CarryMap Builder

Extension to ArcGIS Desktop

Version: 8.0

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About CarryMap Builder

CarryMap Builder is an extension to ArcGIS Desktop for creating compact interactive maps in CMF2 format for further use on Android/iOS smartphones and tablets and Windows Desktop devices.
Note that to use mobile maps created with CarryMap Builder, you will need to install free CarryMap app depending on your device OS:

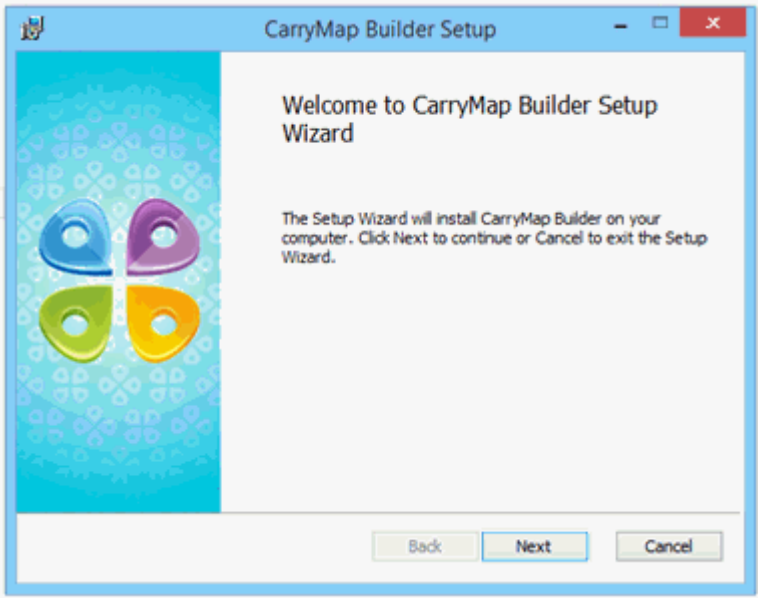
- for Android
- for iOS
- for Windows

System requirements to install CarryMap Builder:
Operating system: Microsoft Windows 8/10/11
Requisite software: ArcGIS Desktop 10.0-10.8.2
Microsoft .NET Framework 4.5.2+

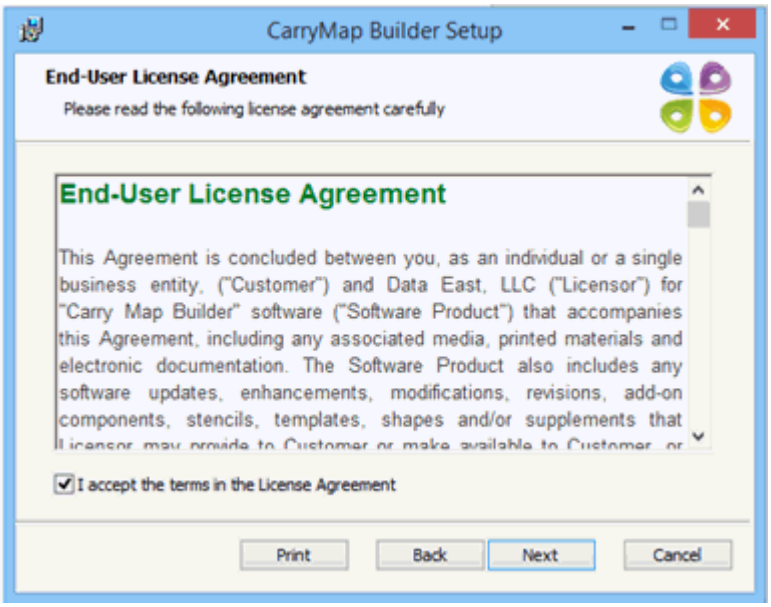
Note for CarryMap 3.x users:
Dear users! CarryMap 3.x is the previous generation of ArcGIS Desktop extension that has been replaced by CarryMap Builder, a new product with enhanced functionality. Please note, that we no longer develop new versions of CarryMap 3.x extension as well as mobile application CarryMap Observer that was used to view CMF mobile maps. However, if you own a CarryMap 3.x license, you can continue using it as long as you need. Read this article to view detailed comparison of CarryMap 3.x and CarryMap Builder functionality. Contact sales@dataeast.com for details.

Installing CarryMap Builder and adding CarryMap Builder toolbar to ArcMap

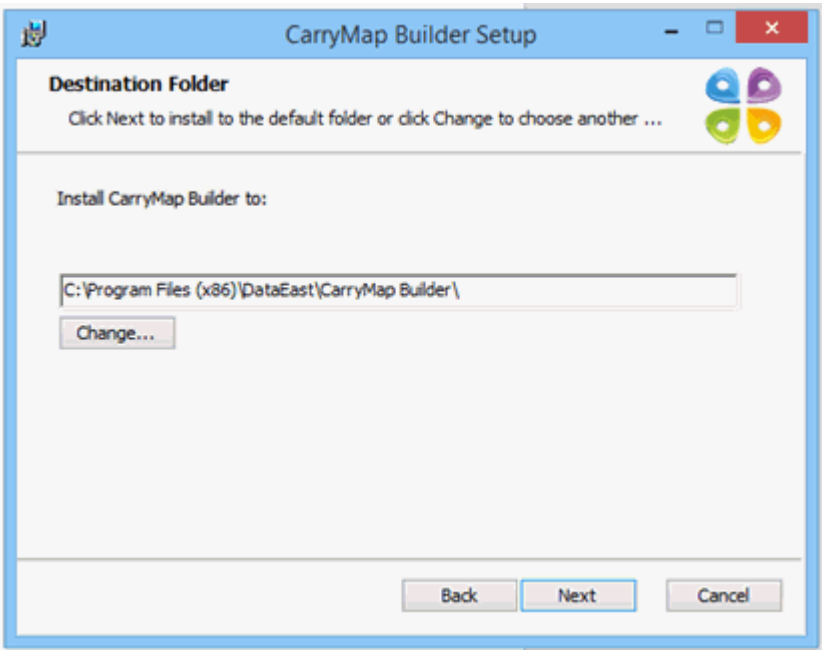
To install CarryMap Builder, go to **CarryMap Builder** and press Download button. Run the CarryMapBuilder setup file. Press **Next** in the appeared window.



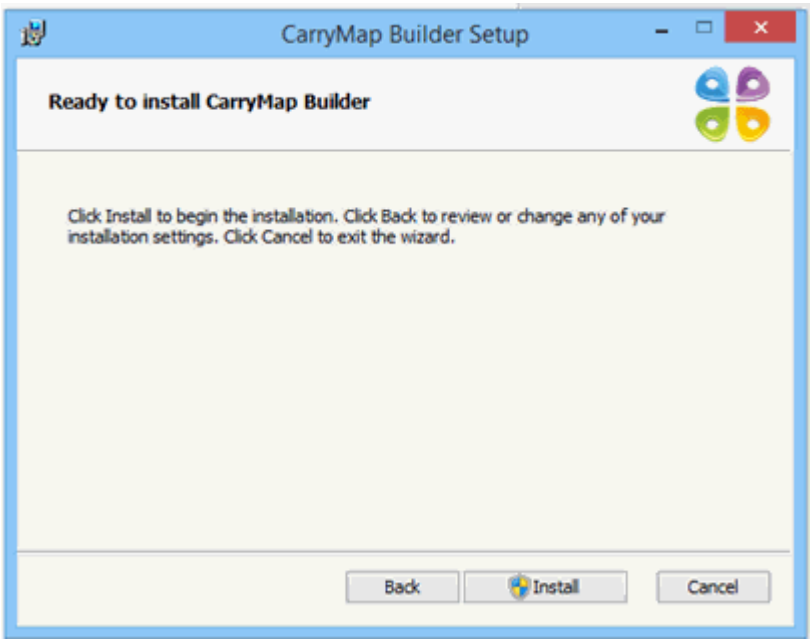
Read the End-user license agreement and check the box accepting its terms, press **Next**.



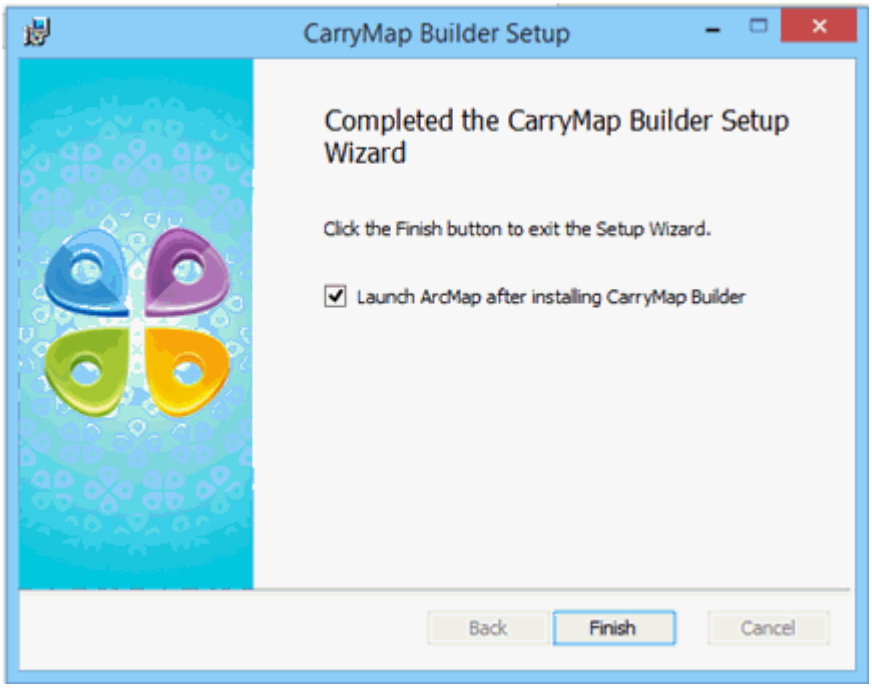
Specify the path to the CarryMap Builder installation file and press **Next**.



In the appeared window press **Install**.

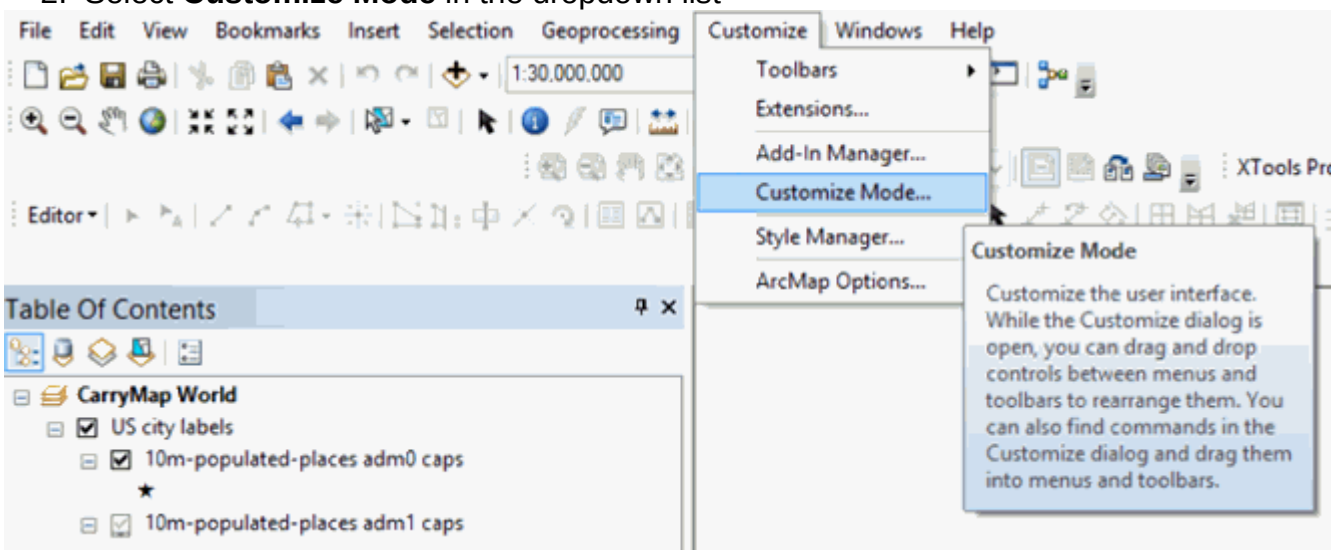


Upon installation completion, the window with appropriate message appears. In this window check the box to launch ArcMap after installing CarryMap Builder and press **Finish**.

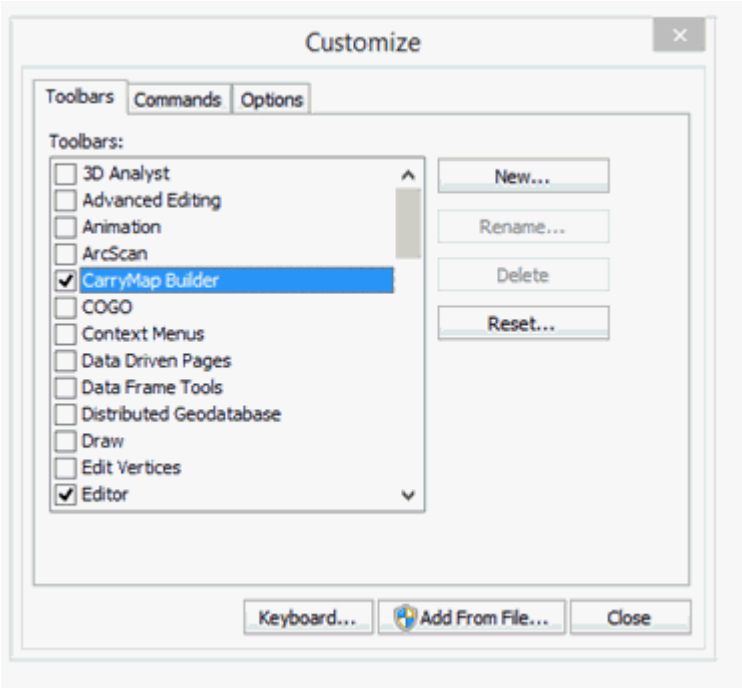


Now CarryMap Builder toolbar needs to be added to ArcMap. To do so:

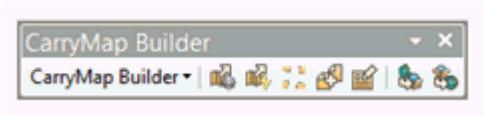
1. Open **Customize** menu in ArcMap panel
2. Select **Customize Mode** in the dropdown list



3. In **Customize** dialog select **CarryMap Builder**



After that CarryMap Builder toolbar will appear in ArcMap.



Licensing

To be able to use CarryMap Builder extension, you need to have the appropriate license key. You can purchase CarryMap Builder on the product's website or send your request to our sales department at sales@dataeast.com.

The available types of CarryMap Builder licenses and their characteristics are shown in the table below.

License type	Trial[1]	Subscription	Single	Academic[2]	Corporate	Global
Period of use	14 days	1 year	Termless	Termless	Termless	Termless
Access to new versions and updates	-	+	During active technical support [3]	+	During active technical support [3]	During active technical support [3]
Number of users	1	1*	1*	1*	25*	Unlimited
Access to CarryMap Builder geoprocessing tools	-	-	-	-	+	+

1. The Trial license is valid for 14 days starting from the trial license key activation date. In order to continue using CarryMap Builder after completion of the trial period, you will need to purchase the license.

2. The Academic license is provided for use by educational institutions for educational purposes only.

3. Purchasing new license includes annual maintenance. Purchased maintenance and staying current on maintenance is the only way to have access to all newer CarryMap Builder versions, no matter major or minor.

* If you need to transfer your activated CarryMap Builder license to another computer, contact our support team at support@dataeast.com.

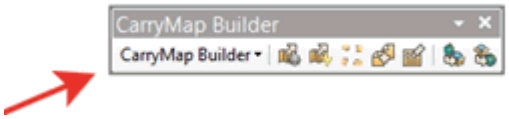
Dear CarryMap Builder users, please note that using more than one Trial license on one and the same computer is not allowed!

Registering CarryMap Builder license

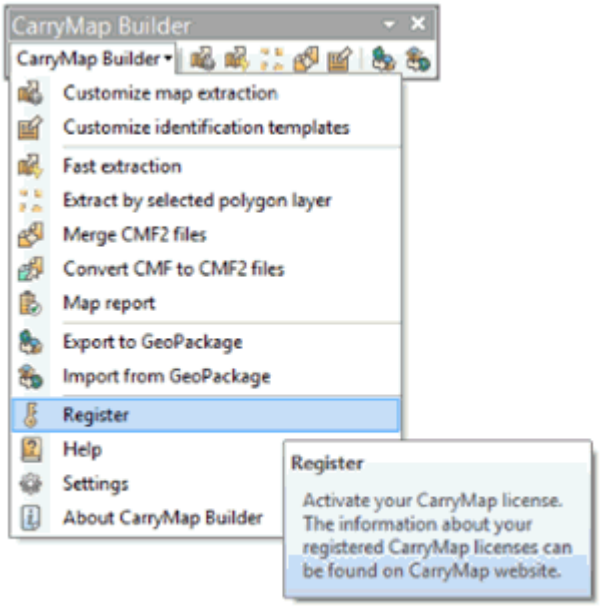
Note that to use CarryMap Builder you will need a license. Go to site CarryMap Builder to learn about provided licensing types and to buy CarryMap Builder. Contact sales@dataeast.com for details.

After getting CarryMap Builder license, you need to register it:

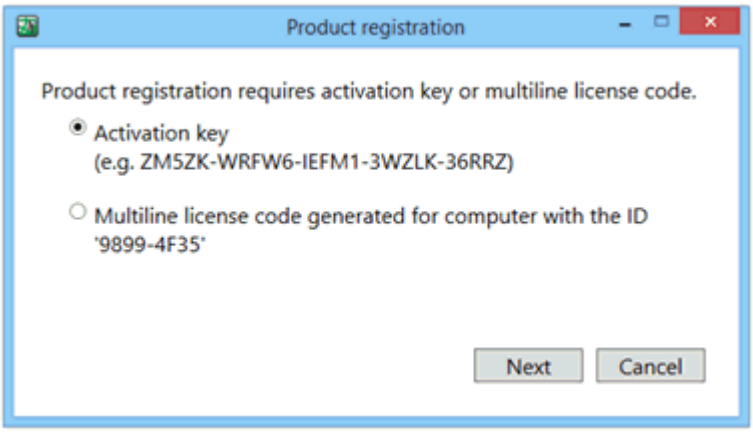
Press **CarryMap Builder** in ArcGIS menu.



