NMDC

NORWEGIAN MARINE DATA CENTRE (NMDC)

D6.5 TUTORIAL MATERIAL

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Versions

Version	Date	Comment	Responsible
Version 0.1	2014-06-26	Outline and material on web-based metadata exploration tool v1.0	Armin Pobitzer
Version 0.2	2014-06-27	Update after input from FFI (Nina Nordlund) and IMR (Helge Sagen)	Armin Pobitzer
Version 1.0	2014-06-30	Final version for delivery	Armin Pobitzer
Version 1.1	2014-10-27	Updated version after comments from internal review	Armin Pobitzer
Version 2.0	2015-06-30	Updated version for delivery	Armin Pobitzer
Version 3.0	2016-06-30	Updated version for delivery	Armin Pobitzer

1   INTRODUCTION

1.1 Background

Within the scope of *WP6 - Applications*, a number of applications are developed at the partner institutions. For a general description of the activities in workpackage 6, please confer the document *Workpackage Description WP6, Version 5* [1].

1.2 Purpose

This document is meant to provide tutorial material related to the applications developed within the scope of *WP6 Applications*. The list of applications available to the general public and information on how to access them can be found in the *WP6 – Application Documentation* document [2].

1.3 Audience

The intended audience of this document are the end users of the respective applications.

1.4 Applicable documents

[1] NMDC, Workpackage Description WP6, Version 5.
[2] NMDC, D6.3 WP6 – Applications Documentation, Version 3.0

2   WEB-BASED METADATA EXPLORATION TOOL (CMR)

This tutorial material describes the use of the metadata exploration tool as of 30.06.2016. It should be noted that the application is in an experimental stage, and some downtime has to be expected.

2.1 Prerequisites

The application is confirmed working on desktop and laptop computers with the most popular browsers: Google Chrome (Version 35), Mozilla Firefox (Version 30.0), Microsoft Internet Explorer (version 8 and 11), and Apple Safari (Version 5). It is recommended to use an external mouse for easier interaction with the map.

2.2 Selection of a geographical region

1) Select a geographical region of interest by panning and zooming in the map view. The panning is achieved by dragging the mouse pointer (hold down right mouse button and move mouse). Zooming is performed by using the plus/minus buttons in the top left of the map or using the mouse wheel. Pinching for zooming is confirmed working on some touch-capable devices. Every panning and zooming operation is considered a new map segment, i.e. query. A limited number of queries are kept track off during navigation.

2) Data sets cover either a single points or geographic areas. The first are displayed as NMDC icons, the latter as rectangles. If multiple "point" data sets are found in an area they will be clustered, indicated by green circles. If multiple data sets cover the same geographic area they will be clustered as well, indicated by black rectangles. The number of data sets contained in each cluster is given by the number in the cluster icon. Data sets that cover an area but at small with respect to the currently viewed map segment will be converted to point data sets for display.
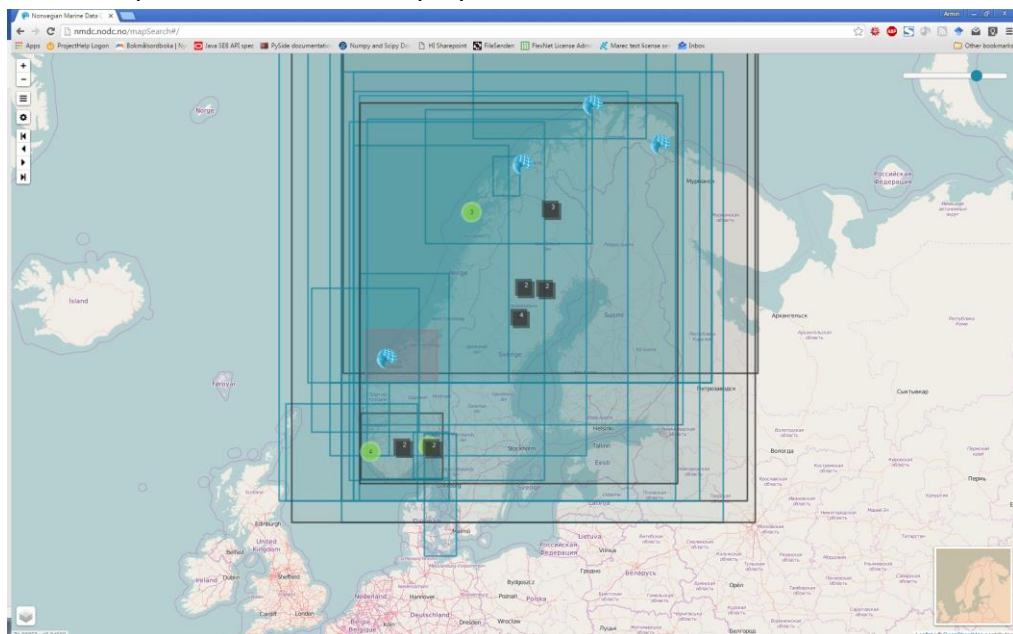

