

2013

Oilrisk Web Manual for a client



Madli Kopti, Mihhail Fetissof, Robert Aps
Estonian Marine Institute, University of Tartu
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1. OILRISK Web

OILRISK Web serves as a tool for:

1. the oil spill related contingency planning;
2. environmental risk assessment;
3. the oil spill response decision and scene planning support.

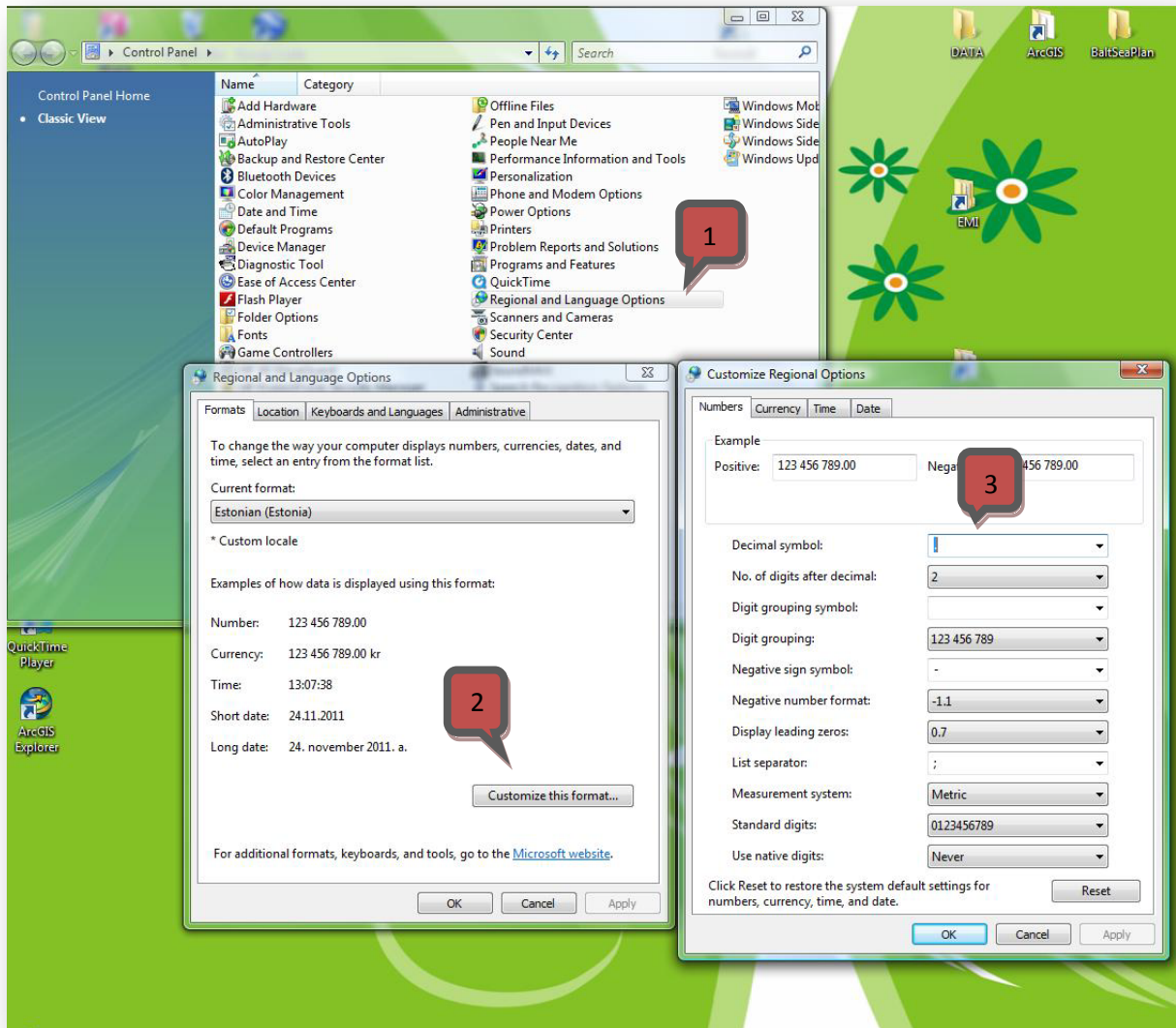
All relevant and available Web Map Services (WMS) can be imported into the OILRISK Web and analyzed in order to support the informed decisions on the oil spill response. Oil pollution related ecological sensitivity maps and shore geological type map layers produced by national scientific institutions are imported as WMS into the OILRISK Web and are used in combination with the Seatrack Web simulation results to assess the threat to sensitive environment and to decide on the most appropriate response actions.

OILRISK WEB includes map layers as following:

- tundlikkus – ecological sensitivity;
- taastumispotentsiaal – recovery potential;
- loodusväärtused – natural values;
- rannajoon (mõõtmiseks) – coastline for measurement;
- sügavusjooned – depth isobaths;
- randlatüübid – shore types.

2. Computer and Internet browser settings


Start > Settings > Control panel > Regional and Language Options > Format > Customize this format > Decimal Symbol (please replace comma with dot) > OK > OK (figure below).



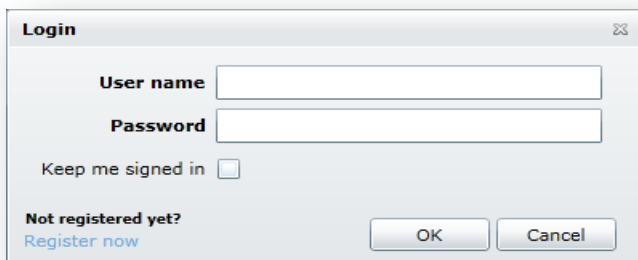
Secondly, it is suggested to delete your Internet browser “cookies”. Open your Internet browser > Internet options > Browsing History > Delete > in next window Delete Browsing History > mark Cookies > „Delete“ and after that in Internet Options window OK.