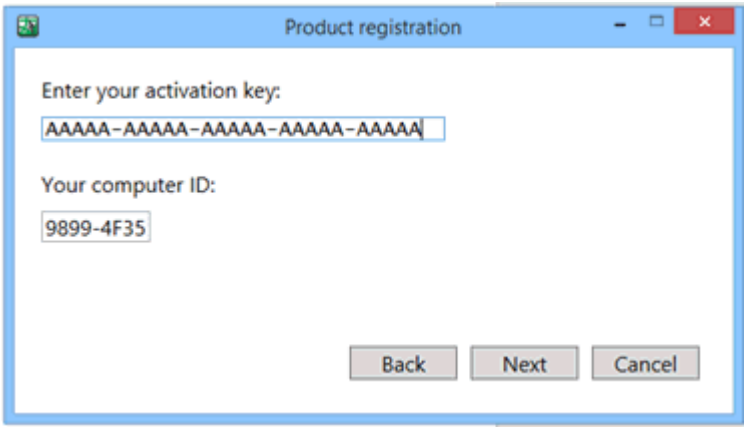
Select **Register** in the appeared menu.



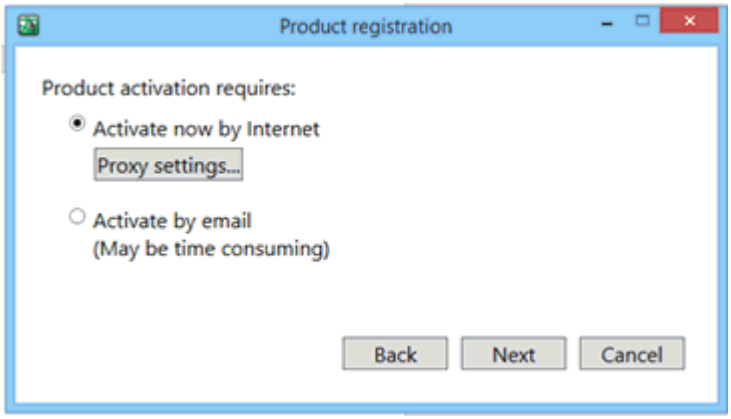
Select the appropriate variant and press **Next**.



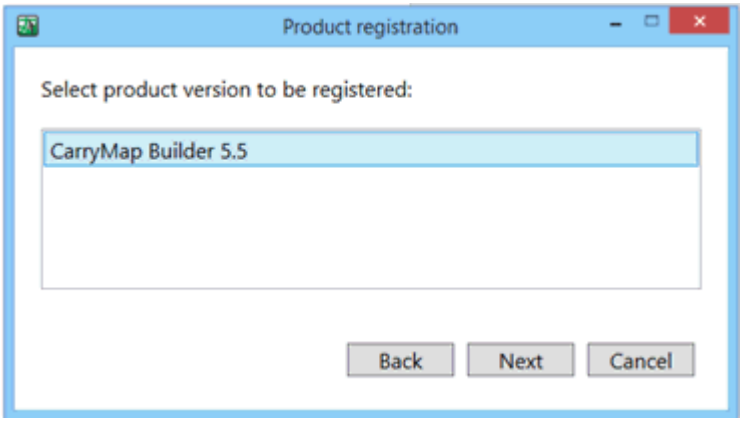
Enter the activation key in the appeared window and press **Next**.



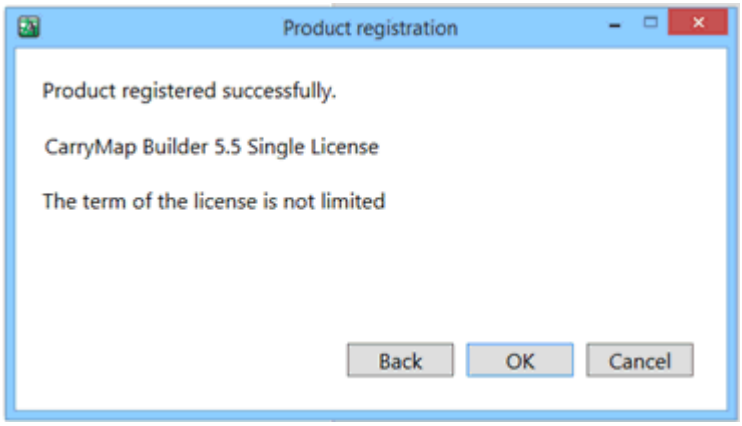
Select the activation method and press **Next**.



Select the product version to be registered and press **Next**.

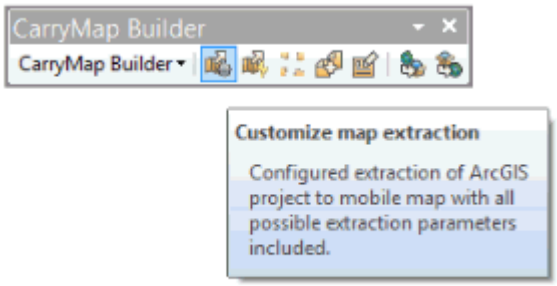


Your CarryMap Builder license is registered. Press **OK** to continue.

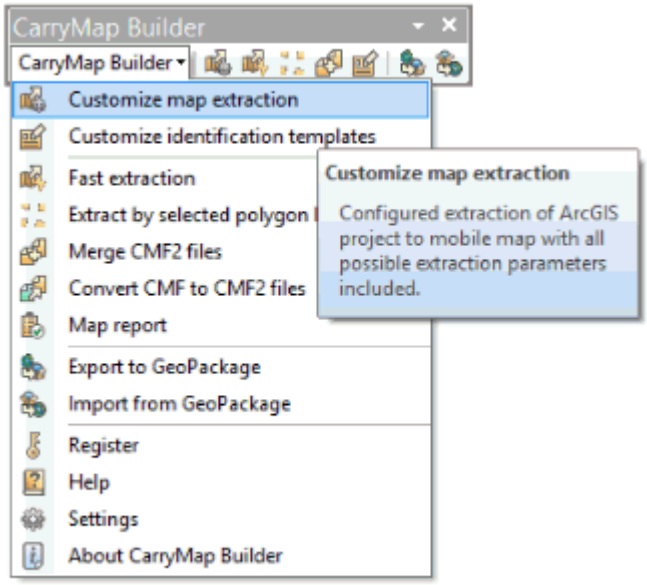

Product registration
Product registered successfully.
CarryMap Builder 5.5 Single License
The term of the license is not limited
Back
OK
Cancel

Selecting layers from ArcMap document to be extracted to CMF2 map

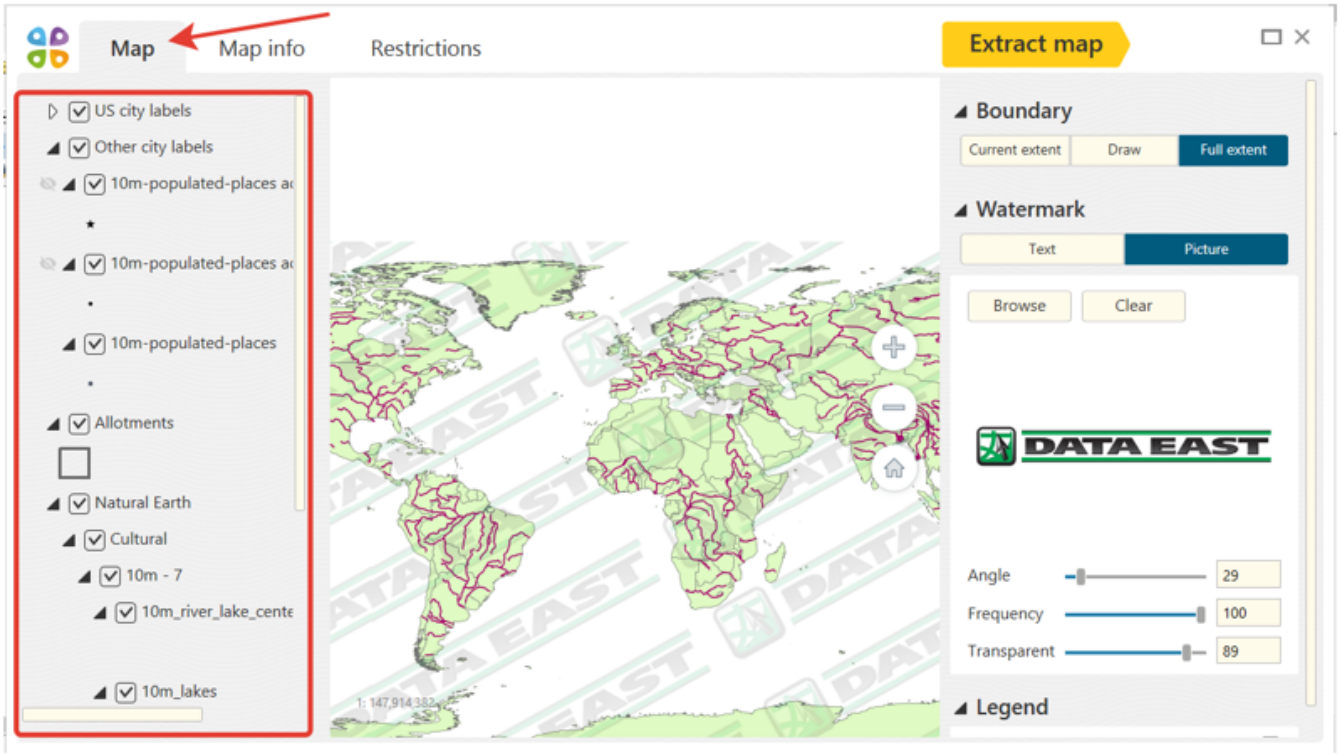
To select ArcMap layers that need to be extracted to mobile map, press **Customize map extraction** button on the CarryMap Builder toolbar.



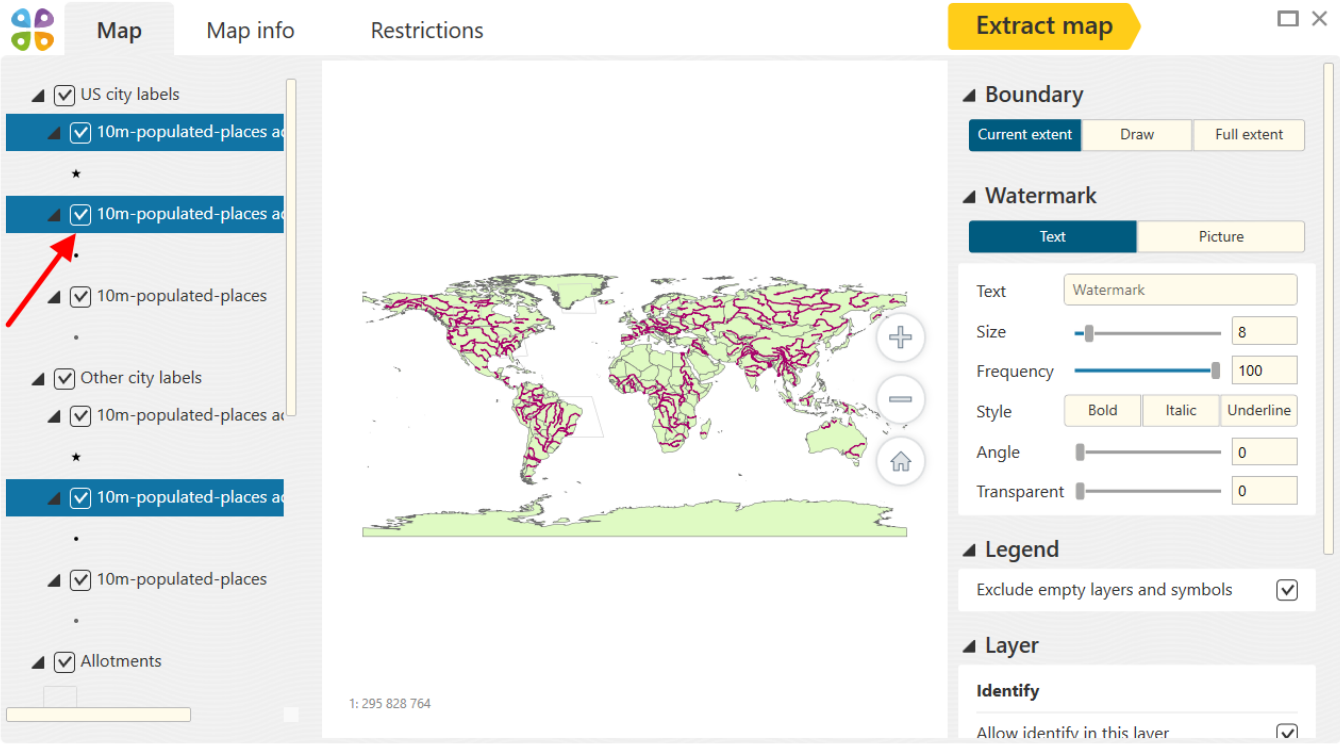
Or, open the dropdown CarryMap Builder menu and select **Customize map extraction**.



In the **Map** section in the left part of the window the list of layers of the current ArcMap document will be shown.

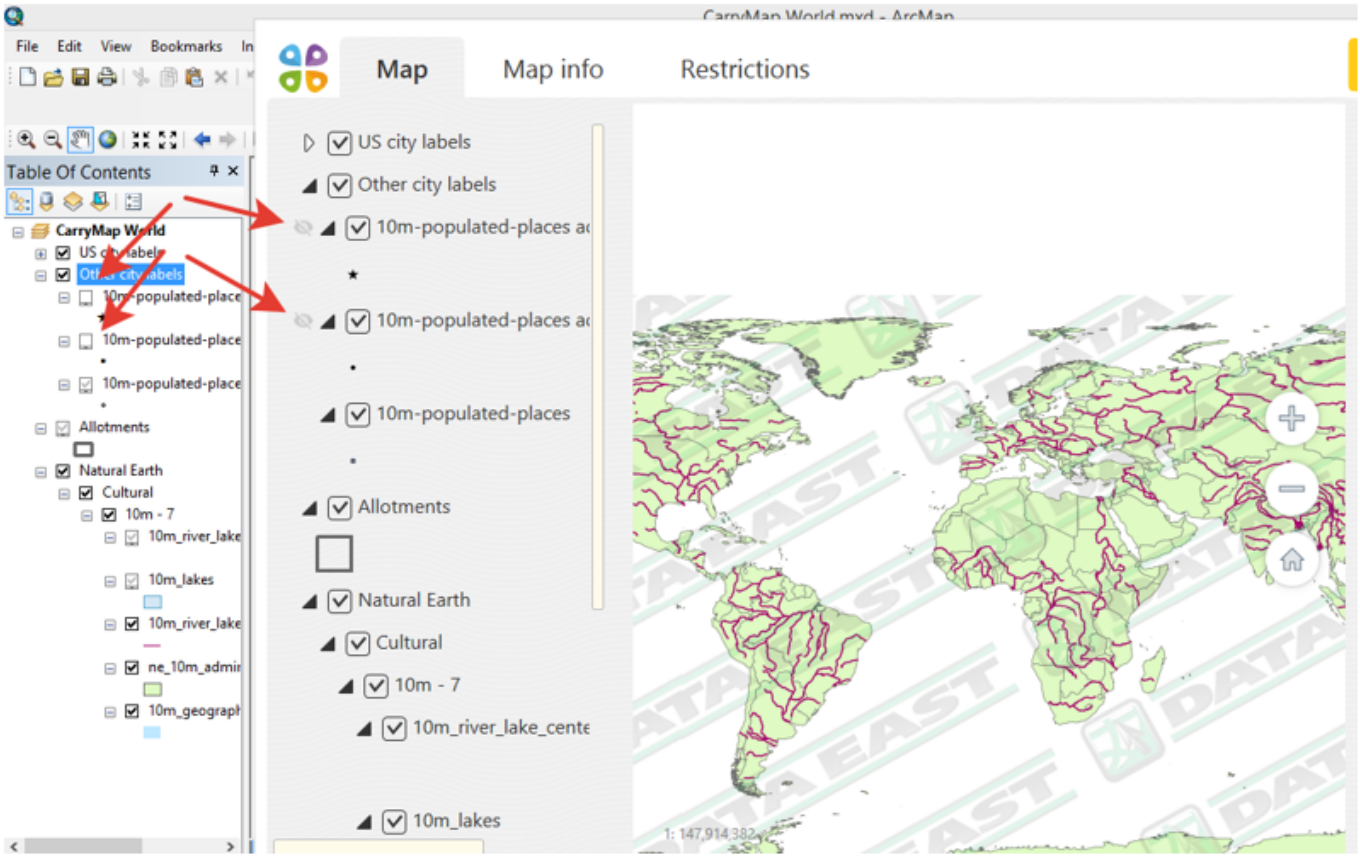


To add or to exclude one or multiple layers from the extraction, select them in the **Customize map extraction** tool dialog and check/uncheck the box near the required layer name.



By default the layers visibility set in ArcMap will be saved in CarryMap Builder.

The invisible layer that has been added to extraction will be marked as in the map legend.