Figure 1: The map view. The zoom buttons are found in the top left corner.

3) If necessary, navigate back (undo) and forth (redo) between different queries using the arrow buttons. Single arrows indicate one step back and forth in tracked queries. The double arrows jump to the start and end of the tracked queries. Changing the map segment during navigation using the arrow buttons discards previously undone queries.
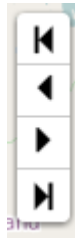
Figure 2: Arrow navigation buttons found on the top left border of the map.

2.3 Filtering of search results (Through "Setting" menu)

1) Each new map segment/query triggers a search in the metadata database. The search results can be filtered to contain only data sets consisting of data collected during a certain time span. This temporal filter is defined by a from date and to date. The dates can be set using the datum picker displayed when clicking/taping on the respective field, or entering the date from a key-board (format yyyy-mm-dd). It possible to specify only one date bound by leaving the other field blank.

Figure 3: The two fields used to define the temporal filter. Below the "To Date" field the datum picker is shown.

2) The datum filtering is undone by clearing the respective fields using the x-symbol.

2.4 Search result organisation

The result of each search is a list of all data sets with a non-empty intersection of their geographical extend and the currently displayed map segment (and fitting the temporal filter, if set). Figure 4 illustrates the search result of a query defined by a map segment (black frame). The bounding boxes of the data sets coloured in green have a non-empty intersection with the visible map segment, viz. they are either fully contained in the map segment, partially contained in the map segment, cross the map segment, or do themselves contain the map segment.
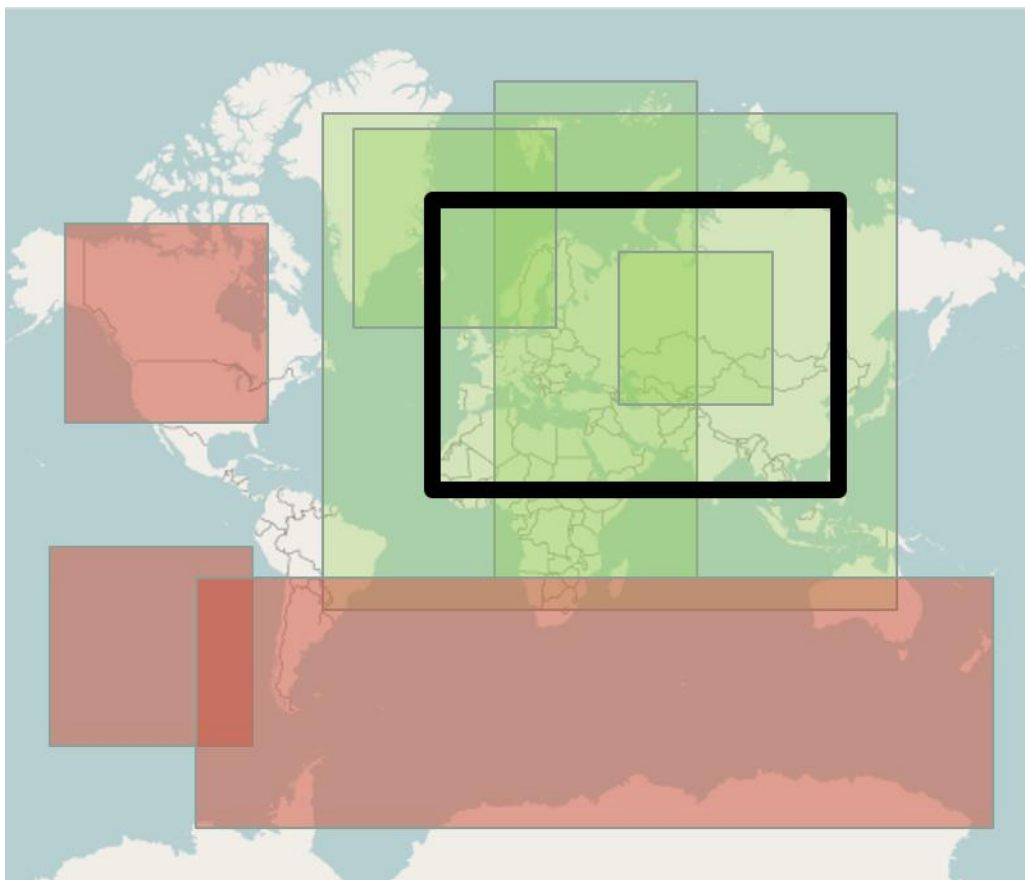
Figure 4: Illustration of the query defined by a map segment. Provided the black frame represents the visible map segment, the metadata search returns the data sets coloured in green, but not the data sets coloured in red. Which of the green data sets are shown in the map depends on the position of the amount of area inside slider