3. Registration and Authentication services in the OILRISK Web

Open OILRISK Web on address <http://oilrisk-web.eu>

To login in or to register account of OILRISK Web select button on the right top corner of the application. 

The **Login form** will appear where you can specify your **User name** and **Password**.



The screenshot shows a 'Login' dialog box with the following fields and options:

- User name**: Text input field
- Password**: Text input field
- Keep me signed in**:
- Not registered yet?**: [Register now](#) link
- Buttons**: OK, Cancel

If you are not registered yet you can use the **Register now** link to open **Registration form**.



The screenshot shows a 'Register' dialog box with the following fields and options:

- User name**: Text input field
- Friendly name**: Text input field with an information icon
- Security question**: Dropdown menu
- Security answer**: Text input field
- Email**: Text input field
- Password**: Text input field with an information icon
- Confirm password**: Text input field
- Country**: Text input field
- Surname**: Text input field
- Already registered?**: [Back to Login](#) link
- Buttons**: OK, Cancel

Another possibility to create your account is to ask from administrator to do it (e-mail: mihhail.fetissov@ut.ee).

After login the OILRISK Web system will check whether you are assigned to a group(s), which projects are available for you and what role you have. All such assignments can be done by administrator.

If you have already the role(s) the system will make you available buttons to enter into appropriate role section.



4. Functionalities of the OILRISK Web

4.1 Projects

To choose a project you want to work with, please click on the projects button and choose from the structure required project. If you would like to use Edit mode, please click on “pencil” after project name.

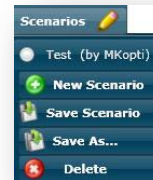


After choosing project edit mode it is possible to generate different scenarios, add bookmarks and notes according to specific needs and projects.

4.2 Scenarios

For different tasks and purposes it is possible to generate scenarios. Upper part of the window locates button „Scenarios“.

When you click on that button, then the following structure will open.



If you want to switch on already saved scenario, put checkmark in front of the scenario name and the scenario will be opened.

If you want to add new scenario: choose New scenario > insert the name of scenario > press OK.

To save scenarios use buttons Save Scenario and Save As. To delete scenario, put checkmark in the front of scenario you want to delete and press button “Delete”

4.3 Base Map selection

It is possible to select the base map layer for the background of the Main Map. On the upper left corner you can find the button Base Map, hovering mouse over will open the list of the Base Map Layers.



Each item in the list has an URL address of Map service which is located on services.arcgisonline.com server:

Streets (Worldwide Street Map): http://services.arcgisonline.com/ArcGIS/rest/services/World_Street_Map/MapServer

Aerial (Worldwide Satellite Imagery Map): http://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer

Shaded Relief (Worldwide Shaded Relief Map): http://services.arcgisonline.com/ArcGIS/rest/services/World_Shaded_Relief/MapServer

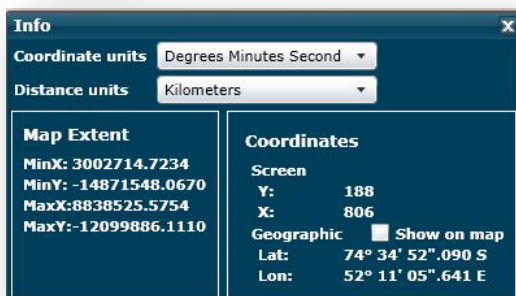
Topographic (United States Topographic Map): http://services.arcgisonline.com/ArcGIS/rest/services/USA_Topo_Maps/MapServer

Physical World (Natural Earth Physical Map): http://services.arcgisonline.com/ArcGIS/rest/services/World_Physical_Map/MapServer

Clear: Choosing this command the background will be cleared.

4.4 Map coordinates and extent

To see current mouse geographical/screen coordinates, and current extent of the Main Map you can choose command „Map coordinates and extent“, which is situated on the upper left corner. After selecting this command the window with needed information will appear in the bottom left corner. .



From this window is possible to choose what kind of coordinate and distance units you would like to use, would you like to see geographic coordinate on map, when you move the mouse.

4.5 Map navigation control

On the right bottom part of application you can find the Map navigation control.



With help of this control it is possible to change the extent of the Main map by scaling, moving and rotating.

To scale and move you can use the mouse. Wheeling up the mouse button will scale in the map, wheeling down – scale out. To move the extent press left mouse button and without releasing move the mouse.