File
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View
Bookmarks
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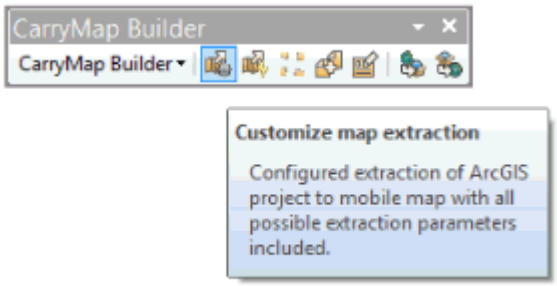
CarryMap World
US city labels
Other city labels
10m-populated-place
10m-populated-place
10m-populated-place
Allotments
Natural Earth
Cultural
10m - 7
10m_river_lake
10m_lakes
10m_river_lake
ne_10m_admin
10m_geograph
Map
Map info
Restrictions
US city labels
Other city labels
10m-populated-places ac
10m-populated-places ac
10m-populated-places
Allotments
Natural Earth
Cultural
10m - 7
10m_river_lake_cente
10m_lakes
1: 147,914,382

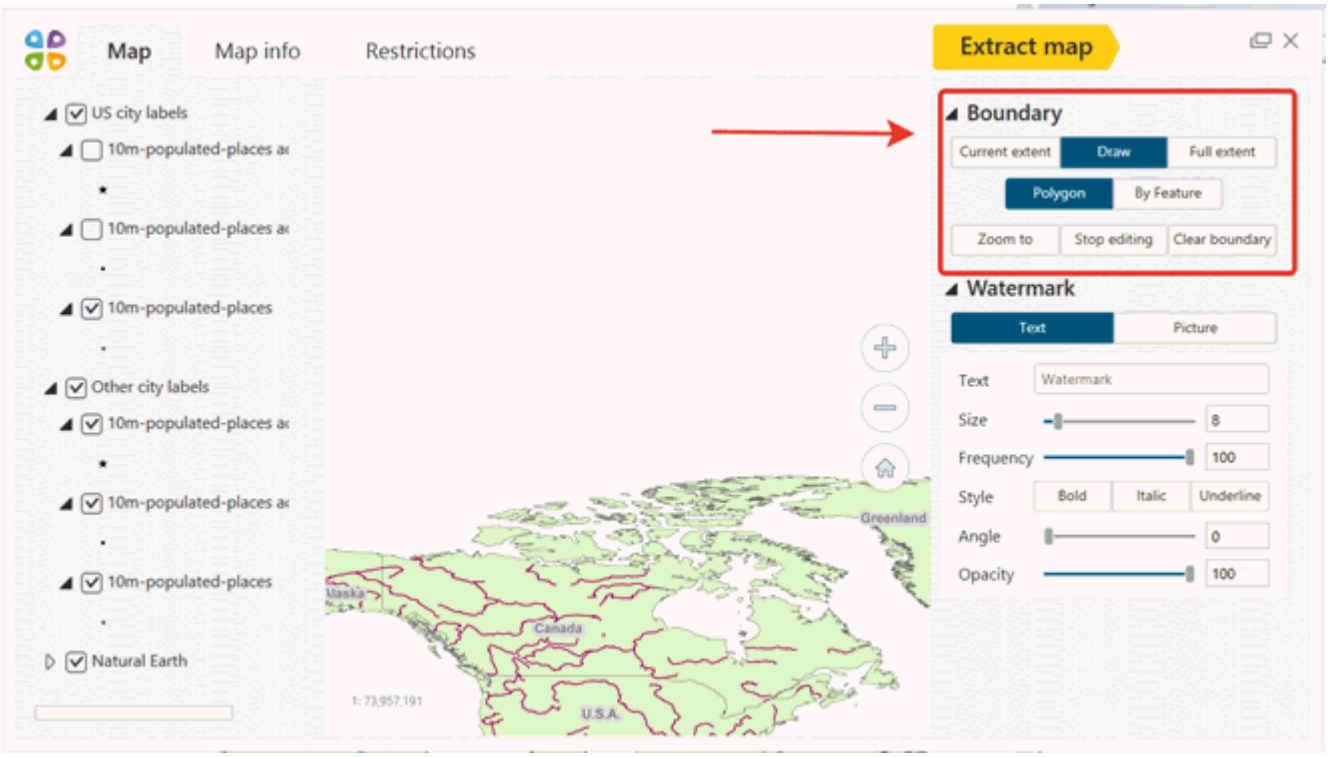
Setting mobile map boundary

Mobile maps can be created from any ArcMap document or its part. To set boundary of your future mobile map, open **Customize map extraction** tool in CarryMap Builder.



Go to **Map** section, **Boundary** menu. Specify boundary of your ArcGIS map that needs to be exported to mobile map, selecting one of the provided options:

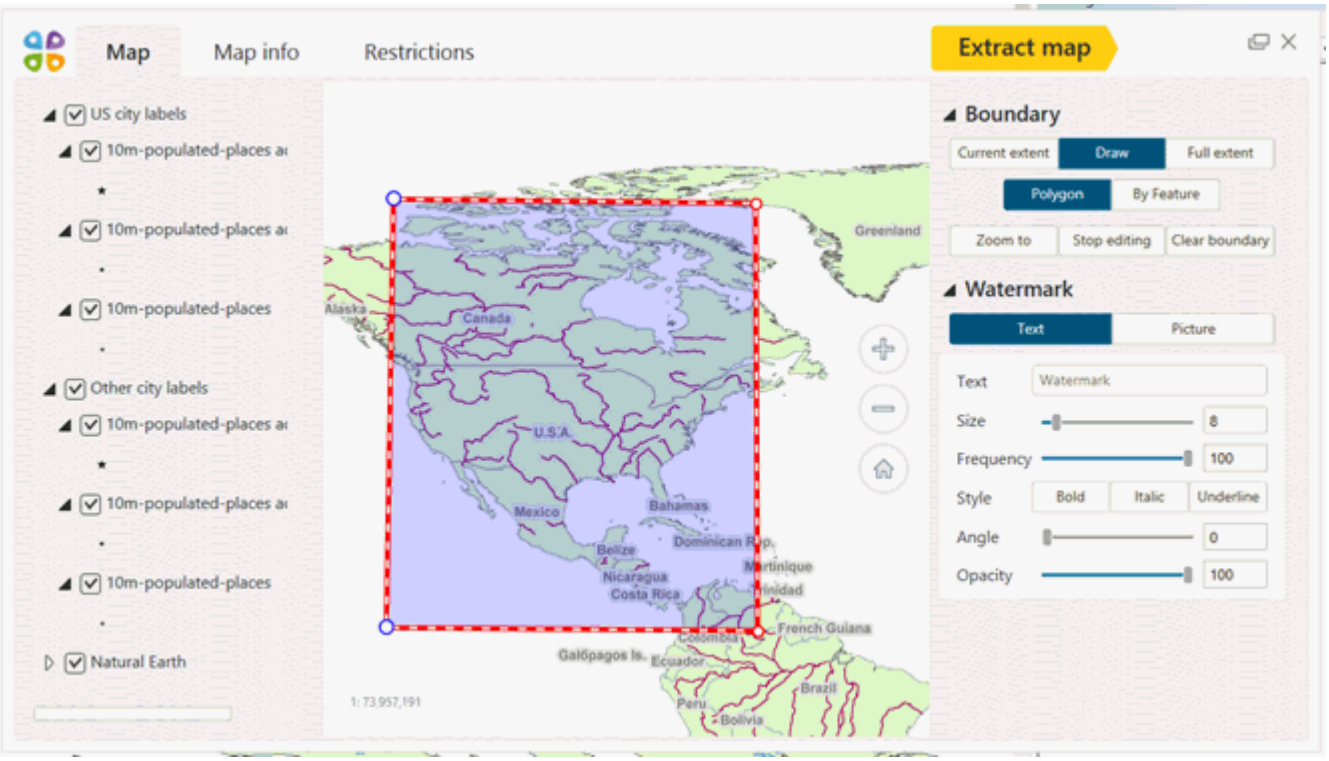
- Current extent
- Draw
- Full extent



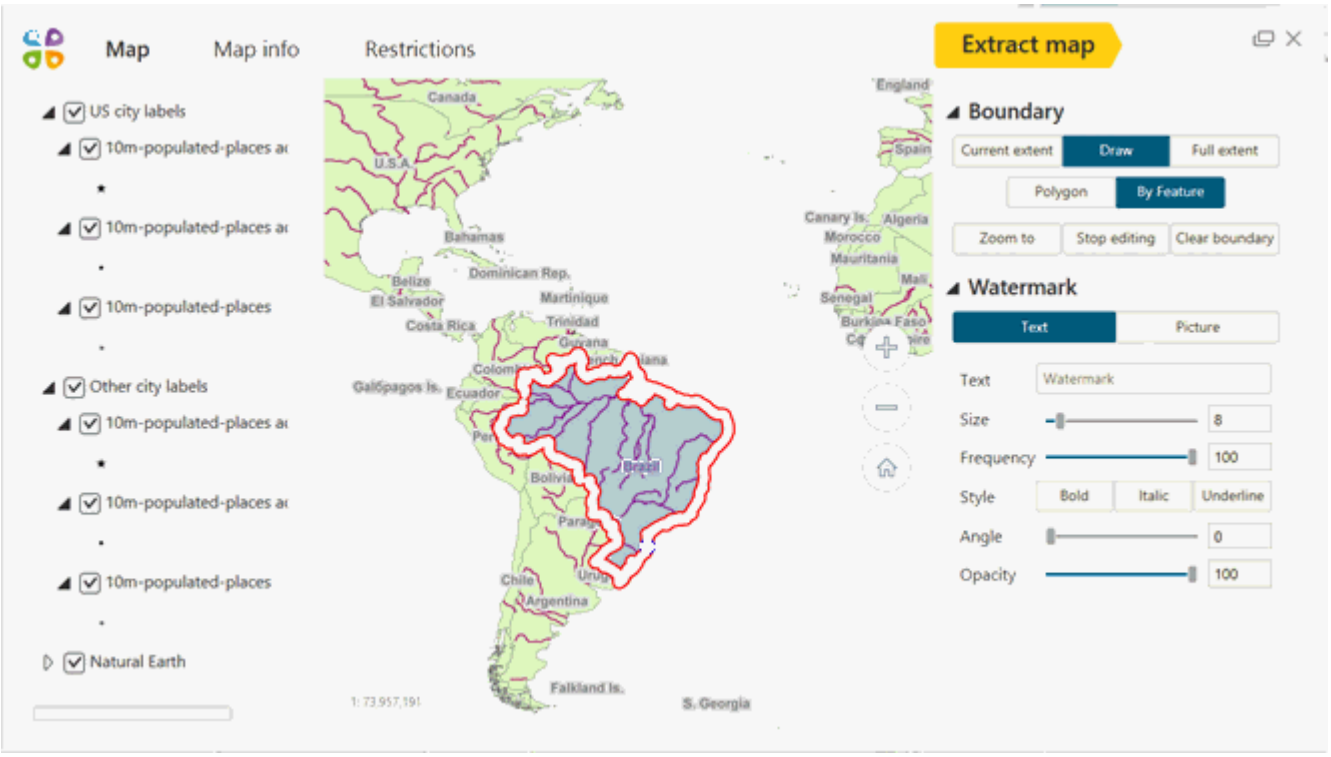
If you select **Current extent** option, the map will be extracted by the boundary of the map area shown in the CarryMap Builder preview window.

The **Draw** option is provided for cases when you want your mobile map to be created by boundary of the drawn graphics on map or by boundary of any existing polygon feature.

To create mobile map by drawn geometry, press Draw button and in the CarryMap Builder preview window draw the boundary of your future mobile map with your mouse.



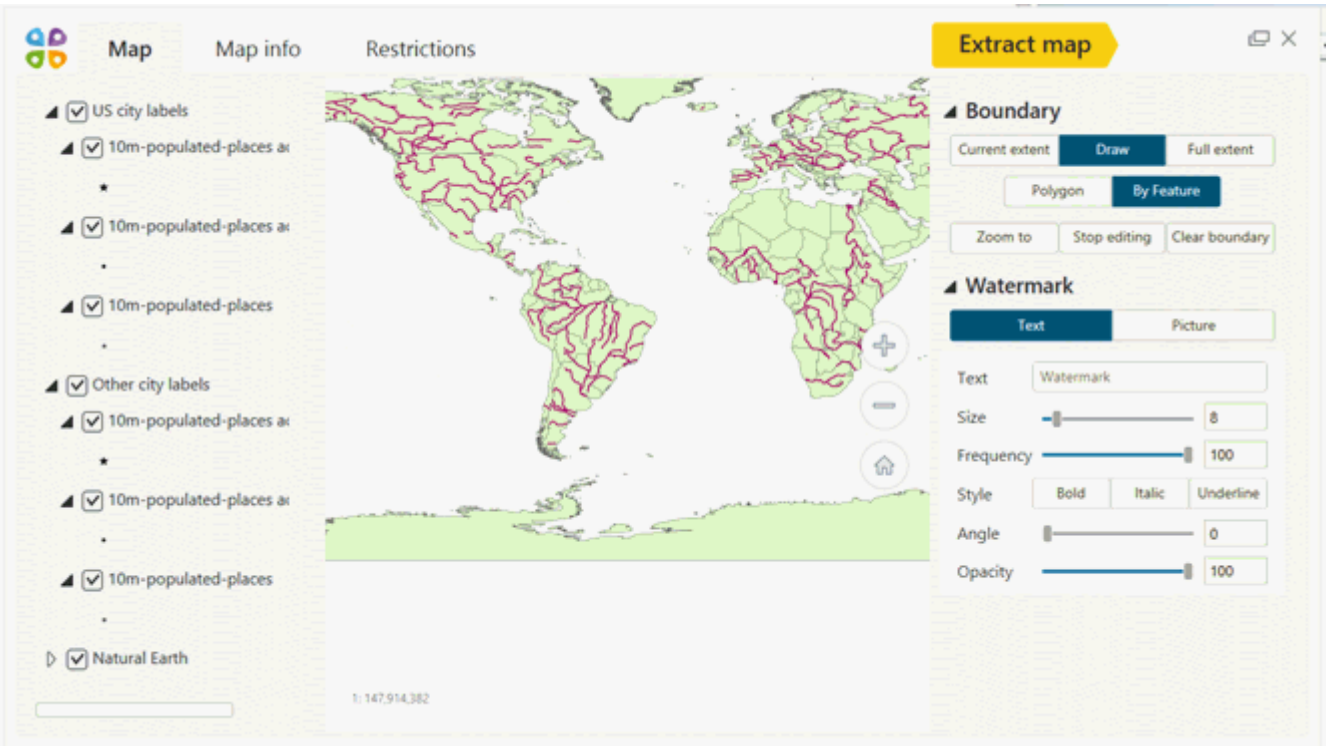
To create the map by the existing polygon feature boundary, press By Feature button and click the required vector or graphic polygon on the map. The selected polygon will be marked red.



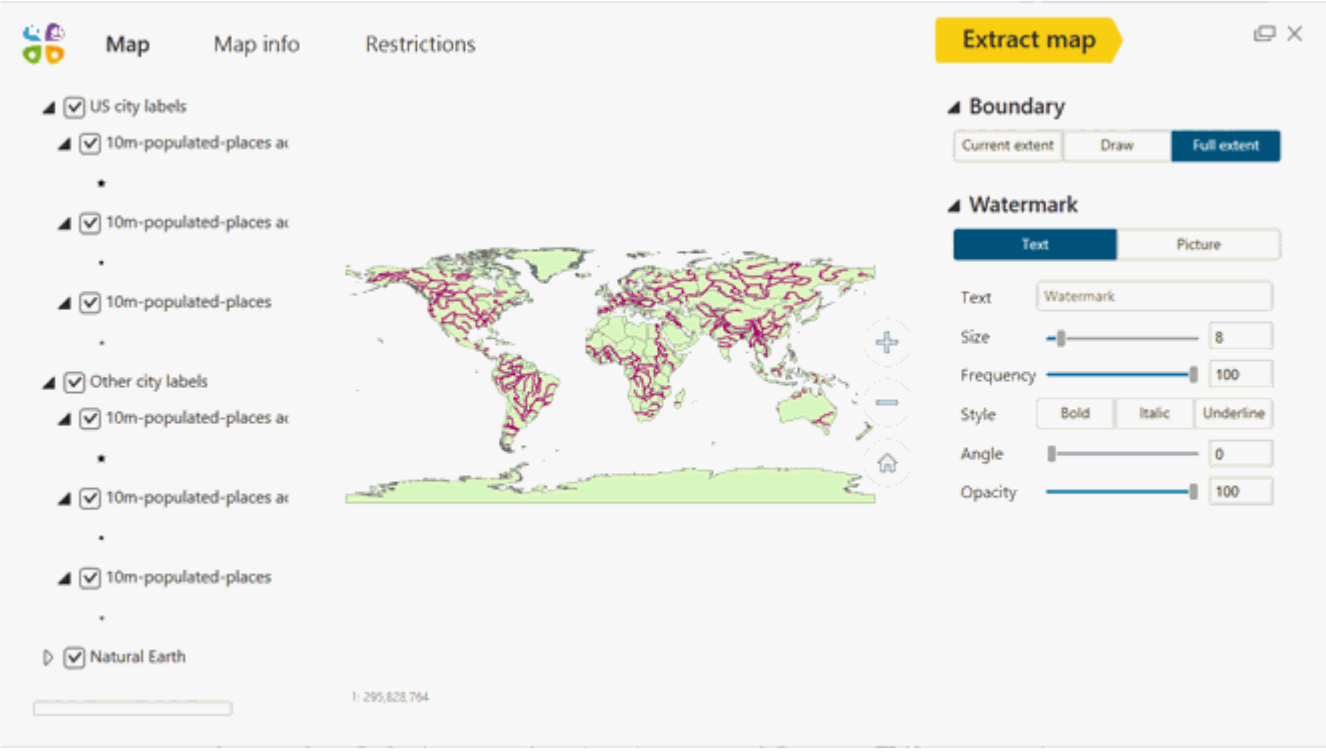
To zoom your map to the boundary of the output mobile map extracted by selected polygon, press Zoom to. The scale of the map shown in the CarryMap Builder preview window will be changed respectively.

To finish the process of setting the mobile map boundary by selected polygon, press Edit boundary. The selected area will be highlighted in the CarryMap Builder preview window.

To delete the boundary specified by feature or polygon, press Clear boundary button. Now you can start setting the mobile map boundary again.



If you select **Full extent** option, your current ArcMap document will be fully extracted to mobile map (including all the features and layers selected for extraction).


