another option. Then describe any limitations to the use of the data e.g. for research purposes only in the 'Use constraints' field.



- 22) Click on the **Supplier Details** tab. If this dataset, or more detailed information about it, is available on the Internet then enter the web address for it into the 'Web Address' field. It is possible that the supplier may be a different person to the originator of the dataset who was listed in the **Title Form**. However, complete this form in exactly the same way as you filled in the 'Originator(s) of the Dataset' field on the **Title Form**. See steps 8 and 9 above.
- 23) Now click on the **Formats for Data and Presentations** tab to reveal a form that looks like Figure 9. This form allows you to specify the format of the dataset, the medium on which you wish to supply it and the way in which you have presented the data e.g. as a map. Type your entries into the fields. As you start typing another field opens up below for a further entry should you need it.

Figure 9: The Formats for Data and Presentations Form

The screenshot shows the 'Metadata Capture Tool' interface. At the top, it says 'The WIS Metadata Capture Tool' and 'Version 1.0.0 (Beta test release)'. The main window has a title bar and a menu bar. Below the menu bar, there's a 'Current Dataset' field and a 'Project ID' dropdown menu set to 'No Project ID'. A checkbox for 'Model output included?' is checked. The main area is divided into several tabs: 'Title', 'Description', 'Keywords', 'Spatial/Ref. System for data', 'Geographic Extent', 'Temporal Extent', 'Data Capture Period', 'Quality', 'Data Access', 'Supplier Details', 'Formats for data and presentations', and 'Samples and Associated Datasets'. The 'Formats for data and presentations' tab is active, showing three columns: 'DATA_FORMAT', 'SUPPLY MEDIUM', and 'PRESENTATION TYPE'. Each column has a list box and a 'Record:' indicator. Below these columns is a 'Spatial Referencing System' dropdown menu. On the right side, there are buttons for 'Import Datasets', 'Export Datasets', 'New Dataset', 'Save Dataset', 'Help', and 'Quit'. At the bottom, there's a status bar showing 'Record: 1 of 2'.

- 24) The final Form is for **Samples and Associated Datasets**. Figure 10 shows this form. In the 'Sample' field, type in the filename(s) of the files you will be supplying as samples of your data. If there are any data which are associated with your dataset that you think it would be useful to know about, then enter them in the 'Dataset Association' field. Finally, type in any additional information about your dataset that has not been supplied in any of the other forms.



Figure 10: The Samples and Associated Datasets Form

Saving metadata

When you have entered all your metadata in the different forms, click on the 'Save Dataset' button to the right of the main window. This will save your entries to the database. Next time you open the URGENT Metadata Capture Tool your dataset will be available to browse through and edit if necessary. You may need to use the Record Counter to move through the datasets to find the dataset you last entered. (See Entering metadata, step 3 for more details on the Record Counter)

Remember - if you don't save your dataset, the information you entered will not be stored in the database, so it won't be there when you next open up the Tool.

Deleting a record or full metadata dataset

If you are typing an entry into any of the forms and decide you want to abandon that entry press the Escape key on your keyboard.

If you wish to delete one of a set of multiple records, for example one of several keywords, click the record selector to the left of the field. The black arrow will move to point at the row you have selected. You can then press Delete on the keyboard to remove the record.



To delete an entry in one of the text boxes, highlight the text and press Delete.

To delete the whole dataset entry in one go, click the black arrow record selector to the very left of the Form window and press Delete.

The dataset toolbar

Across the top of the application you will find the dataset toolbar as shown in Figure 11. This has eight different buttons on it, split up into four different groups. The first group deals with reports, with a button for displaying a report on the screen, printing the report for the current dataset, or printing reports for all the datasets in the database.

The second group contains buttons for importing and exporting datasets. The third group contains buttons for selecting an HTML template and creating HTML pages. The final button is for clearing the database and deleting all the datasets. All the functions on the dataset toolbar are also available through the dataset menu, or through their shortcut keys (indicated by an underscore). Import and export buttons are also on the main tool itself.


Figure 11: The Dataset Toolbar



Report preview

This button allows you to view a report (on screen) of the metadata for the current dataset. The report contains all the metadata for the dataset and will normally fit onto two sides of A4 paper. Figure 12 shows part of a Dataset Report.

Figure 12: Part of the Dataset Report



River Trent water quality dataset

Project ID: E-SPRC.0001

Alternative Title: Nutrient levels in the River Trent

Inclusion model output?

Originator(s) of dataset:

Name: A Principal Investigator

Address: Project - Nutrient Levels in the River Wellingford Oxon OK10 9BB
Trent - Code 12345
Centre for Ecology and Hydrology

Tel: 01491 838900

Email: apa@ceh.ac.uk

Abstract:

Purpose - To gain a better understanding of the transport of freshwater nutrients in the urban environment. What was measured - phosphorus, nitrogen, silicon, suspended sediments, flow, dissolved oxygen, water temperature, pH

When - 1998 - 1999

Where - River monitoring site on the river Aps to Beal

By whom - CEH staff. How was it measured - Water samples were taken on a weekly basis and



You can navigate through the pages of the report and through the different reports using the arrow buttons in the bottom left hand corner of the report.

Printing the current dataset / printing all datasets

These buttons will send a report similar to that shown in Figure 12 directly to the printer. Print current dataset will print one report for the dataset currently displayed on the screen, and print all datasets will send a report for each of the datasets in the database to the printer. The reports will be sent to whichever printer is set up as the default printer for your PC. You can change your default printer by going to Control panel → Printers, right clicking the printer you wish to set as default and selecting 'Set as default'.

Exporting datasets

When you have entered details for all your datasets use the 'Export Datasets' function to create a datasets file. A window will appear and you will be asked to choose a filename and location to save the file to. Once you have done this, click OK and the file will be created. Email this file to your Data Centre and they will check the file and load it onto the URGENT Metadata Database.

Importing datasets

Should you have a previously exported file containing datasets which you wish to import into your Capture Tool, use the 'Import datasets' function. You will be asked to choose the file which you wish to Import into the Capture Tool, and then the datasets will be imported. If any of the datasets being imported have the same title as datasets already in the database, you will be asked whether you wish to overwrite them, rename them or not to import that particular dataset. After the datasets have been imported, you will be informed how many datasets in total were added to the database.

Deleting all datasets

This button will clear all the metadata currently in the database, apart from the example dataset (River Trent water quality dataset) which always resides in the database. It is recommended that you export your datasets before deleting them so they can be recovered (by importing them again) if necessary. Please note that if you overtype the 'River Trent water quality' dataset, then your new record becomes the example dataset which is unaffected by the 'delete all datasets' button.

Exiting the Metadata Capture Tool

When you have finished entering information and you have saved the dataset details you can exit the Metadata Tool. Click on the 'Quit/Stop' button to exit the application.