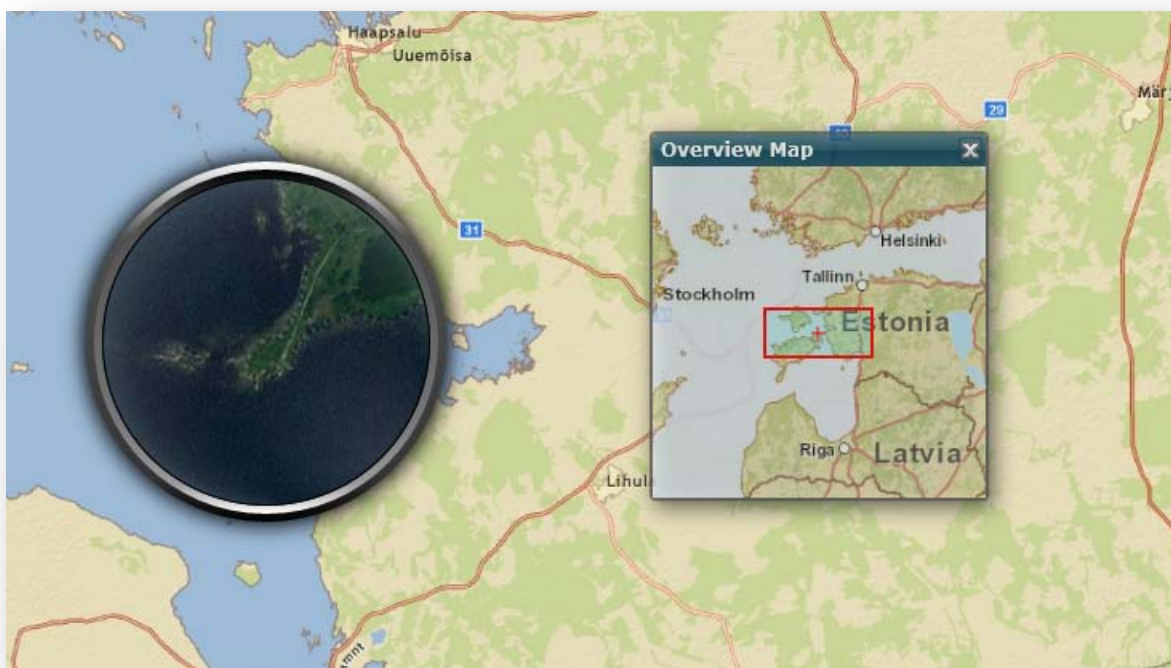
4.6 Magnifying glass and Overview Map

Magnifying glass and Overview Map is standard controls which are provided with the template of Silverlight ESRI Showcase/Standard Map Application. To switch them on select the appropriate command from the top right corner of application.



On the Magnifying glass the Aerial Base Layer with the appropriate scale will be displayed..

On Overview Map the Street Base Layer with the appropriate scale will be displayed.



4.7 Drawing on a map without saving

It is possible to draw any static graphic object on the Main Map without saving drawings to the Web database. To draw the object, select the appropriate command from the menu under the Draw Graphics button on the left top corner of application.



After command is selected start drawing the objects on the Main Map. To stop the drawing and to erase all graphics select last command Erase graphics.

4.8 Measure distance, radius and size of area


There are three types of measurement tools: Polygon – to measure distance and area, Polyline – to measure distance and Circle – to measure the radius.



After selecting the appropriate command start to draw the measurements on the Main Map. Double clicking the mouse button will stop the measurement tool.

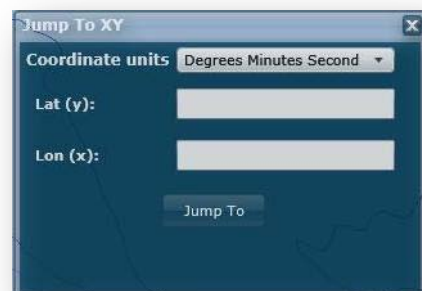
While measuring distances it is possible to measure the length of different lines at same time. By one click you can mark several segments of line – then the length of each segment and the total length as well will be shown.

4.9 Jumping to certain geographic location

If it is needed to find certain position according to given coordinates, then press the “Jump to XY” button in windows upper left side .

Pressing this button will open the window.

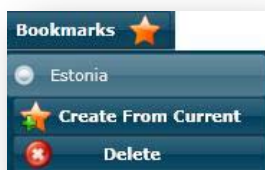
Please insert coordinates and for jumping to concrete coordinate press „Jump to“.



4.10 Bookmarks


The purpose of bookmark is to move to some concrete destination on the map what is set beforehand.

Zoom the map to desired location, then choose bookmarks button on upper part of the window > create from current > name the bookmark > OK. If you want to move to saved location - choose bookmarks, mark bookmark and you will be directed to previously saved location.

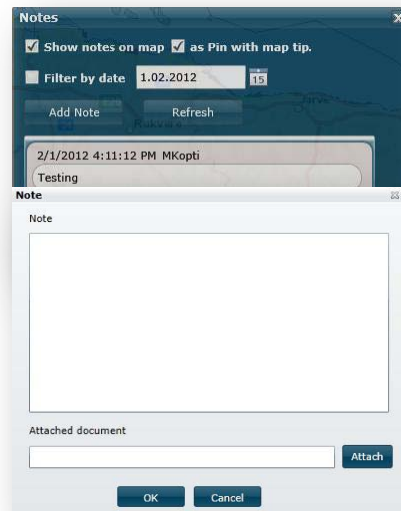


For each project and scenario it is necessary to add the new bookmarks.

4.11 Notes

To add notes press the button . Notes window appears on the right side of the window, where is possible to do the following:


- ✓ Switch on and off showing the notes on map;
- ✓ Choose whether the notes are shown on a map as pins or texts;
- ✓ When several users are simultaneously adding notes to the same scenario it is necessary to press “Refresh” button to update notes window.
- ✓ Filter notes by date
- ✓ Add notes. To add notes press the button Notes > insert note > attach a document if needed > press OK;



4.12 Seatrack Web

Here it is explained how to import the Seatrack Web (STW) scenarios and how to use the STW scenario in OILRISK Web application.