Map
Map info
Restrictions
Extract map
US city labels
10m-populated-places ac
10m-populated-places ac
10m-populated-places
Other city labels
10m-populated-places ac
10m-populated-places ac
10m-populated-places
Natural Earth
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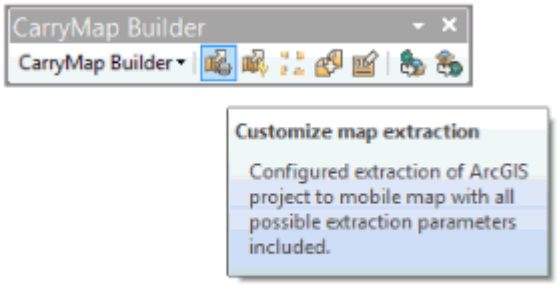
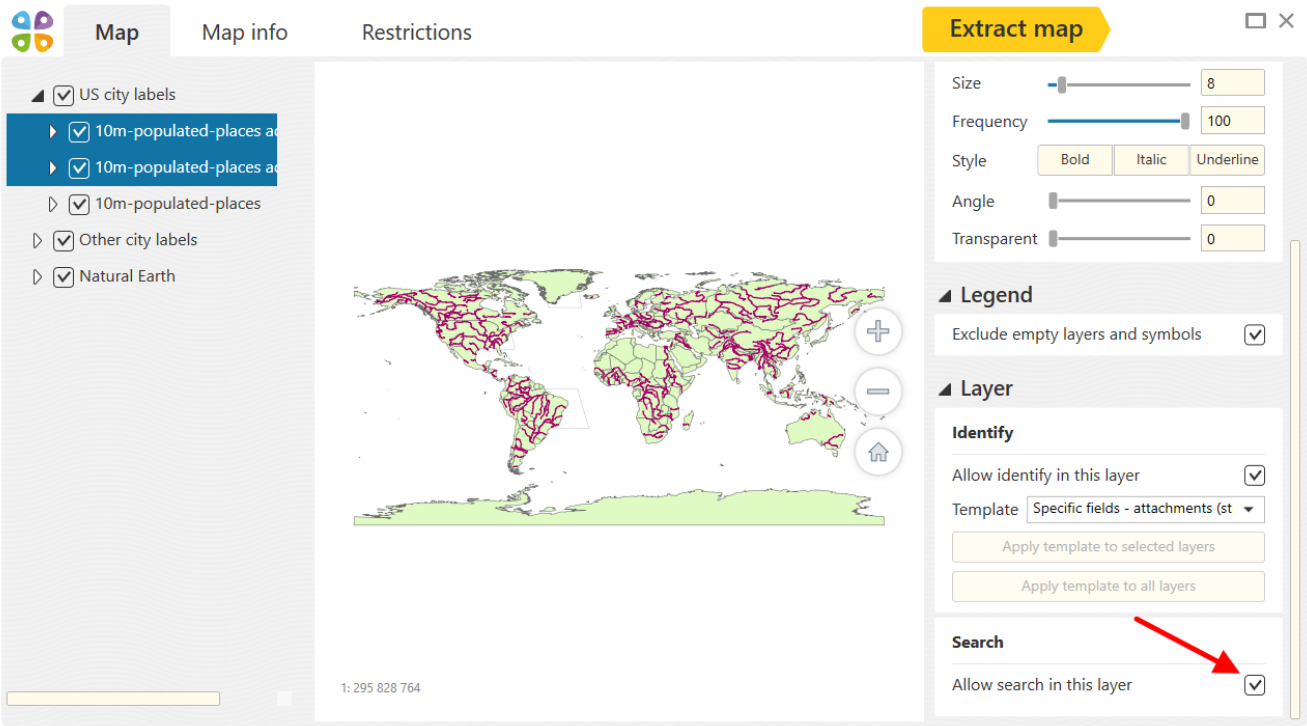
Boundary
Current extent
Draw
Full extent
Watermark
Text
Picture
Text
Watermark
Size
8
Frequency
100
Style
Bold
Italic
Underline
Angle
0
Opacity
100

Setting custom search on map

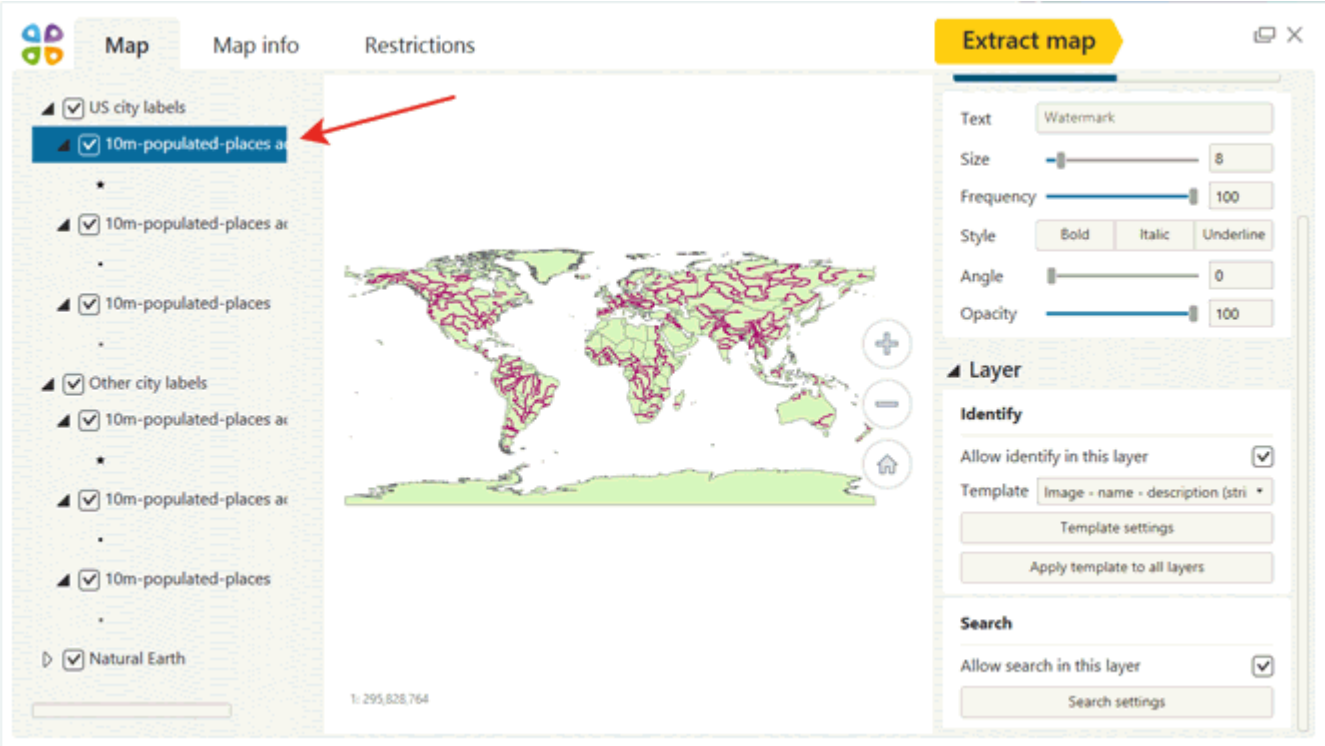
When preparing your ArcGIS map for export to mobile map you can specify search settings to be able to search features. To allow users to search features in mobile app CarryMap, run **Customize map extraction** tool on CarryMap Builder toolbar.



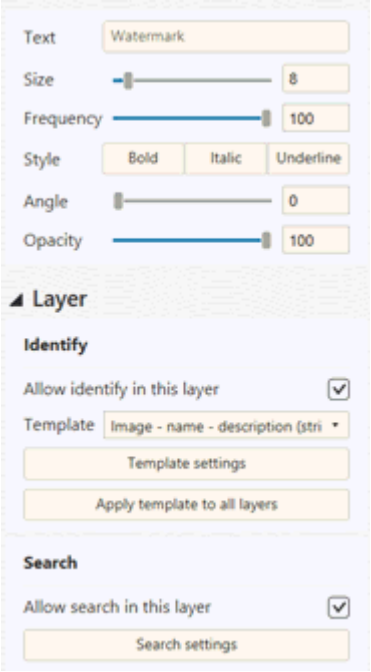
To allow searching for features in one or multiple layers, select them in the **Customize map extraction** tool dialog and check the box near the **Allow searching in this layer** option.



Click one of the layers in the map legend to specify settings for searching features in this layer.



In the appeared menu scroll down and press **Search settings** button.

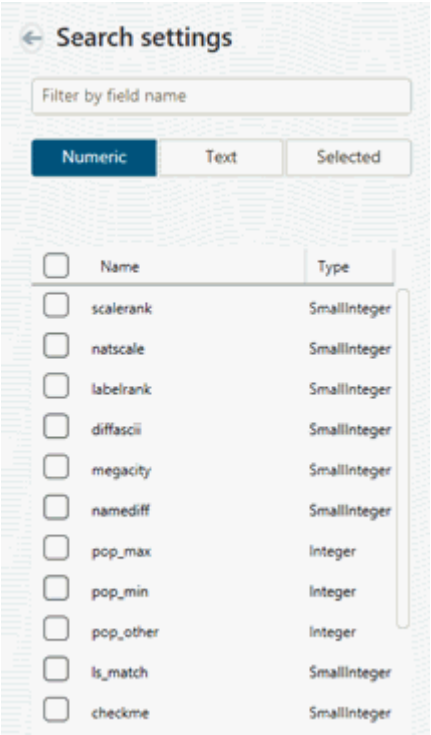


Select layers which features need to be searchable checking the boxes ☑ near them. Uncheck the boxes ☐ for fields that do not need to be searchable.

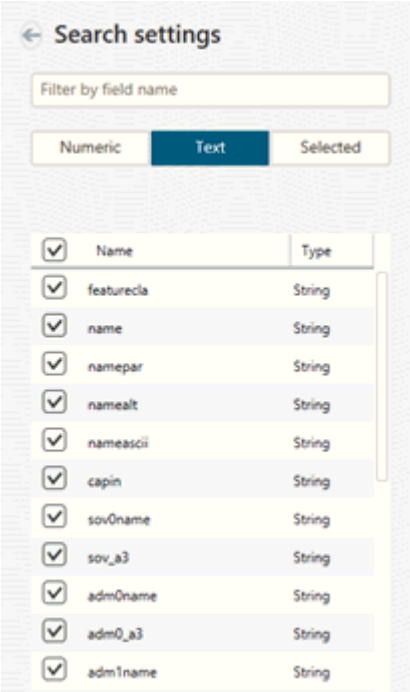
As searchable fields you can select both numeric and text fields. By default all fields for layer included to extraction are searchable.

Sorting fields in search settings

To show only numeric fields in the search settings window, press Numeric button.

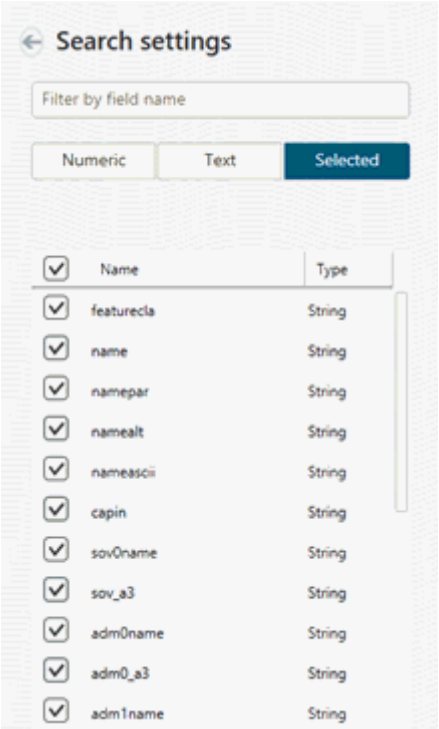


To show only text fields in the search settings window, press Text button.



To show only fields selected as searchable, press

button.



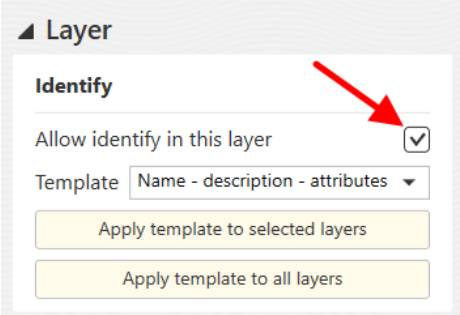
Note that you can apply multiple sorting options at a time, if needed.

Setting features identification

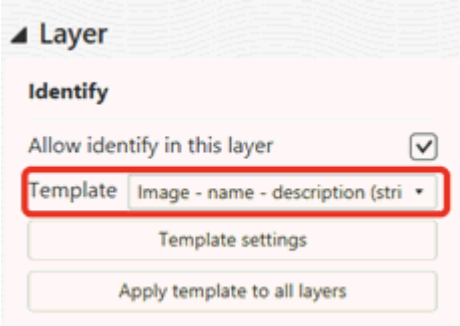
The additional information about surrounding objects may be very helpful, especially if you found yourself in the unfamiliar place. To make your mobile map as informative as possible, select the layers of your ArcGIS map that you want to be identifiable in the mobile map. That said, your users will be able to get information about features from these layers selecting them on the mobile map and viewing the appeared identification dialogs.

The information about feature in the identification dialog can be shown differently based on used identification templates. That is, you can use the existing (system) templates that will define the view of the identification dialogs in the output mobile map, or create your own (custom) templates. See **Customize identification templates** section for more detail.

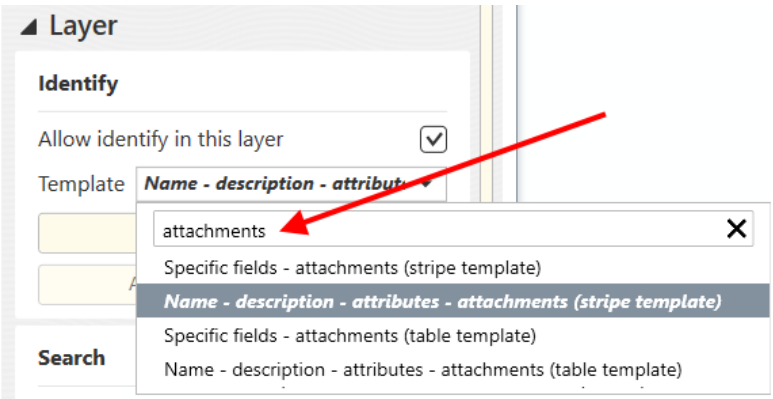
To allow features identification in one or multiple layers, select them in the **Customize map extraction** tool dialog and check the box near the **Allow identify in this layer** option.



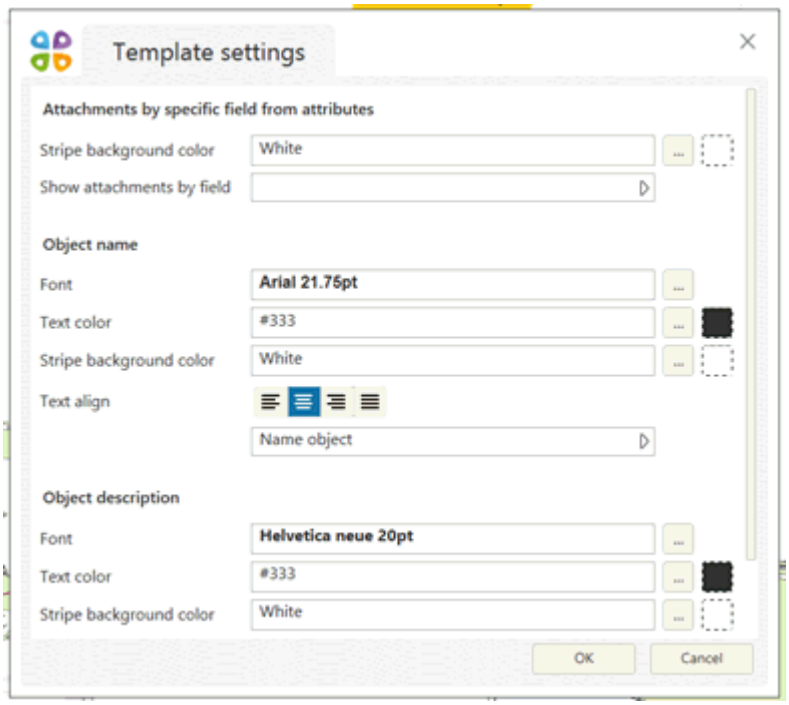
Click one of the layers in the map legend to specify settings for feature identification card.
In the **Template** field select the previously created custom or system template from the list that will be used to display information about features of the specified layer.



To filter the templates presented in the list, enter the template name in the filter box.



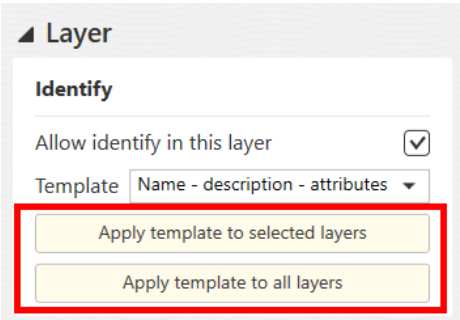
To change settings specified during template creation or to set parameters for the layer, press **Template settings** button and make necessary changes in settings or parameters in appeared window. See **Customize identification templates** section for more detail.



In the Template settings window, you can specify the following options:

- Select text size, font and color;
- Select background color of stripes with information;
- Select text alignment;
- Select fields that will be shown during feature identification;
- Select attachments (photo, video, documents etc.) that will be shown during feature identification.

To apply specified template to all or selected layers of the map, select the required layer/layers in the list of layers and press **Apply template to all layers** or **Apply template to selected layers**.



Note that the **Apply template to selected layers** option is available only if multiple layers are selected in the list of layers.

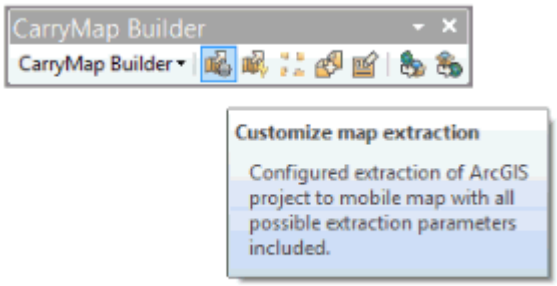
See **Customize identification templates** section to learn more about setting identification templates.