The search results are organised according to two relations, "content" and "related".

1) Modulate which of the search results are shown on the map by adjusting the amount of area inside slider. If the slider is all the way to the right, only data sets properly contained in the shown map segment are visible. Moving the

slider to the left relaxes this requirement to only a certain amount of the data being required to be inside the map segment. If the slider is all the way to the left, all data sets but those fully containing the map segment are visible. The visible data sets are the "content", the remaining "related".

Figure 5: The amount of area inside slider.

2) Choose between showing the "content" data, the "related" data by clicking on the respective tabs in the side panel (opened by clicking on the button with the three horizontal lines, see Figure 6).
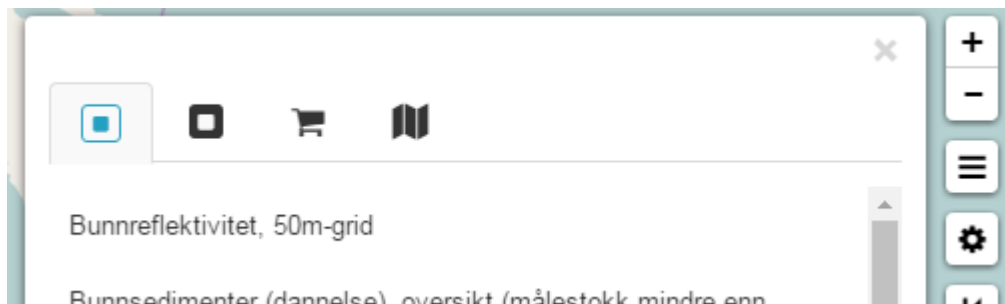
Figure 6: Buttons to choose between content (left most) and related data set (second from left).

2.5 Selection of data sets

1) Selecting a data set in the map is achieved by clicking on the respective rectangle or marker. If the coordinate corresponding to the mouse position during clicking is contained in several data sets, the data set with the smallest geographical extent is selected. The selected data set is highlighted in a reddish colour. The same data set is also highlighted in the list, if displayed in the side panel.

2) Selecting a data set in the list is achieved by clicking on the corresponding list item. The same data set is also highlighted in the map view and a popup is shown.