4.12.1 Downloading Seatrack Web scenario

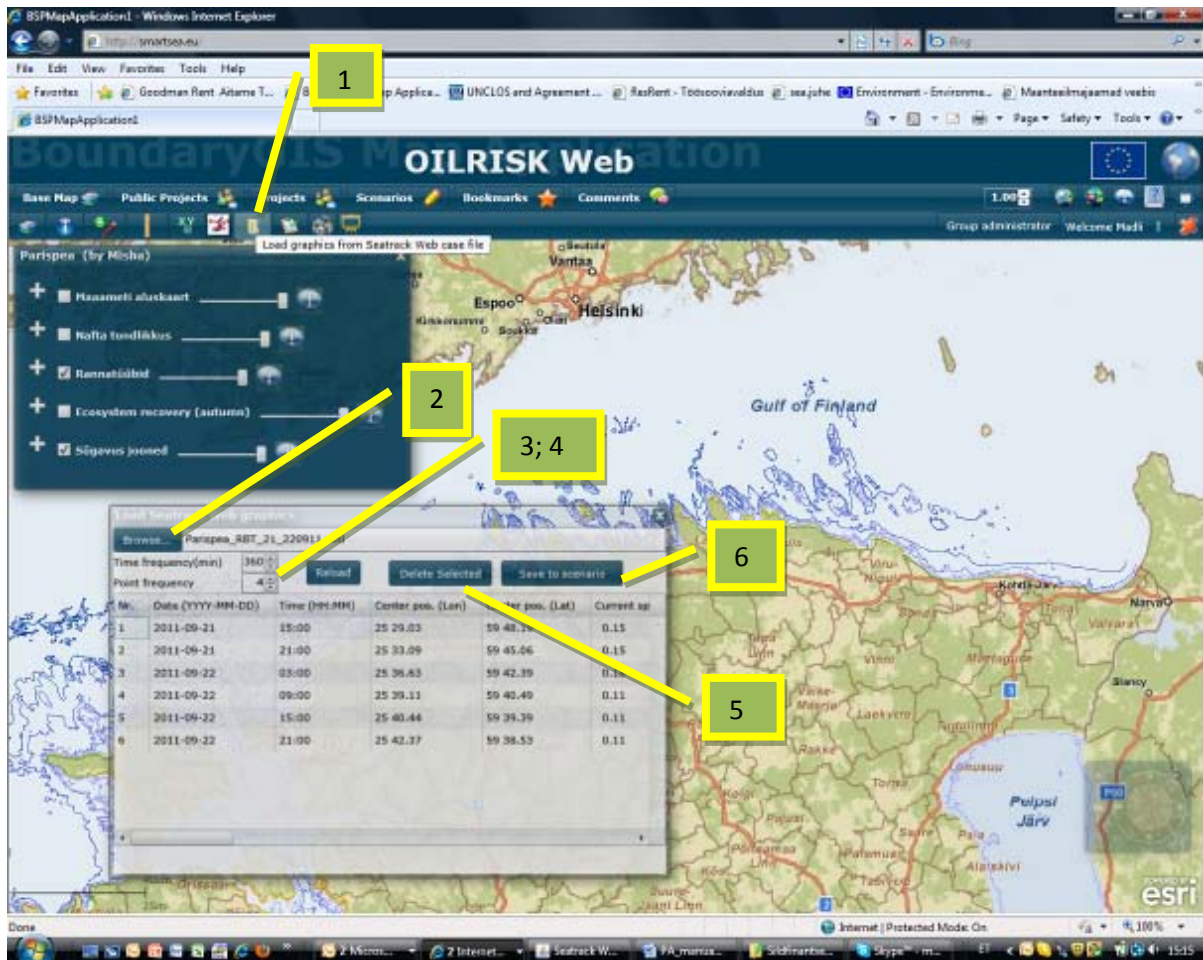
To enter STW it is necessary to press STW button  in OILRISK Web application. New internet browser window will be opened in STW, where is necessary to insert STW username and password. After simulating the STW scenario it is necessary to save it as .xml into your computer.

Before starting to download STW scenario into OILRISK Web, it is necessary to open project in edit mode and the appropriate STW scenario.

To download STW scenario into OILRISK Web is necessary to follow the next steps (also see figure below):


1. Press on button “Load graphics from Seatrack web case file”;
2. Upload the STW case file from your computer using Browse button;
3. Choose appropriate “Time Frequency” – it shows what is the frequency of displaying oil spill movement information;

4. Choose appropriate “Point Frequency” what means point frequency showed on the map. For example when you choose point frequency 4, then on the map will be displayed only every fourth point and not every point, what means that the application is operating faster;
5. If it is necessary to delete some STW case rows, then mark this rows and press “Delete Selected”;
6. To save the scenario press “Save Scenario” > insert the name and description > press OK;



Now the STW scenario is added to the OILRISK Web application under selected project and scenario.

4.12.2 Using Seatrack Web scenario in OILRISK Web

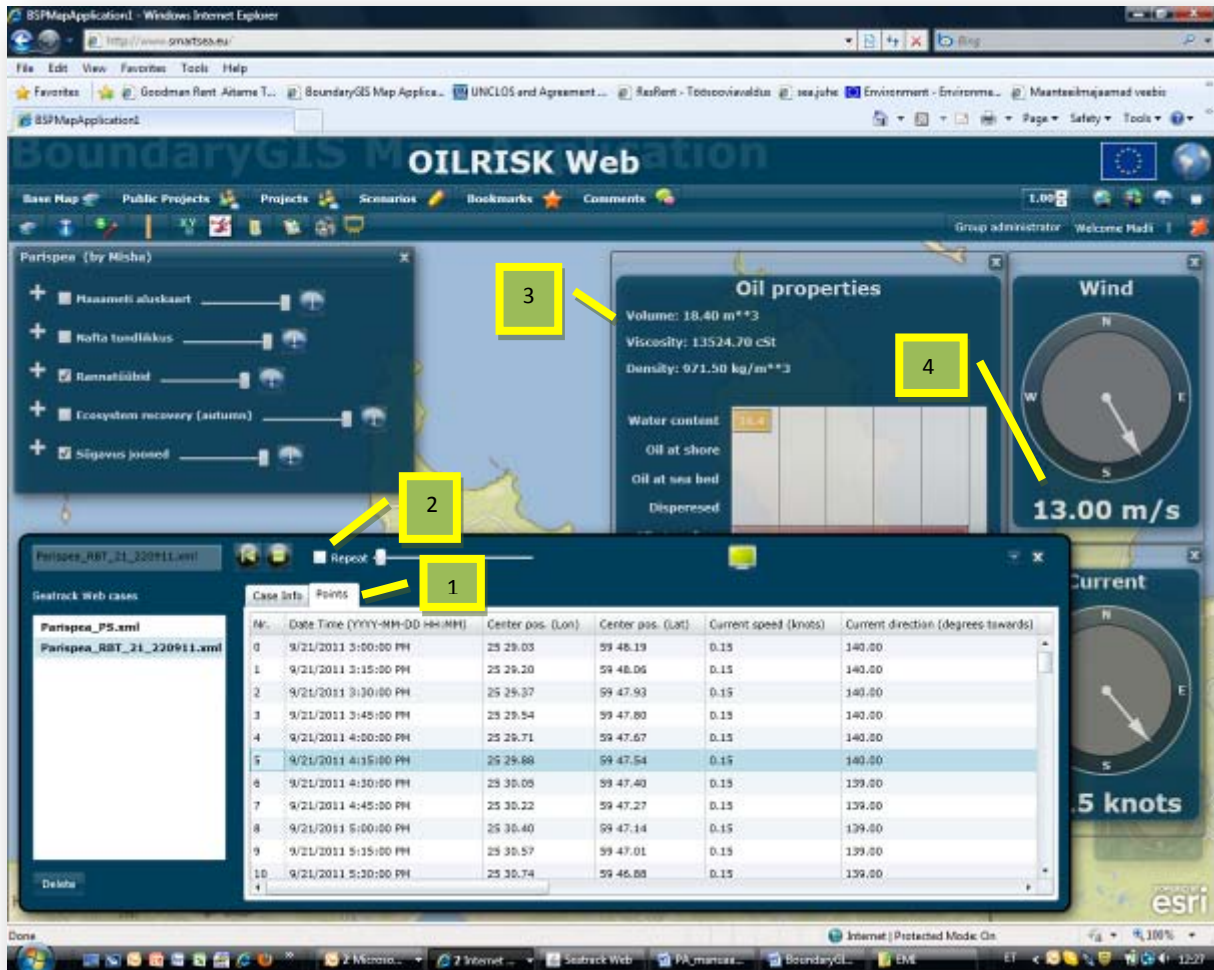
Open the STW scenario by pressing button  “View Seatrack Web cases of current scenario”. Choose the appropriate STW scenario from the list on left side of the window.