Excluding empty layers and symbols from map extraction

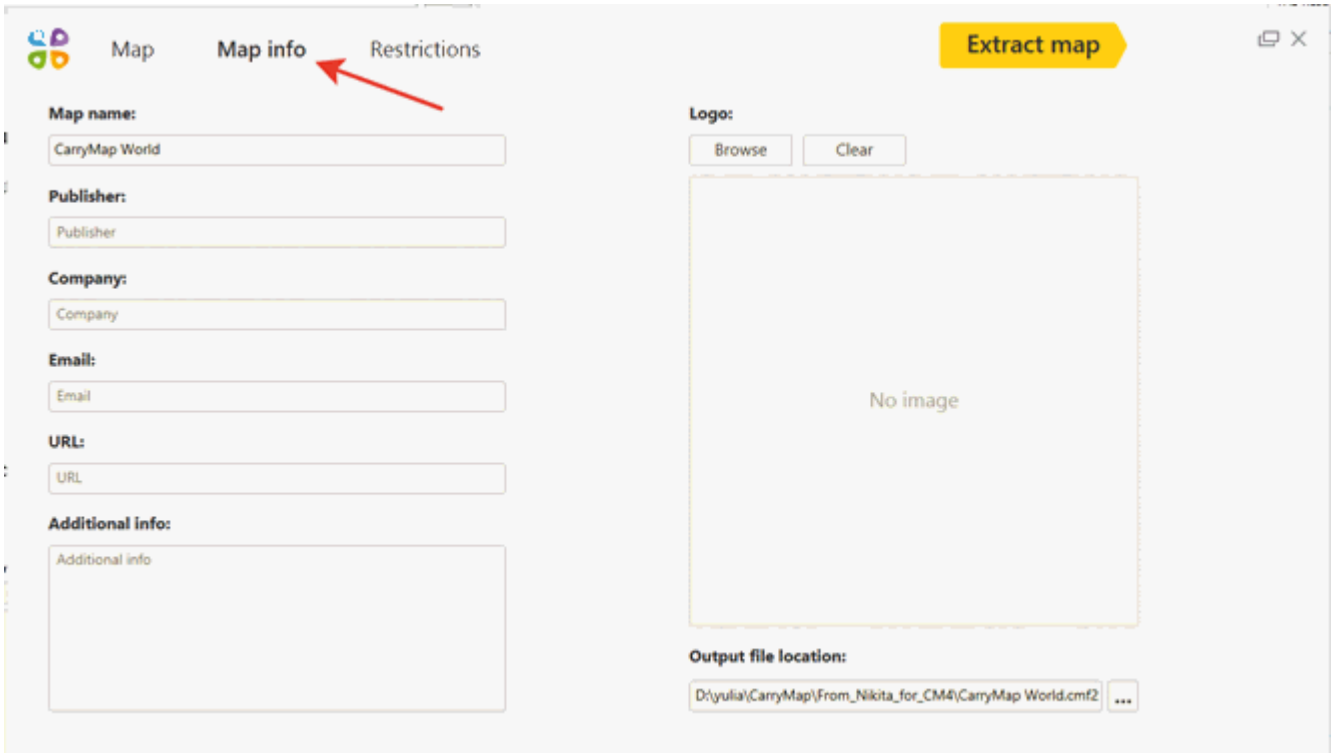
To exclude empty layers from the map extraction, check the Exclude empty layer and symbols option in the Legend section of the Customize map extraction window.

Specifying map properties

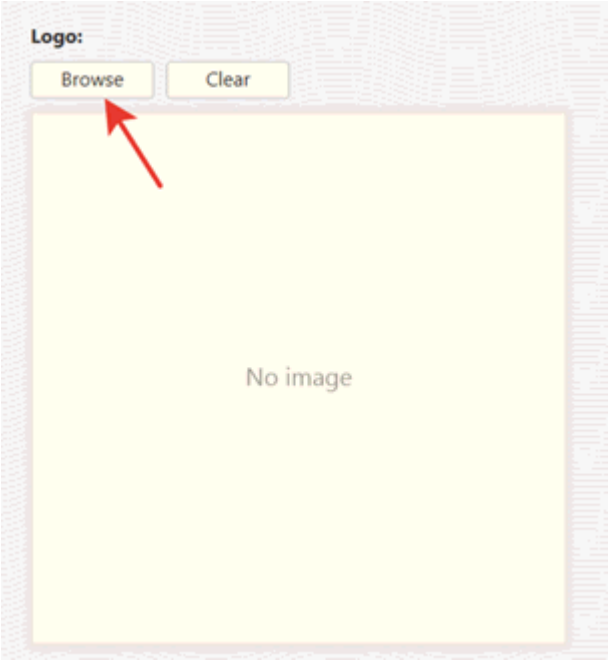
When preparing your ArcGIS map for export to mobile map you can create a summary info about your map that will be shown in the **About map** dialog. That is, when opening this dialog, your users will see information about the map publisher, company name and logo, website, contact email, and map description.
To set the **About map** dialog content, press **Customize map extraction** button on the CarryMap Builder toolbar.



Go to **Map info** tab and fill in all the required fields: map name, publisher, company, email, URL, additional info.

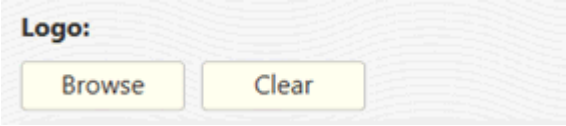


To add logo, press **Browse**.



In the appeared window select the required pic and it will be shown in the preview window.

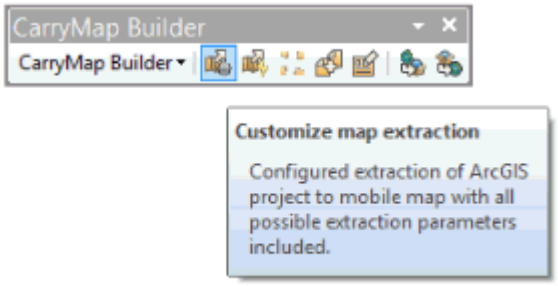
To delete added logo, press **Clear**.



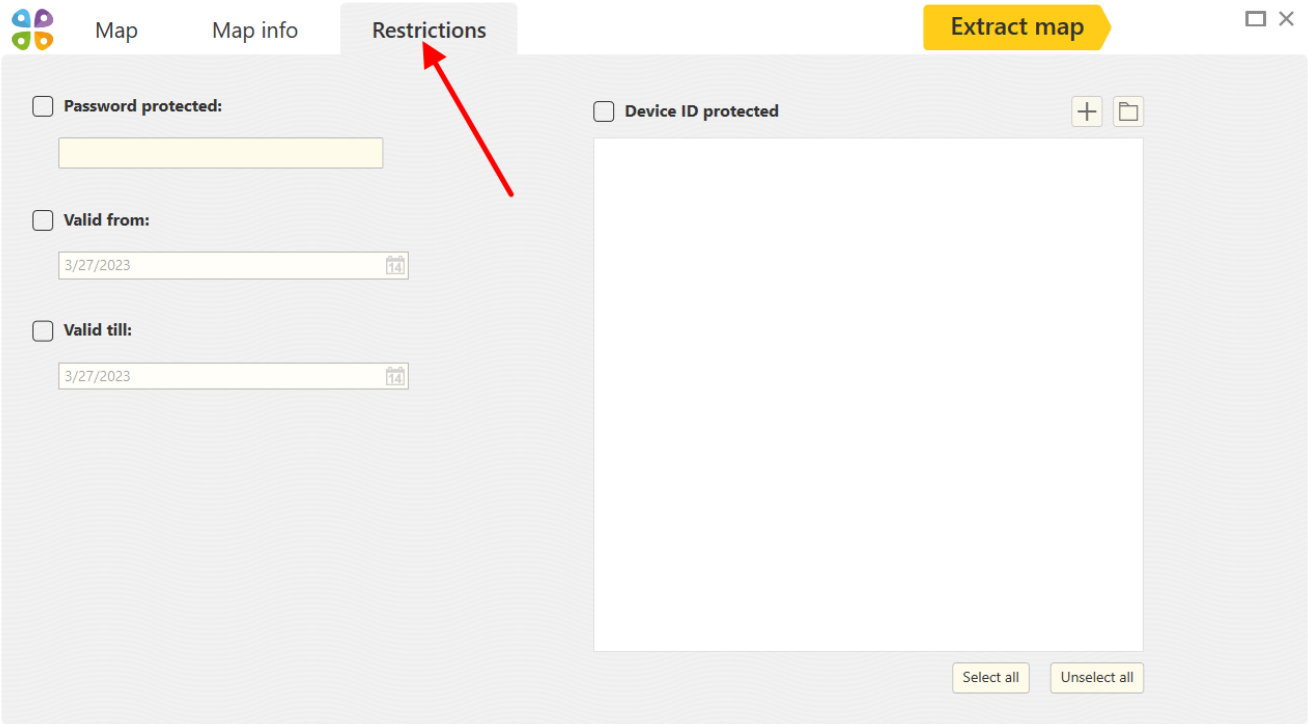
Setting mobile map protection

No need to worry about your data integrity, especially if it goes about sensitive data, as you can always prevent its unauthorized distribution by managing access to your mobile map with one of the provided protection options or with all of them at a time.

You can protect your mobile map with password, or allow access for selected devices only, or set map availability date specifying period when your mobile map will be available for users. Thus, each time the users open your mobile map in CarryMap app, they will be asked to either enter the password or the device ID, or the map will become unavailable after specified date, respectively.
To specify map protection settings, press **Customize map extraction** on CarryMap Builder toolbar.



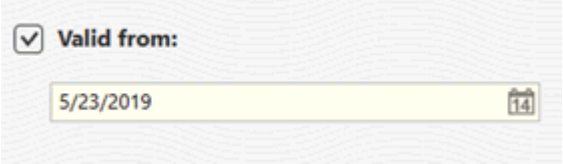
Go to **Restrictions** tab.



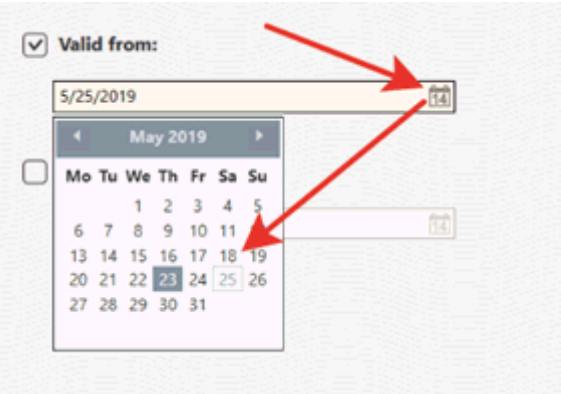
To protect your map by password, check **Password protected**. In the appeared dialog enter the password.

To cancel protection by password setting, uncheck **Password protected** option.

To protect you map by availability date, check **Valid from**.

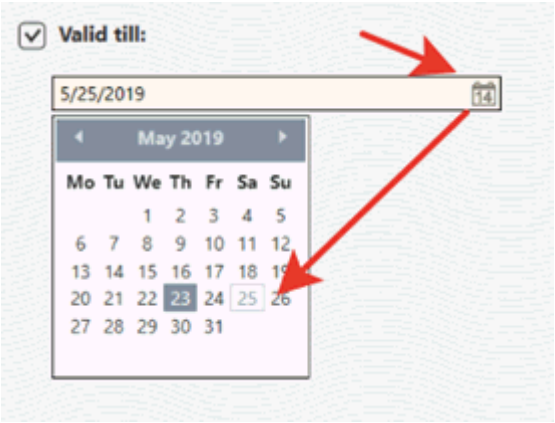


This will be the date starting from which your map will be available for use. By default the current date is suggested, but you can change it pressing the calendar icon and selecting the needed date



To set the date from which your map will not be allowed for use, check **Valid till**.

By default the current date is suggested, but you can change it pressing the calendar icon and selecting the needed date.



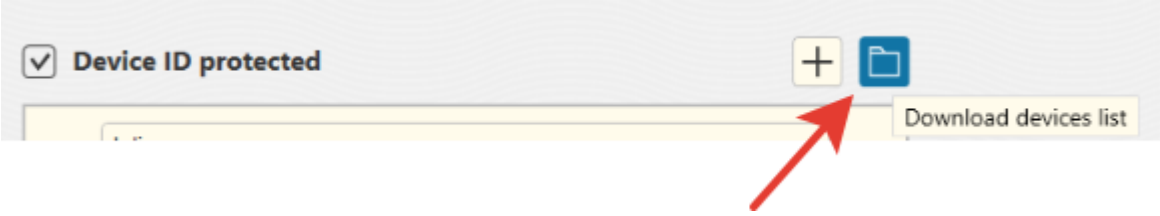
To cancel protection by map availability date, uncheck **Valid from** and **Valid till** options.

To allow opening your map on selected devices only, check **Device ID protected** option.

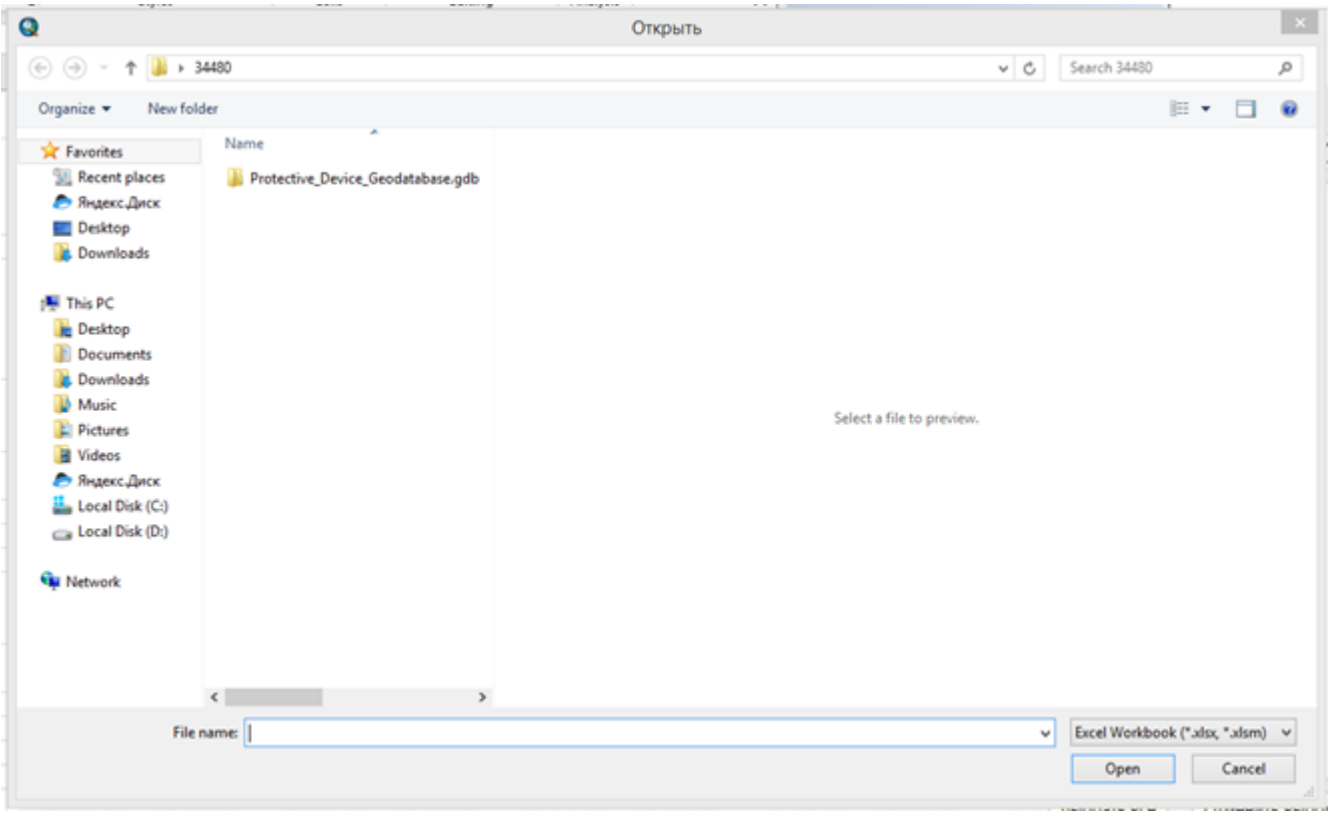
Press and enter the device name (device owner name, for example) and device ID.

You can allow opening your map on multiple devices, to do so press and add as many devices as needed same as described above.

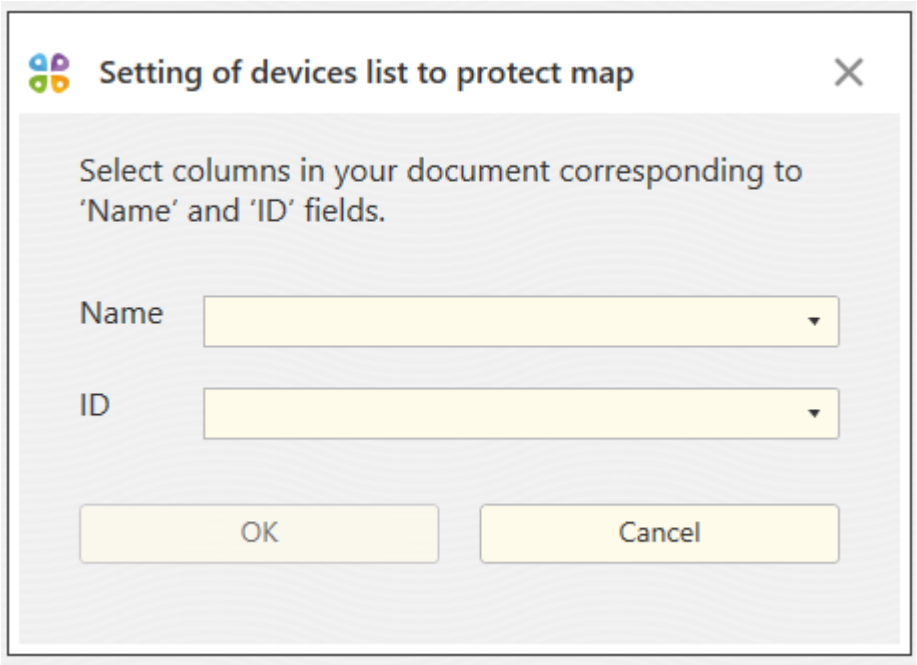
For your convenience, you can download the pre-arranged list of authorized devices in Excel or CSV format, to do so, press Download devices list button.