2.6 Metadata inspection

1) The metadata of a selected data is displayed by clicking on the info icon ![i], either in the selection popup or in the side panel. Each item of the metadata record can be expanded/collapsed by clicking/tapping
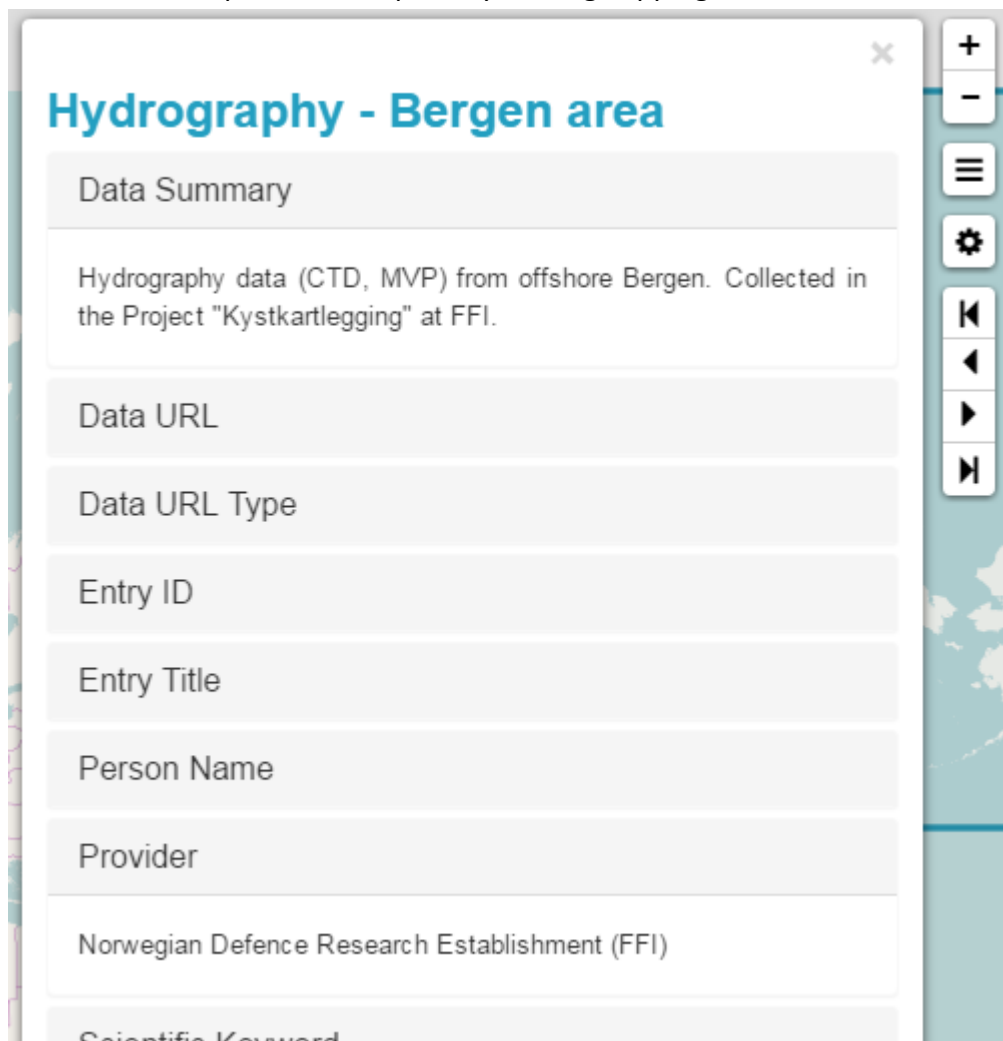

Figure 7: The detail view.

2.7 Display of WMS layers

If the metadata record contains an URL identifiable as a WMS service, this will be indicated in the bottom of the detail view by an additional button ![button].

1) Clicking the button will try to add the WMS layers referenced in the metadata record to the map

2) If successful, the available additional map layers can be togled using the layer control 🗇 in the bottom left corner of the map (see Figure 1).

3) Adding a WMS layers from a different data set will remove the previously added layers from the control. All successfully added layers are collected in a list (accessible through the rightmost button visible in Figure 6)

2.8 Gathering interesting data sets

1) If an interesting data set is identified, it can be added to the selection list (accessible through the second to last button visible in Figure 6) by using the add button ➕ in the side panel. Data sets can be removed from the list by clicking the delete selected item button ✖.

2.9 Sharing of data sets

It is possible to share single data sets, clusters, and the gathered interesting data sets (cf. section above) by clicking the share button ◀, whenever visible in the sidepanel.

1) Click the share button. An email containing a link to a download information page is generated. The example page is shown in Figure 7.

Figure 7: Example of download information page for two data sets.