The chosen STW scenario can be analysed as follows:


1. The data of STW scenario according to time frequency set previously: time of oil spill accident, location and volume of spilled oil at concrete time moments, sea surface current






speed and direction, wind speed and direction etc. If you mark a certain row (for example 5th row), then on the map and tables you see the oil spill information at that concrete time.

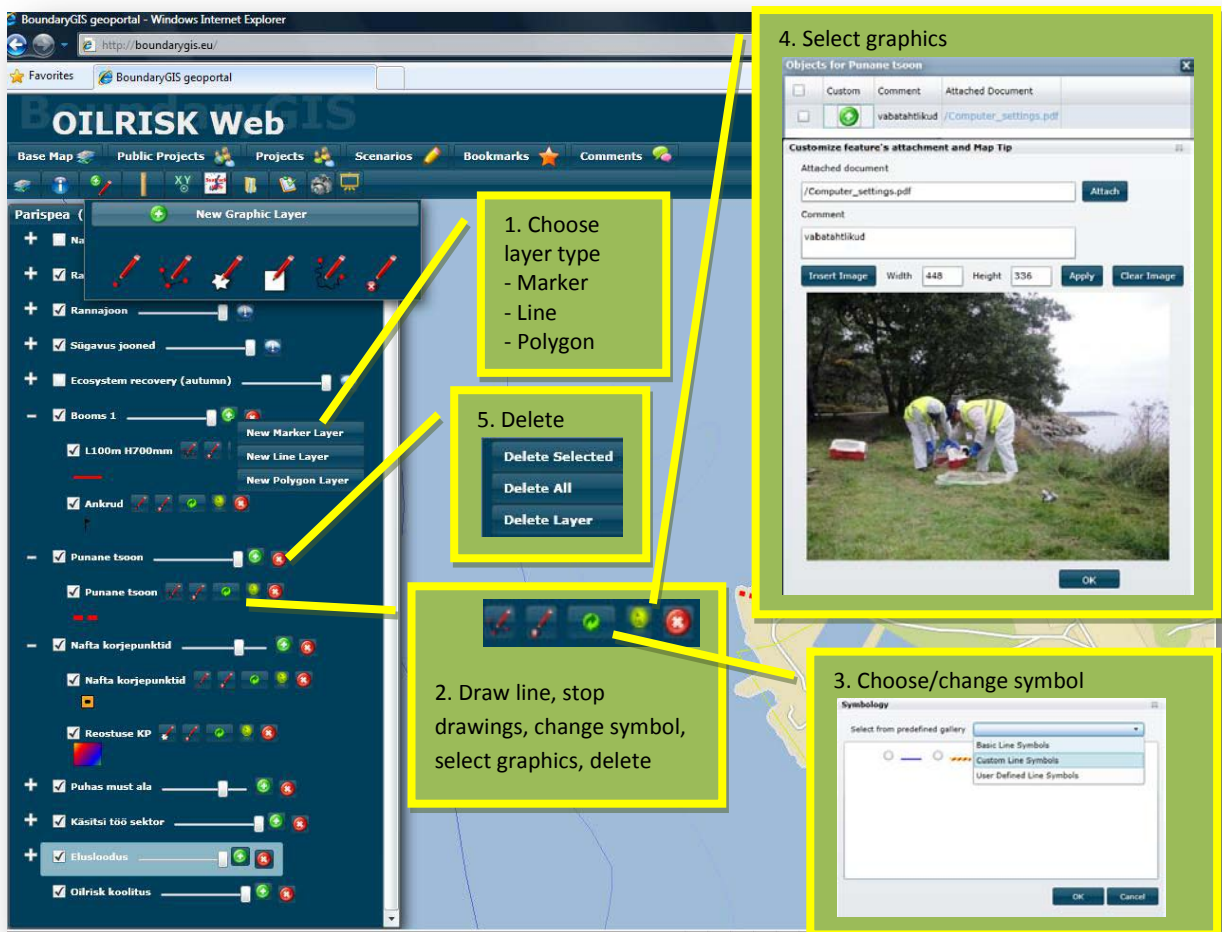
2. Play the scenario. If you add checkmark in front of Repeat playing then the scenario will be repeated.
3. Possibility to see the water content of spilled oil , amount of spilled oil ashore, at the sea bed, dispersed, at certain time.
4. See the weather conditions – wind speed and direction, sea surface current speed and direction.