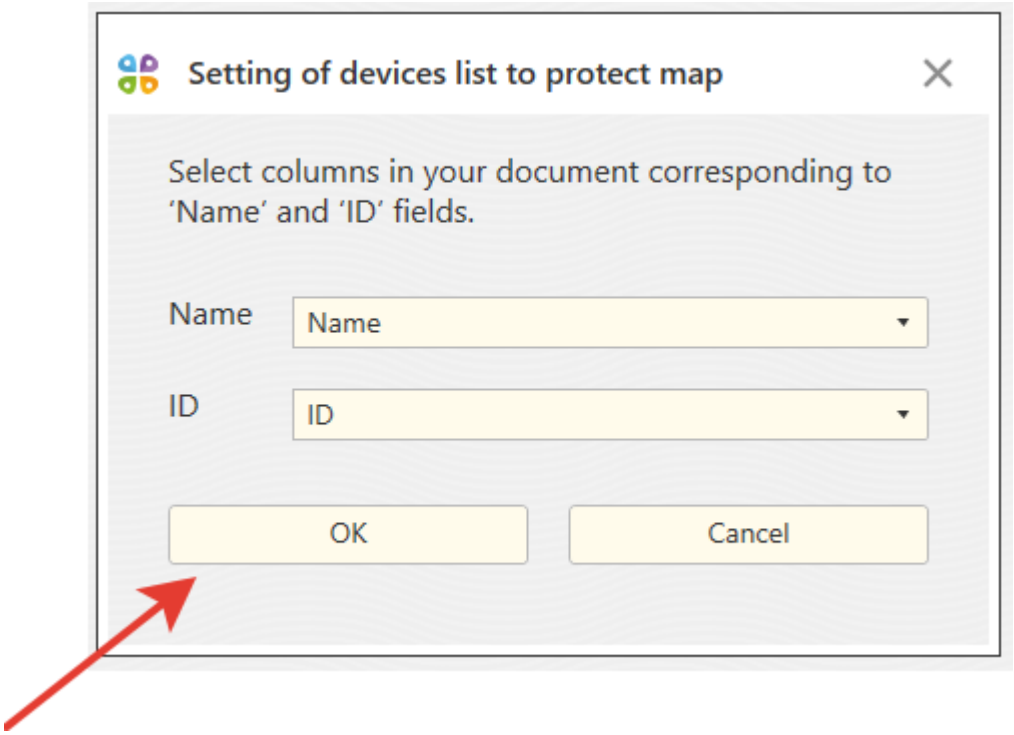
In the appeared window select the needed file and press Open.



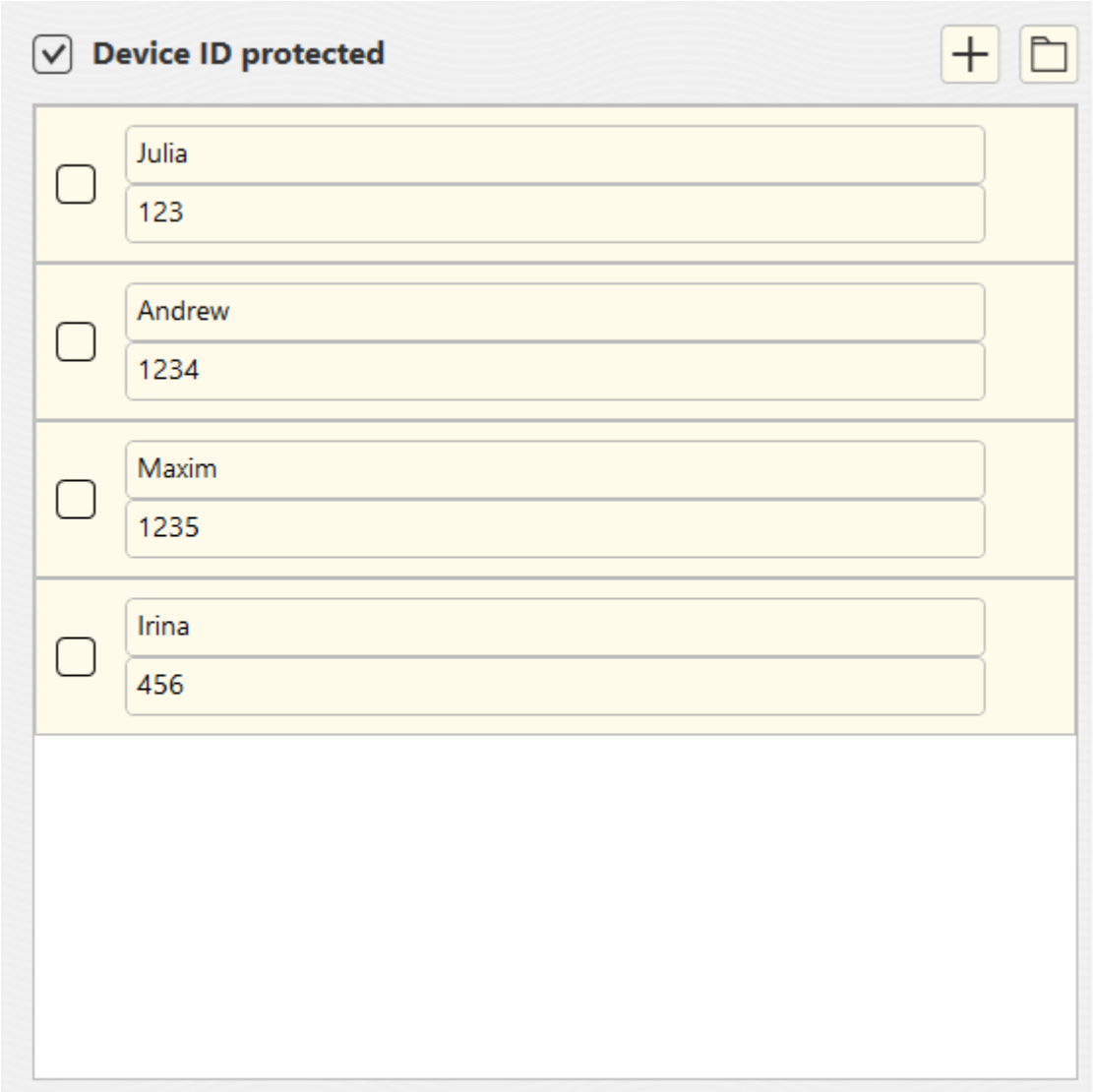
In the appeared table select columns containing the devices owners names and devices IDs.



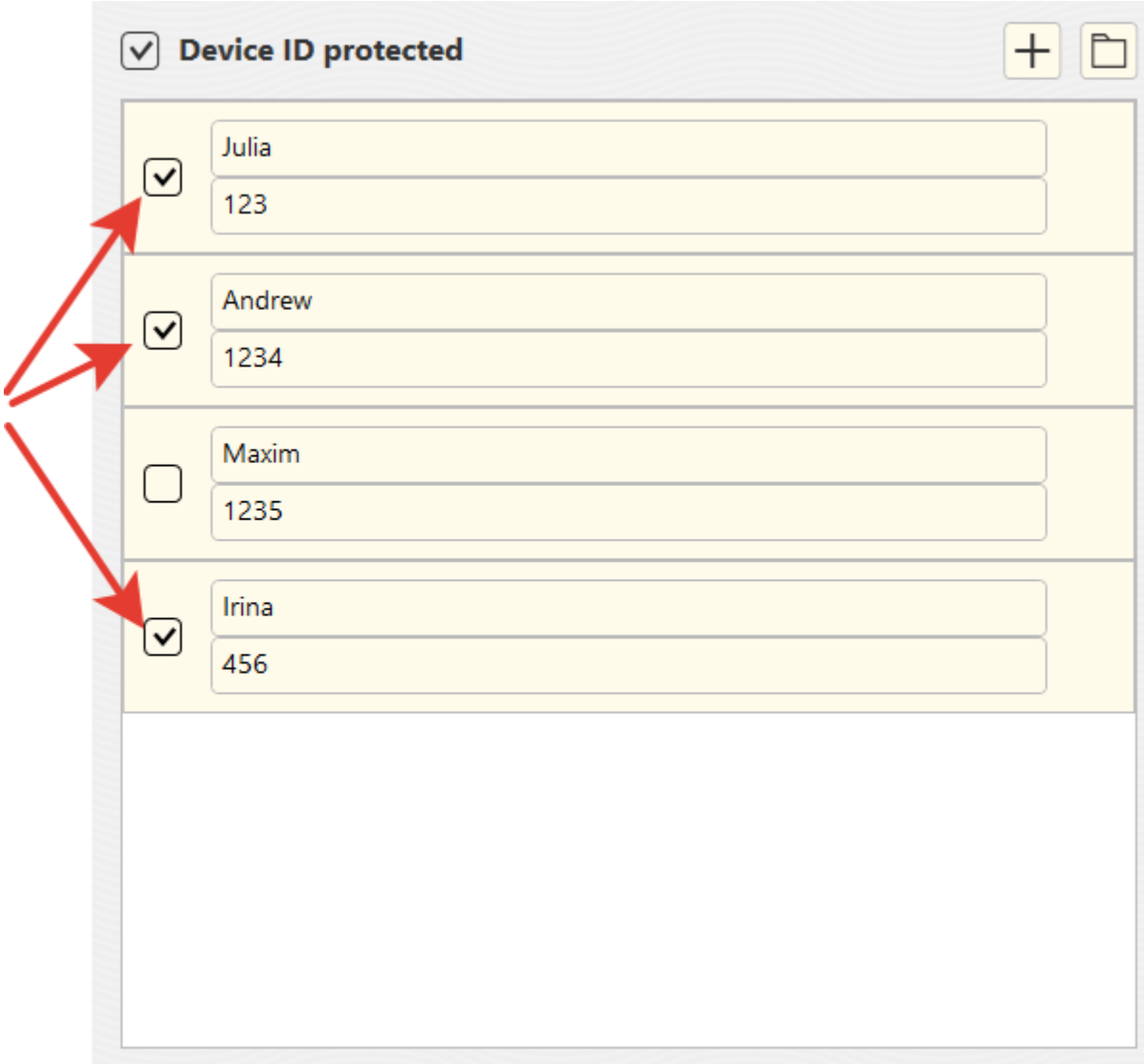
Press OK.



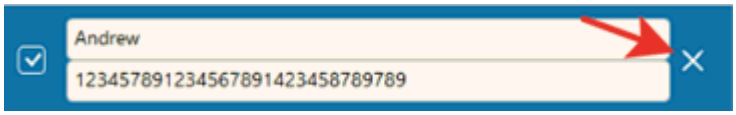
In the appeared window you will see the names and IDs of all devices from your list.



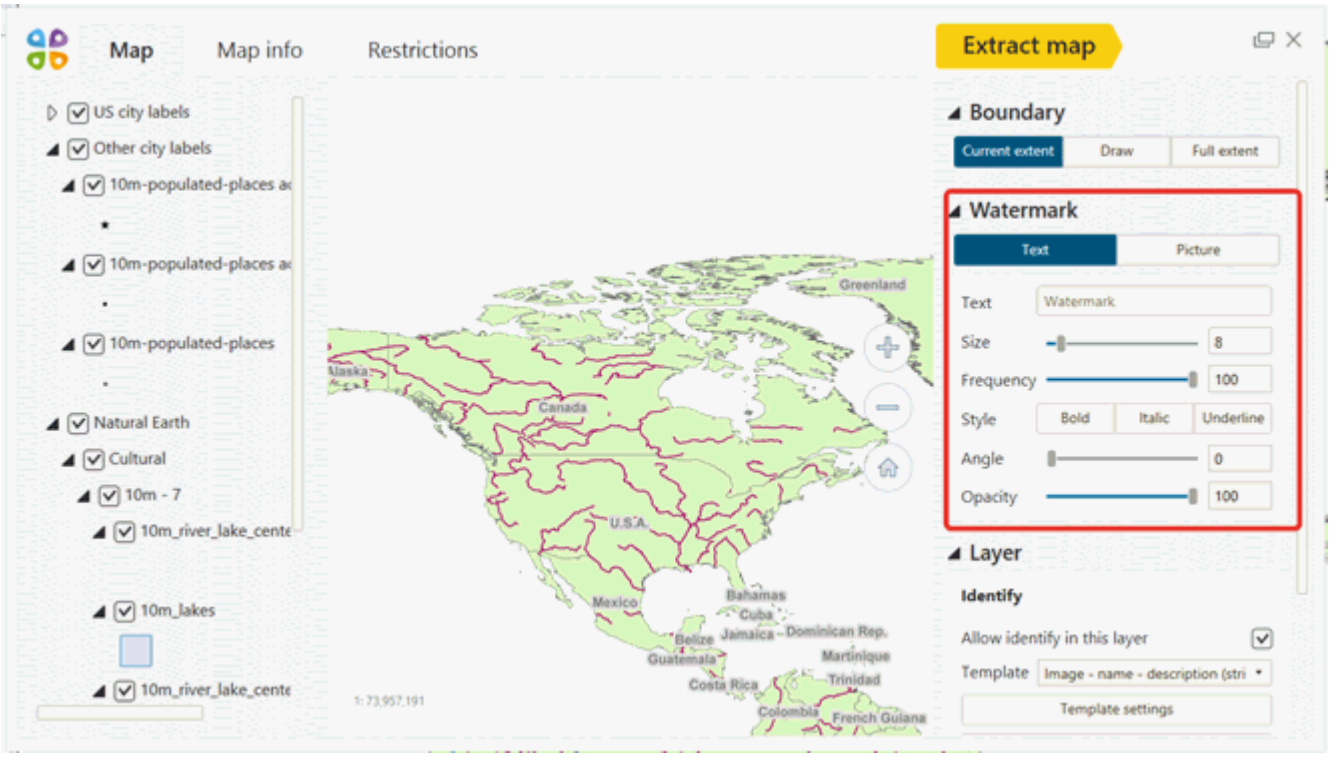
Check the boxes near the devices that should be authorized to open your map or press Select all to select all devices at a time.



To delete added device, press cross icon near its name.



You can demonstrate your corporate identity and protect you data from unauthorized copying by adding watermarks to your mobile maps. These can be either text or any image with specified transparency and rotation angle settings. To add watermark on map, go to **Map** tab, **Watermark** section.

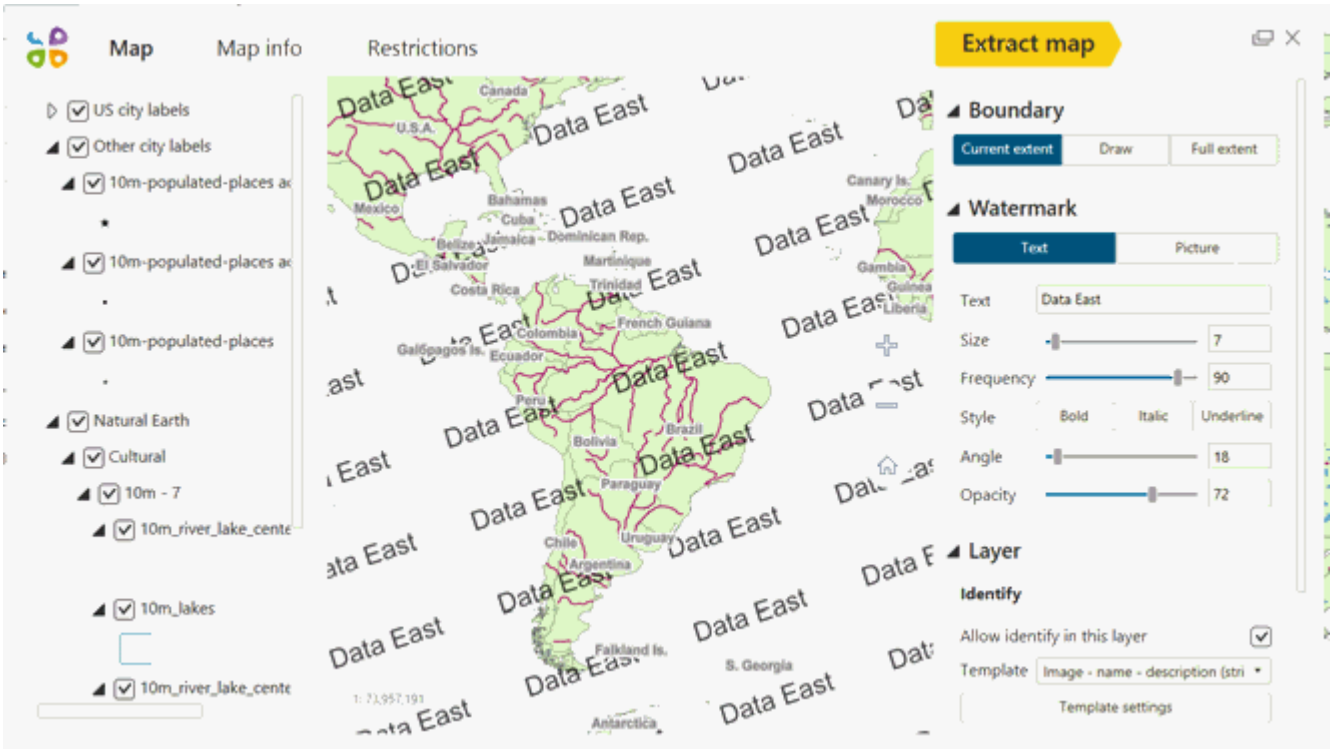


To add text as the watermark, press

and in the appeared window

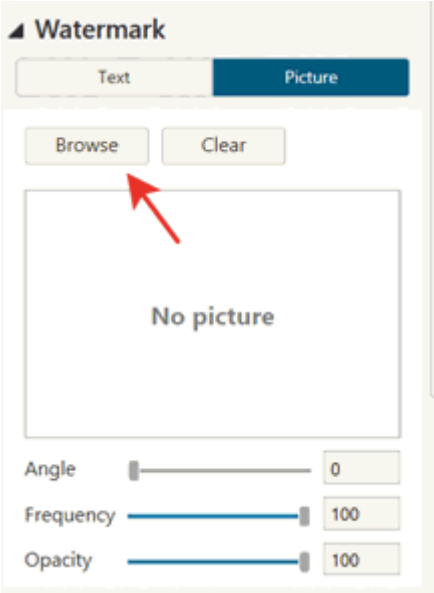
enter your text, set its size, display frequency, style, rotation angle and opacity.

In CarryMap Builder preview window you will see how your watermark will be displayed on map.



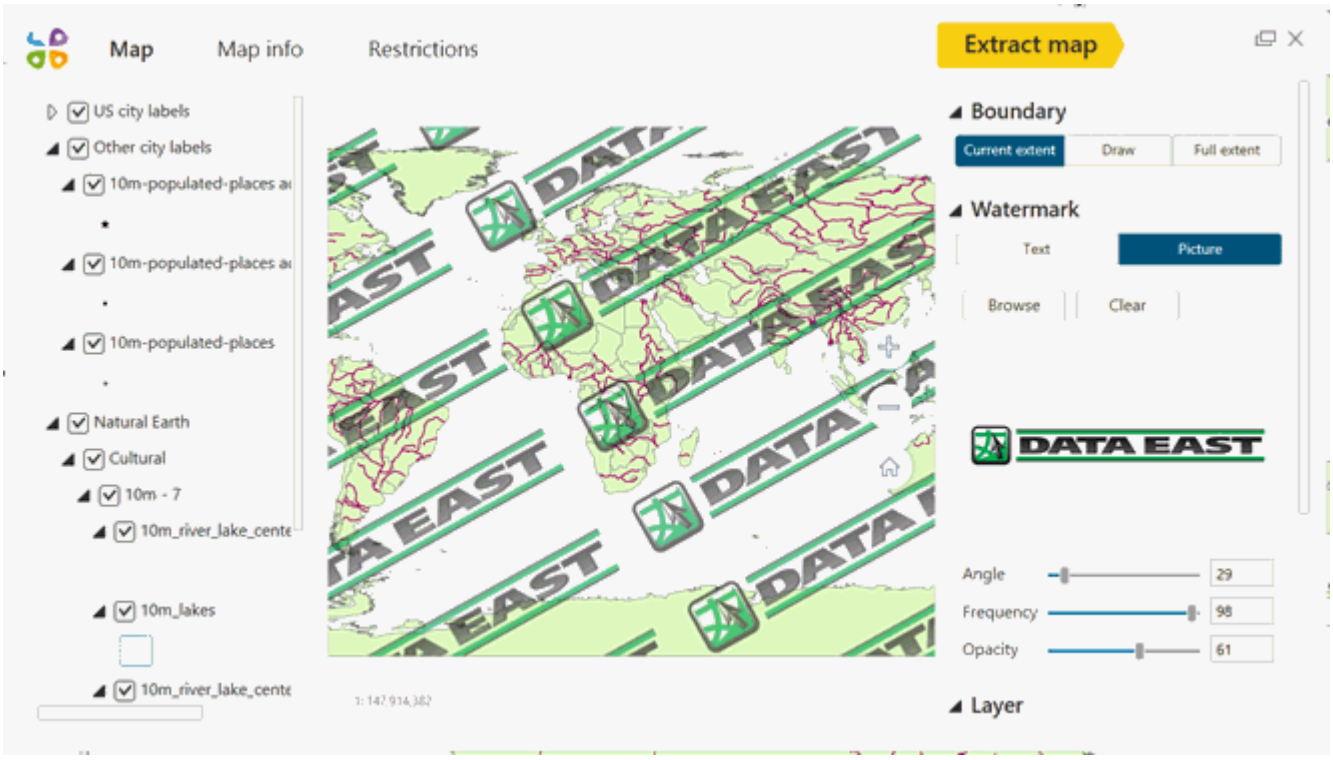
To add picture as the watermark, press

and in the appeared window press **Browse**.



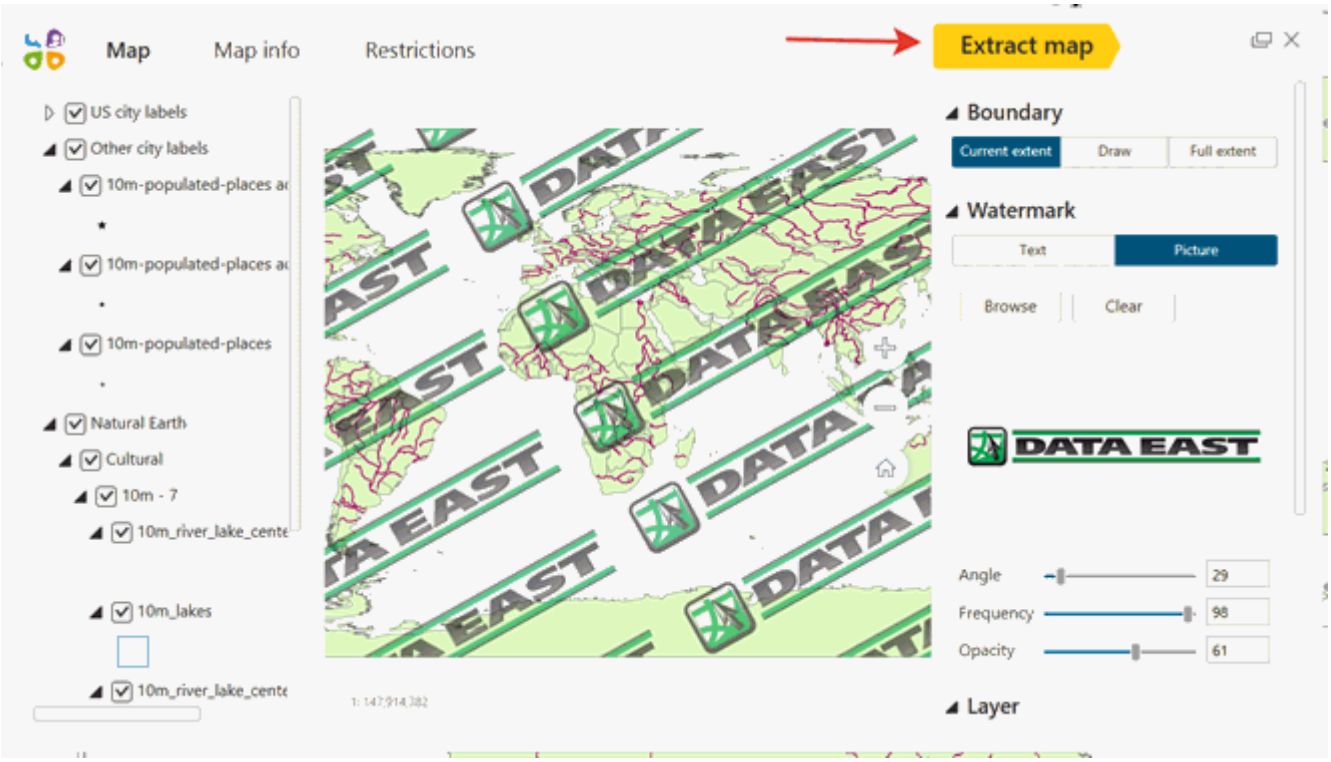
In the appeared dialog select picture and it will be displayed in the preview window. Select all needed settings: display frequency, rotation angle and opacity.

In CarryMap Builder preview window you will see how your watermark will be displayed on map.

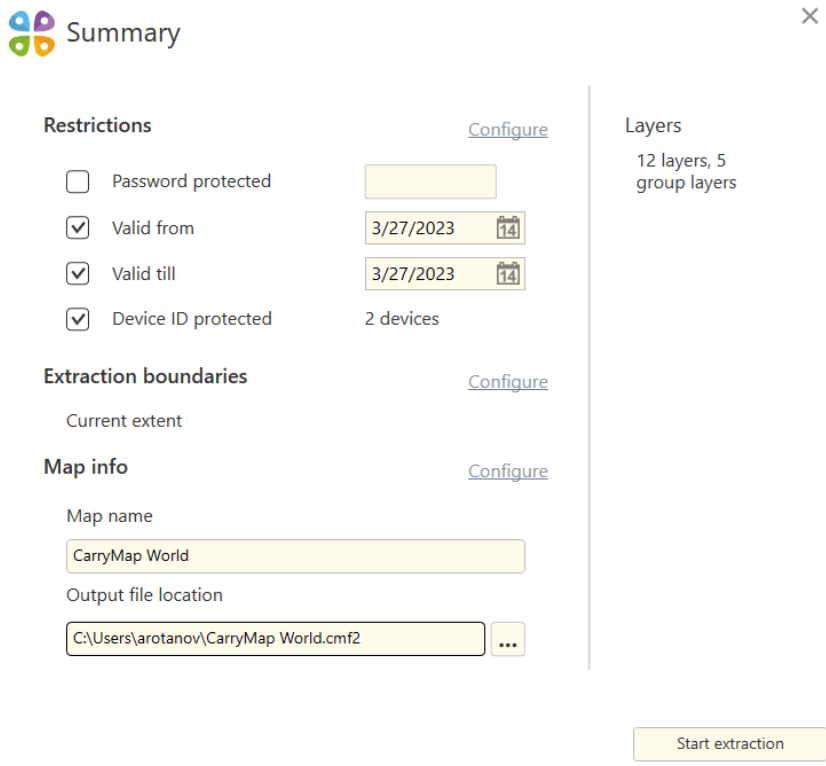


Extracting map

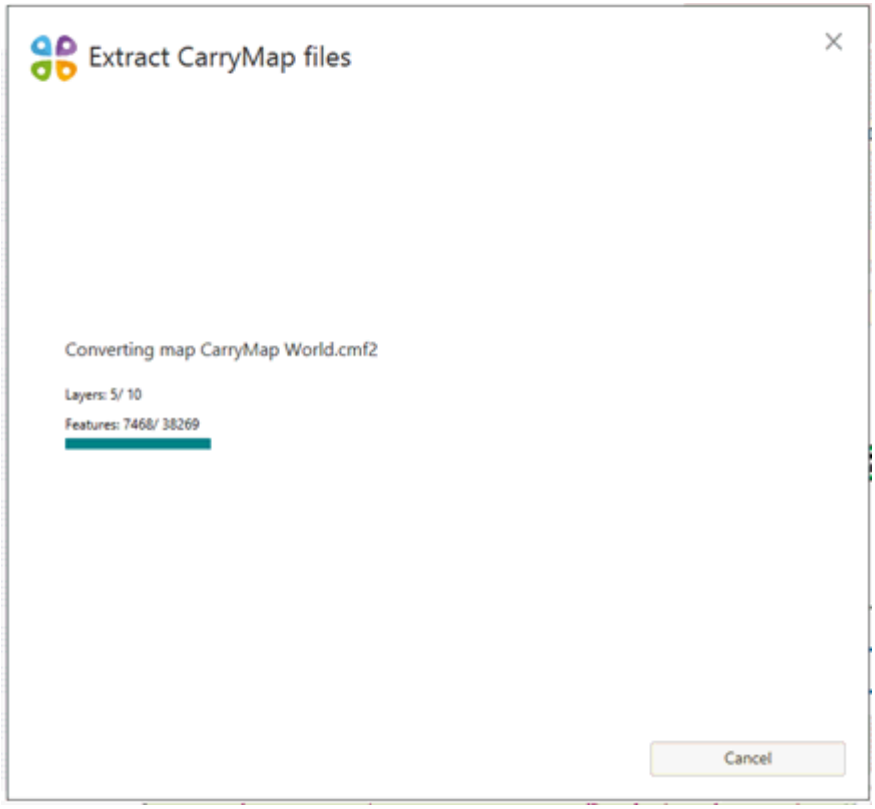
So, as all settings for your future mobile map have been specified, you can move to extraction process. To do so, press **Extract map** button.



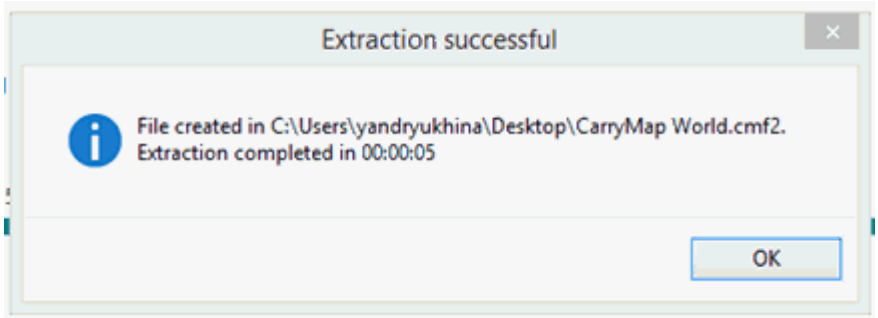
In **Summary** window review the information about your map: output file location, protection settings, boundary and map name. Press **Start extraction** if everything is OK.



The process of extraction of mxd project to mobile map in CMF2 format will start. To cancel process, press **Cancel**.



Upon extraction completion, the following dialog will appear.



Besides, you will see the summary report about created mobile map showing the output file size, feature classes and number of features, coordinate system, etc.

Extraction successful

File name: CarryMap World.cmf2

Total size: 2.06 MB
Total number of features: 2206
Map coordinate system: GCS_WGS_1984

Map info:

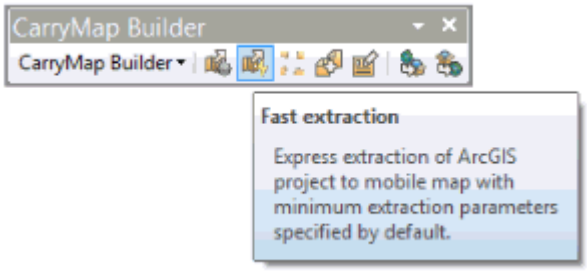
Map name: CarryMap World

Contents	Size	Number of features
Feature classes		
ne_10m_populated_places	2.95 KB	1
ne_10m_populated_places_0	19.99 KB	46
ne_10m_populated_places_1	114.54 KB	463
ne_10m_populated_places_2	14.7 KB	26
ne_10m_populated_places_3	52.76 KB	149
ne_10m_populated_places_4	96.2 KB	381
ne_10m_rivers_lake_centerlines	147.44 KB	90
ne_10m_lakes	355.62 KB	534
ne_10m_rivers_lake_centerlines_scale_rank	188.48 KB	472
ne_10m_admin_0_map_subunits_32	234.2 KB	44
Template data	514.35 KB	
System tables	293.27 KB	

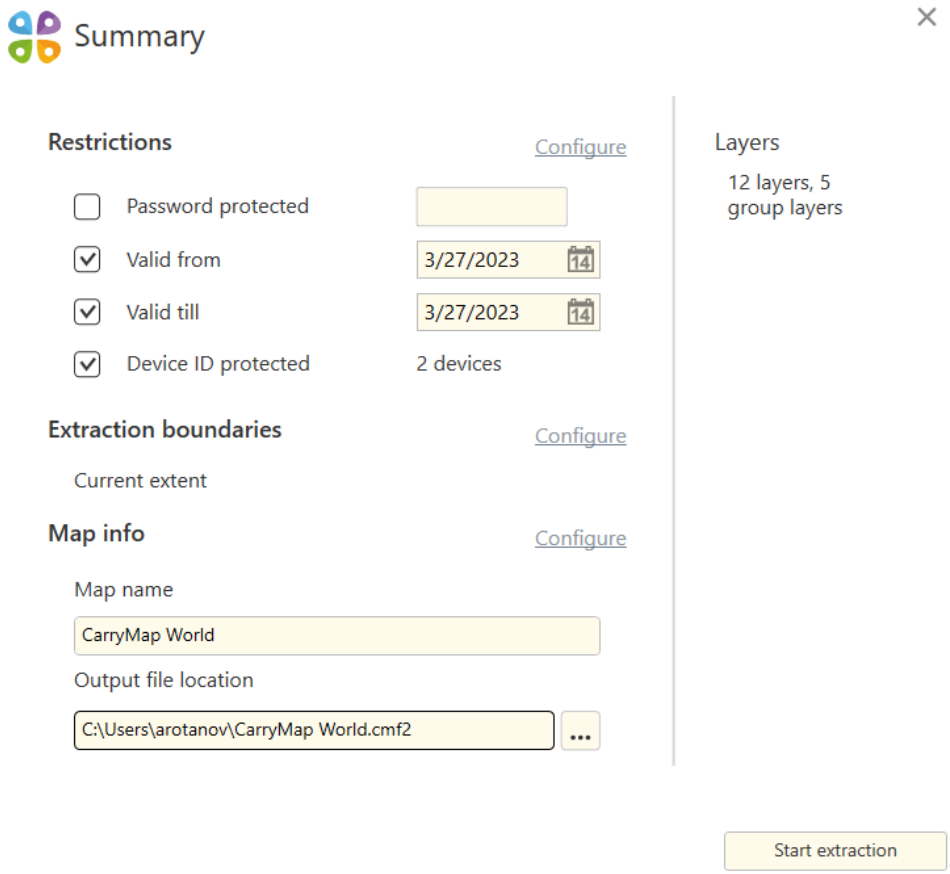
OK

Extracting map fast

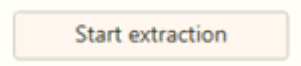
If previously specified map settings work for you, you can save your time and use **Fast extraction** tool to create your next mobile maps.



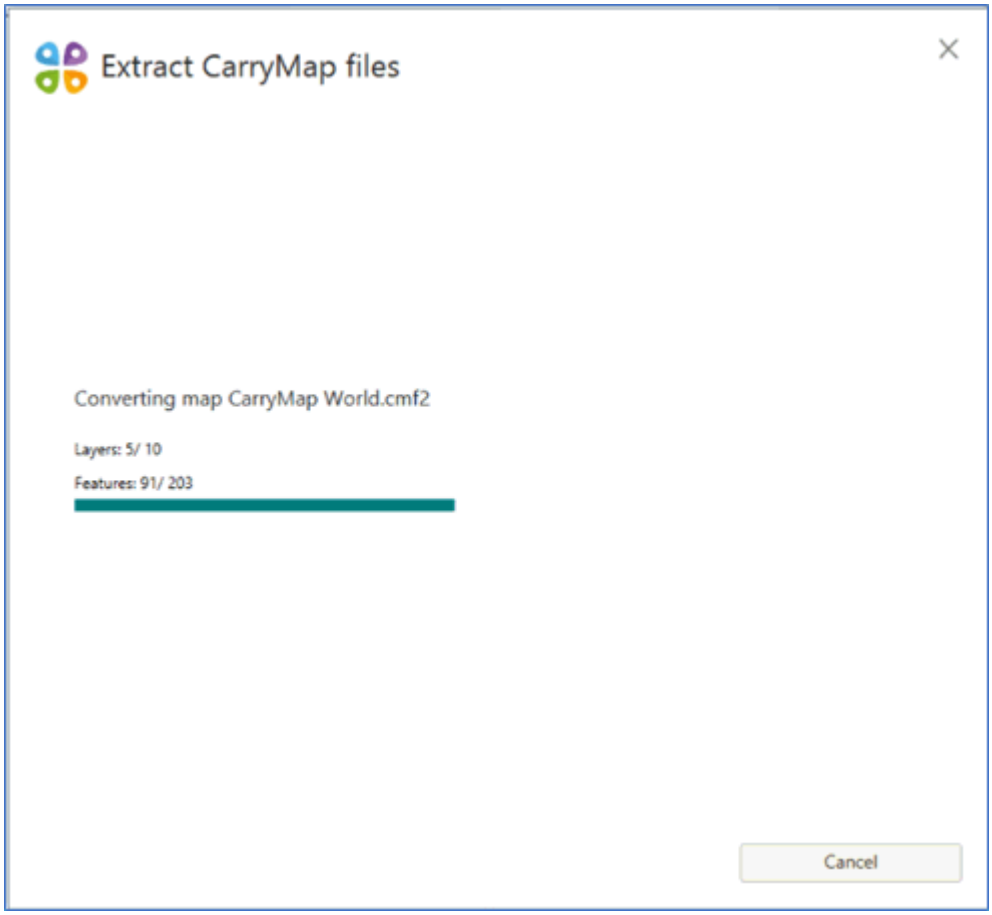
Run the tool and review all settings in the appeared tool dialog once again. If you need to change them, press **Configure** button near the required settings.