4.13 How to draw and save new map layers under scenarios

Under scenarios it is possible to generate own graphic layers. To generate new graphic layers press button  and choose "New graphic layer" > enter name of the new layer > press OK. Under map layers was generated new layer. Behind the layer name it is necessary to choose what kind of layer you want to generate (1) – marker, line or polygon layer. After this the sub layer appears, where is possible to do the following:


- ✓ Draw line, stop drawings, change symbol, select graphics, delete (2). When finishing drawing is necessary to press „Stop Drawing“ , otherwise the drawing on the map will be continued;
- ✓ For changing/choosing the symbol press “Change Symbol”  and choose from predefined gallery appropriate one > press OK (3);
- ✓ For selecting graphics, adding pictures, documents and notes use the button “Select Graphics”  (4). After this the Objects for... window opens, where it is possible to do the following:
 - ✓ If there are many objects added under the layer – for example 3 lines, then in the table there will be 3 different objects. If you would like to change the object information press  before the object name and „Customize features attachment and map tip“ window will be opened. After this is possible to attach document, note and insert image for the selected object.
- ✓ Under the main layer is possible to delete different layers under the structure using the button  behind the main layer' name (5).



The screenshot shows the OILRISK Web GIS interface with several callout boxes highlighting specific features:

- 1. Choose layer type**
 - Marker
 - Line
 - Polygon
- 2. Draw line, stop drawings, change symbol, select graphics, delete**
- 3. Choose/change symbol**
- 4. Select graphics**

Objects for Punane tsoon


| <input type="checkbox"/> | Custom | Comment | Attached Document |
|--------------------------|---|---------------|------------------------|
| <input type="checkbox"/> |  | vabatahtlikud | /Computer_settings.pdf |

Customize feature's attachment and Map Tip

Attached document: /Computer_settings.pdf

Comment: vabatahtlikud

Insert Image: Width 448 Height 336


- 5. Delete**
 - Delete Selected
 - Delete All
 - Delete Layer

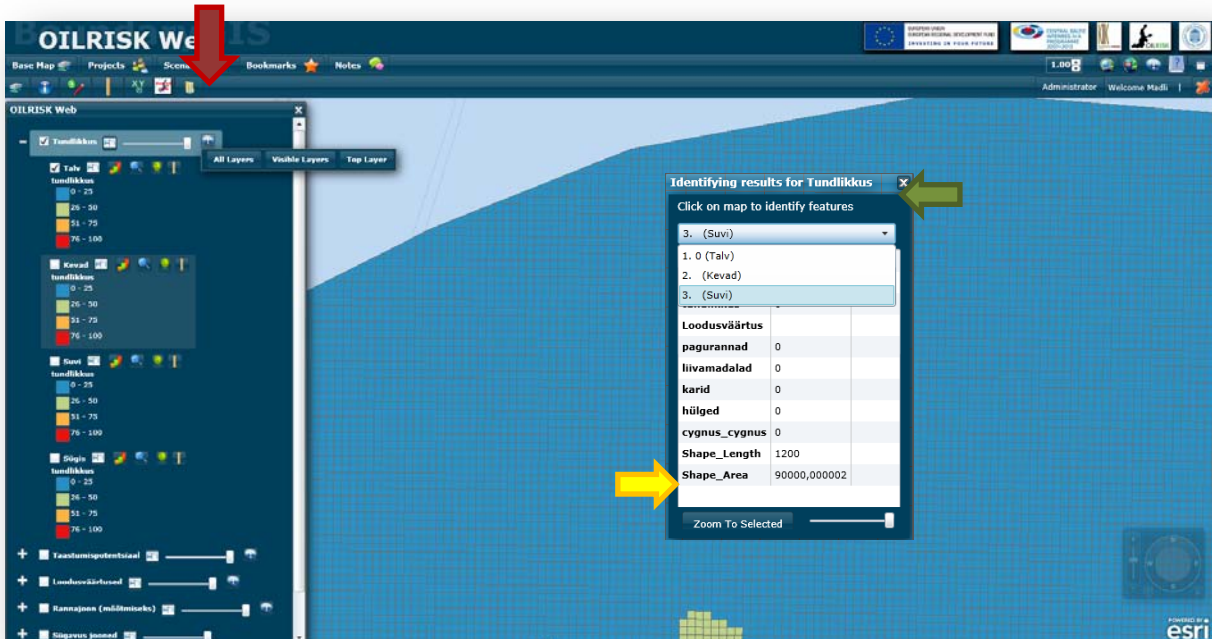
5. Tools in the OILRISK Web

5.1 Identify Tool

Identify Tool allows to query for feature objects on specified area from layers of selected Map Service. Identify Tool provides information based on different approaches as follows:

1. All layers – all layers are identified even if they are not visible.
2. Visible layers – all switched on layers are defined. Performance note: if a layer is turned off or it is not in the range based on its' dependency settings, it cannot be identified. To identify not visible sub layers in the default map service definition, you may need to use the All Layers option to return results.
3. Top layer – only the visible top layer is identified.

Next to the each Map Service in the Layer tree view there is a button which starts the identifying tool (red arrow in the picture). After selecting appropriate identifying option Identifying results window will appear. To specify area click on a map and returned features will be listed in the box (green arrow in the picture). To view identifying result of specific map layer select appropriate layer from the drop down menu. For closer view of selected area should be pressed on a button "Zoom To Selected" (yellow arrow in the picture).



The screenshot shows the OILRISK Web interface. On the left, the Layer Tree view is visible with several layers. A red arrow points to the Identify button (a magnifying glass icon) next to the 'Tundlikkus' layer. On the right, the 'Identifying results for Tundlikkus' window is open. It contains a dropdown menu with '3. (Suvi)' selected. Below the dropdown, a list of features is shown: '1. 0 (Talv)', '2. (Kevad)', and '3. (Suvi)'. A table of attributes is displayed below the list:

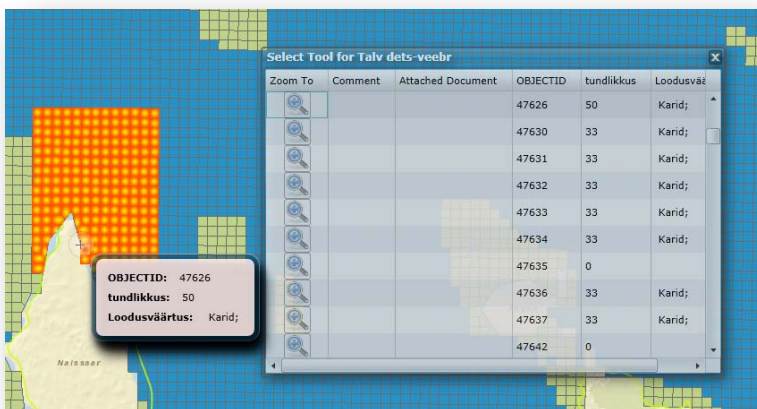
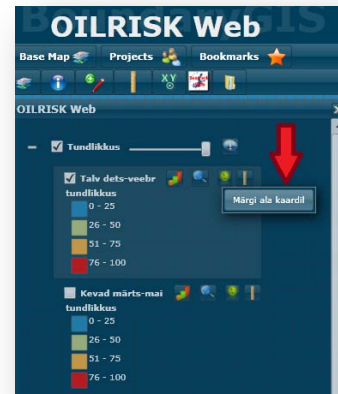
| | |
|---------------|--------------|
| Loodusväärtus | |
| pagurannad | 0 |
| liivamadalaad | 0 |
| karid | 0 |
| hülged | 0 |
| cygnus_cygnus | 0 |
| Shape_Length | 1200 |
| Shape_Area | 90000,000002 |

At the bottom of the results window, there is a 'Zoom To Selected' button, indicated by a yellow arrow.

5.2 Selection Tool

Selection Tool is very similar to the Identify Tool (see help section Identify Tool). Main difference is that result of query will be the features list from the particular layer in Map Service.

To start select appropriate layer in the layers list and press on the button “Selection tool” and press “Märgi ala kaardil” (red arrow in the picture).

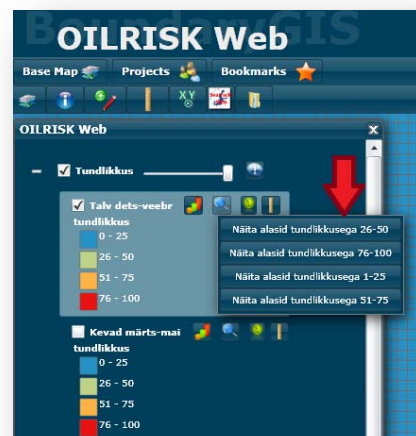


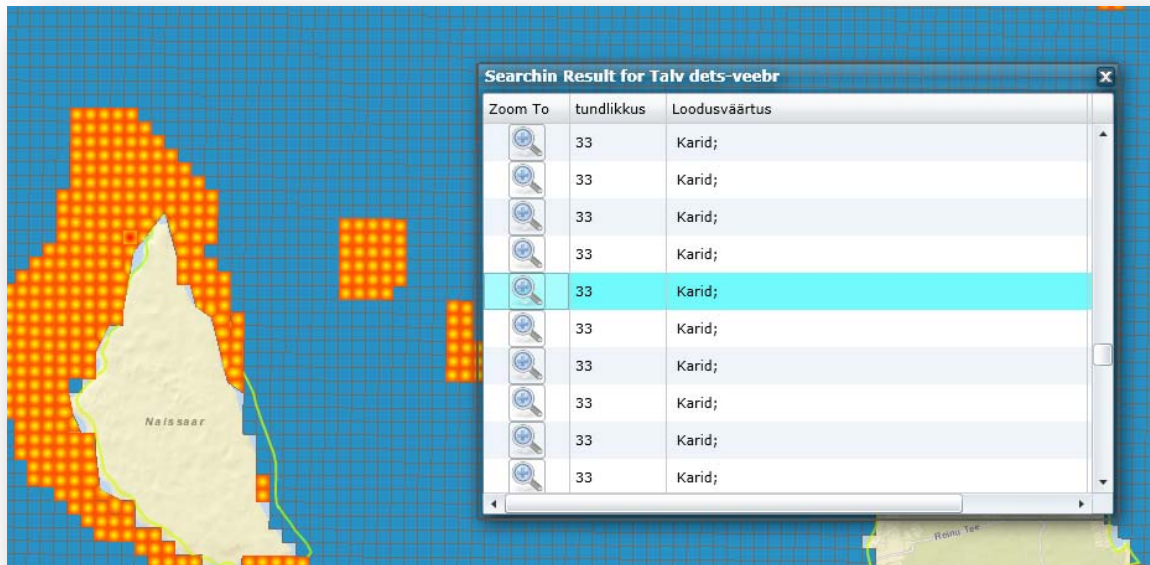
After button is pressed it is possible to specify desired location drawing the rectangle on a Map. Returned features with their attributes will be listed in the Select Tool result window shown in the figure asaid.

5.3 Search Tool

Search Tool enables us to see the different search results of different map layers. To open Search Tool choose appropriate map layer from left side layers tree. After selecting proper layer press on the “Search Tool” button and select appropriate search option you would like to see on a map.

After selection is done the features with their attributes will be returned in the Search Tool result window shown in the figure below.





OILRISK web provides the search profiles as follows:

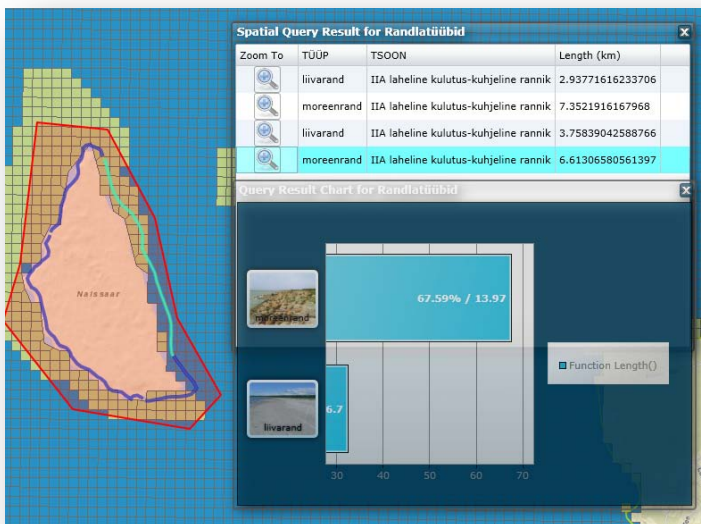
- tundlikkus – ecological sensitivity for 4 seasons sub layers presenting
 - Näita alasid tundlikkusega 1-25
 - Näita alasid tundlikkusega 26-50
 - Näita alasid tundlikkusega 51-75
 - Näita alasid tundlikkusega 76-100
- taastumispotentsiaal – recovery potential for 4 seasons sub layers presenting
 - Näita alasid taastuvusega 0
 - Näita alasid taastuvusega 3
 - Näita alasid taastuvusega 5
- loodusväärtused – natural values for 4 seasons sub layers presenting
 - Näita linnud
 - Näita hülged
 - Näita väärtuslikud elupaigad
- sügavusjooned – depth isobaths presenting
 - Näita kõik 2
 - Näita kõik 5
 - Näita kõik 10
 - Näita kõik 20
 - Näita kõik 50
 - Näita kõik 100
- randlatüübid – shore types presenting
 - Näita kõik kliburand
 - Näita kõik liivarand
 - Näita kõik moreenrand
 - Näita kõik möllirand
 - Näita kõik pankrand
 - Näita kõik tehnorand

5.4 Spatial Query Tool

Spatial Query Tool enables us to do different spatial query analyzes for specific areas based on different map layers information.

To open Spatial Query Tool choose appropriate map layer from left side layers tree. After selecting appropriate layer press on the “Spatial Query Tool” button and select specific spatial query option (red arrow in the figure aside).

After button is pressed it is possible to specify desired area by clicking the left button of mouse and drawing the specified shape on a Map (double click will end the drawing).

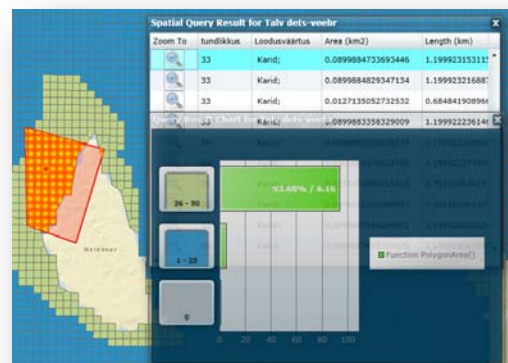


Returned features with their attributes will be listed in the Spatial Query result window and on a diagram showing distribution of Spatial Query result.

Moving with the mouse on the specific location will be mirrored in the result table specific row of selection.

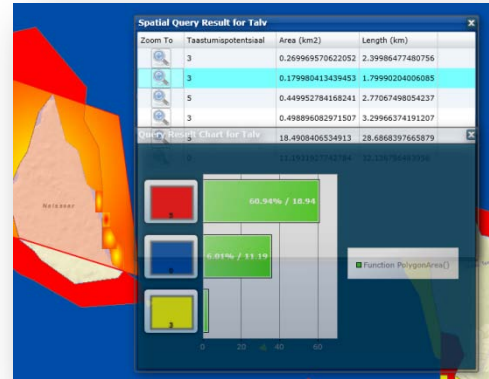
OILRISK Web provides the Spatial Queries as follows:

- tundlikkus – ecological sensitivity for 4 seasons sub layers
 - Ökoloogilise tundlikkuse päring is showing the distribution of ecological sensitivity levels for specific selected area. In the result table there are presented “tundlikkus – ecological sensitivity value”; “loodusväärtus – natural value” and “ala suurus – area

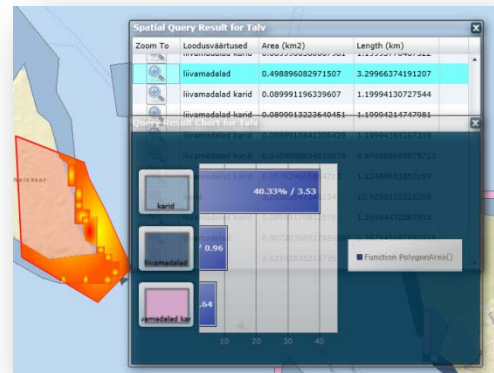


size” of specific shapes selected on a Map.

- taastumispotentsiaal – recovery potential for 4 seasons sub layers
 - Taastumispotentsiaali päring is showing the distribution of recovery potential in years for specific selected area. In the result table there are presented “taastumispotentsiaal – recovery potential” and “ala suurus – area size” of specific shapes selected on a Map.



- loodusväärtused – natural values for 4 seasons sub layers
 - Loodusväärtuste päring is showing the distribution of natural values for specific selected area. In the result table there are presented “loodusväärtus – natural value” and “ala suurus – area size”.



- randlatüübid – shore type layers
 - Randlatüüpide päring is showing the distribution of shore types for specific selected area. In the result table there are presented “randlatüüp – shore type”; “tsoon – zone” and “pikkus – length of the shore” of specific shore lines selected on a Map.