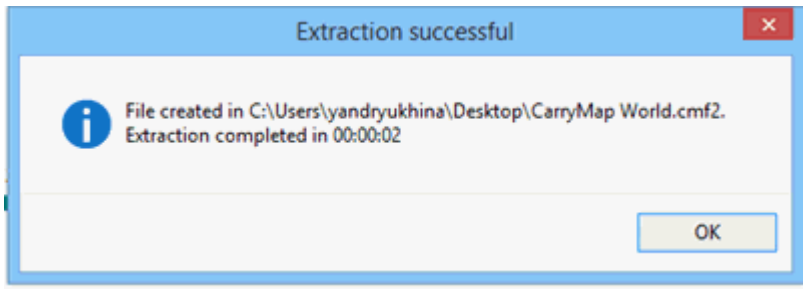
After that press **Start extraction**.



The process of extraction of mxd project to mobile map in CMF2 format will start. To cancel process, press **Cancel**.



Upon extraction completion, the following dialog will appear.



Besides, you will see the summary report about created mobile map showing the output file size, feature classes and number of features, coordinate system, etc.

Extraction successful

File name: CarryMap World.cmf2

Total size: 768.92 KB
Total number of features: 81
Map coordinate system: GCS_WGS_1984

Map info:

Map name: CarryMap World

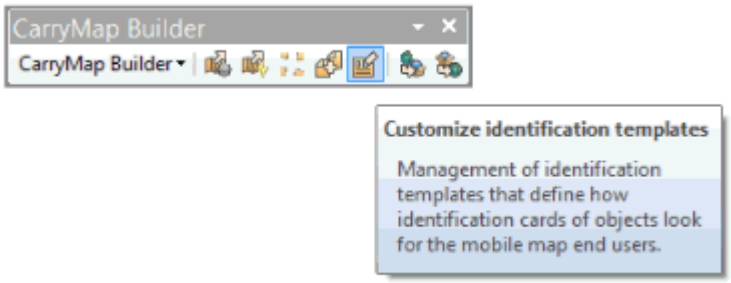
Contents	Size	Number of features
Feature classes		
ne_10m_populated_places_1	3.49 KB	3
ne_10m_populated_places_3	2.81 KB	1
ne_10m_populated_places_4	6.23 KB	14
ne_10m_rivers_lake_centerlines	4.65 KB	4
ne_10m_lakes	17.32 KB	44
ne_10m_rivers_lake_centerlines_scale_rank	5.09 KB	12
ne_10m_admin_0_map_subunits_32	80.42 KB	3
Template data	514.35 KB	
System tables	118.74 KB	

OK

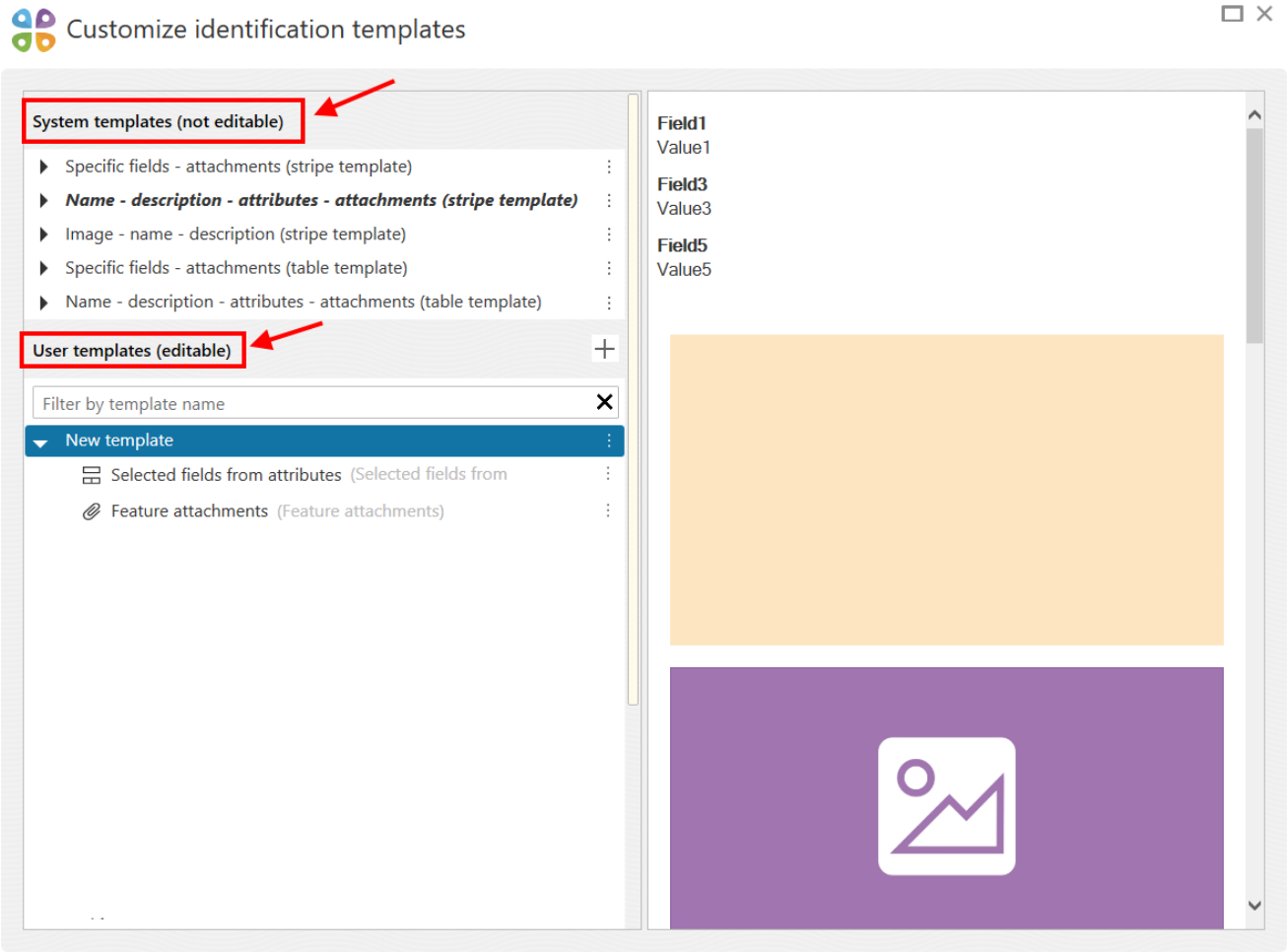
General information about identification templates

Information displayed in the identification card can be organized differently depending on used identification templates. You can select either predefined system templates or create your own user templates.

To define settings of identification cards for your future mobile map, press **Customize identification templates** button on CarryMap Builder toolbar.



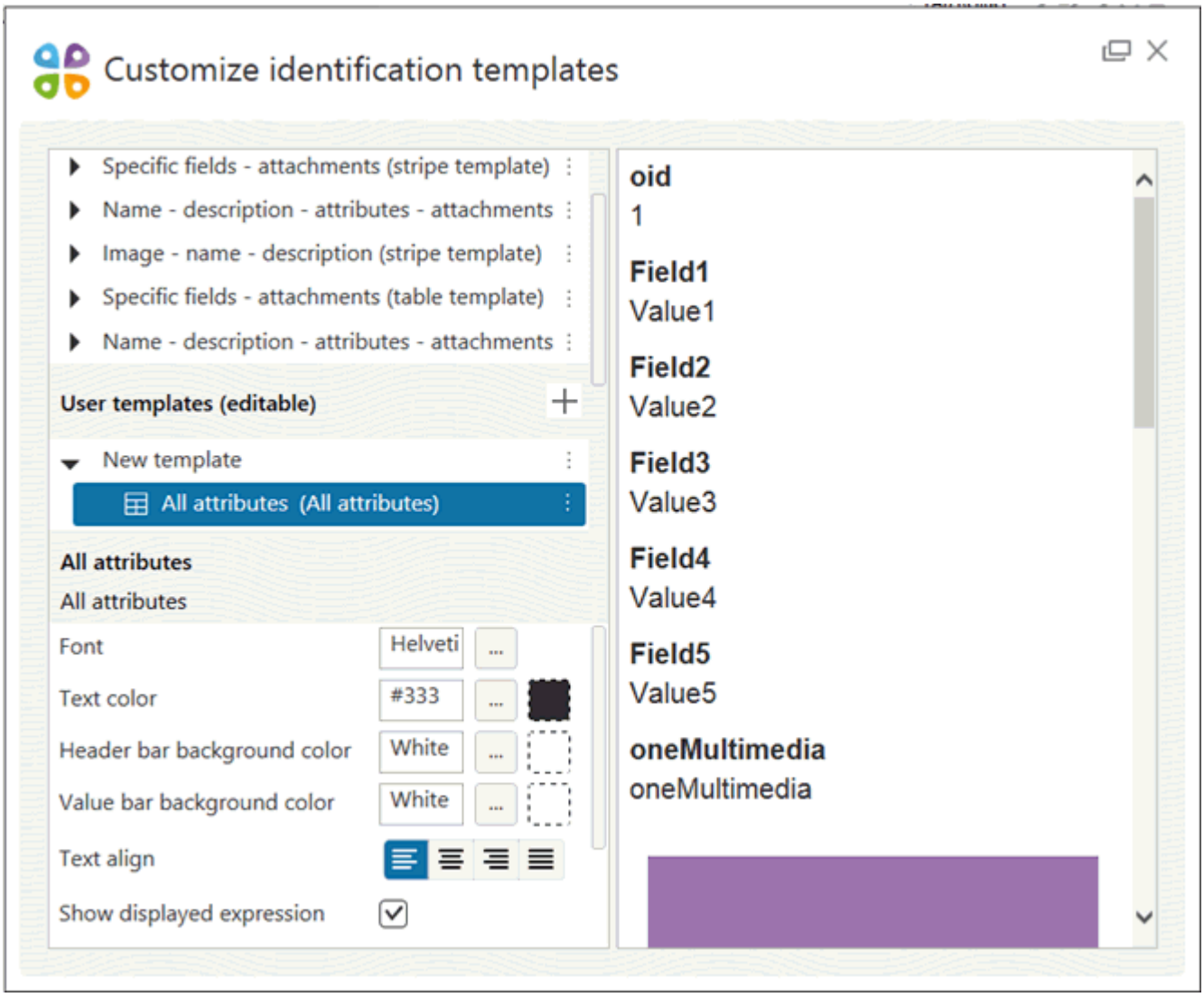
The list of available templates is shown in the left part of the tool dialog.



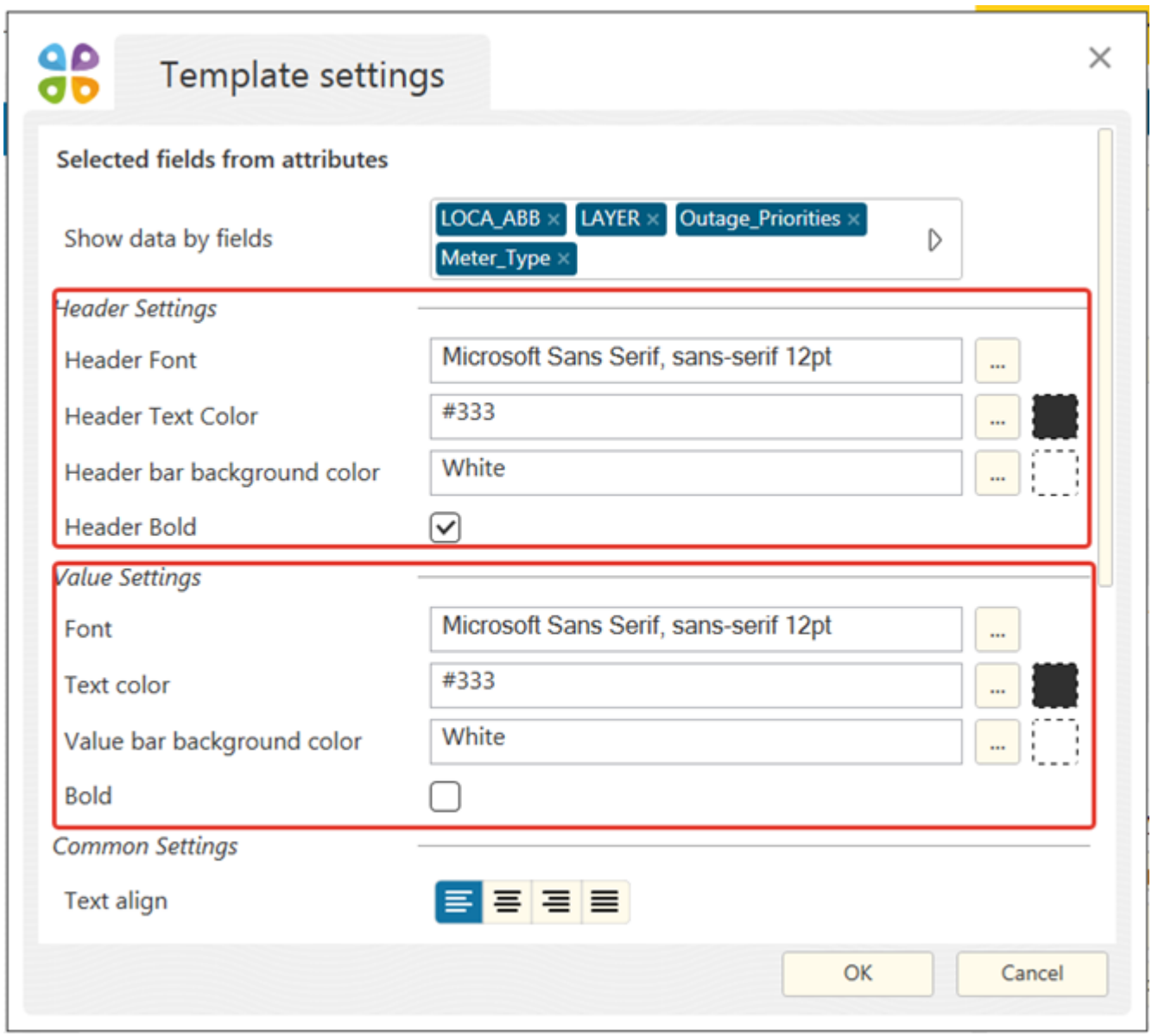
With **Customize identification templates** tool you will be able to create, filter and delete templates, as well as specify their view. Depending on your ArcMap project, you can specify additional settings for already created template. To do so, press **Customize map extraction** and go to **Template settings** section.

Both system and user identification templates are windows divided to separate information blocks as stripes. Type of displayed data, as well as display order in stripes are strictly defined. You can add the following stripes to the user template that you created:

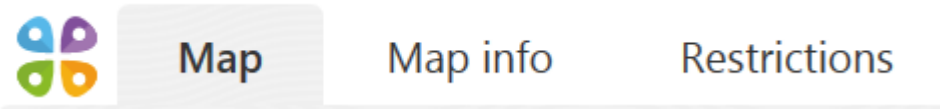
- **All attributes** – this type of stripe is used to display the full attribute table of the feature with all fields (excluding hidden fields). You can specify text (font and size) and background (color) parameters, and select the information display view (table or stripe), and show/hide empty attribute table fields.



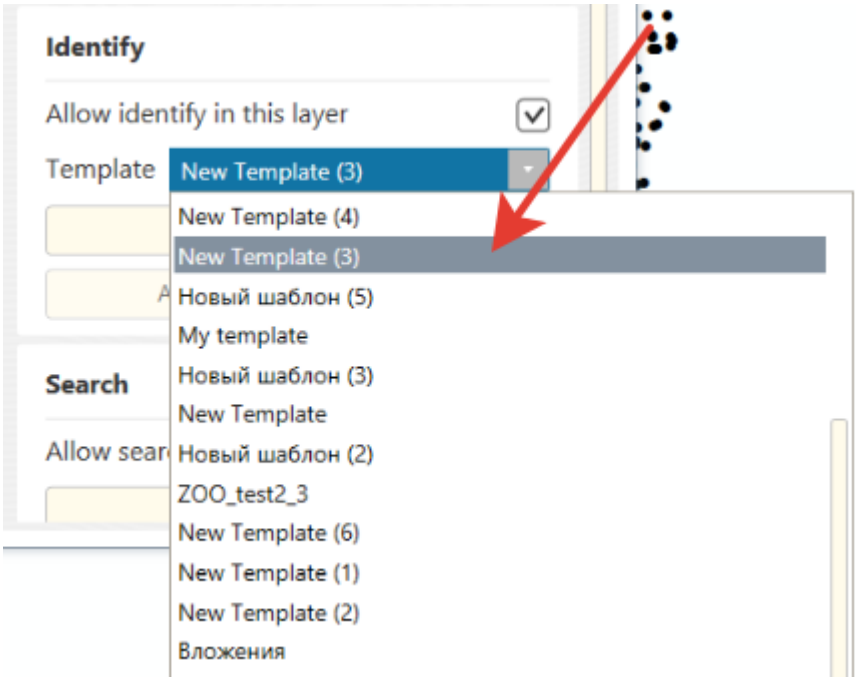
Note that in the settings window for the table template it is possible to select different display styles for header and value. To do so, in the Template settings window set the required settings in the appropriate sections.



- **Attachments by specific fields with link** – this stripe is provided to display all the attachments to objects (images, videos, audios, documents etc.). To select which type of attachment should be displayed, check the boxes near the needed items. Note that this template can be used even if you have ArcGIS Basic license, which does not support creation of tables with attachments. To set display of attachments by links from the fields, go to Map section of Customize map extraction window.

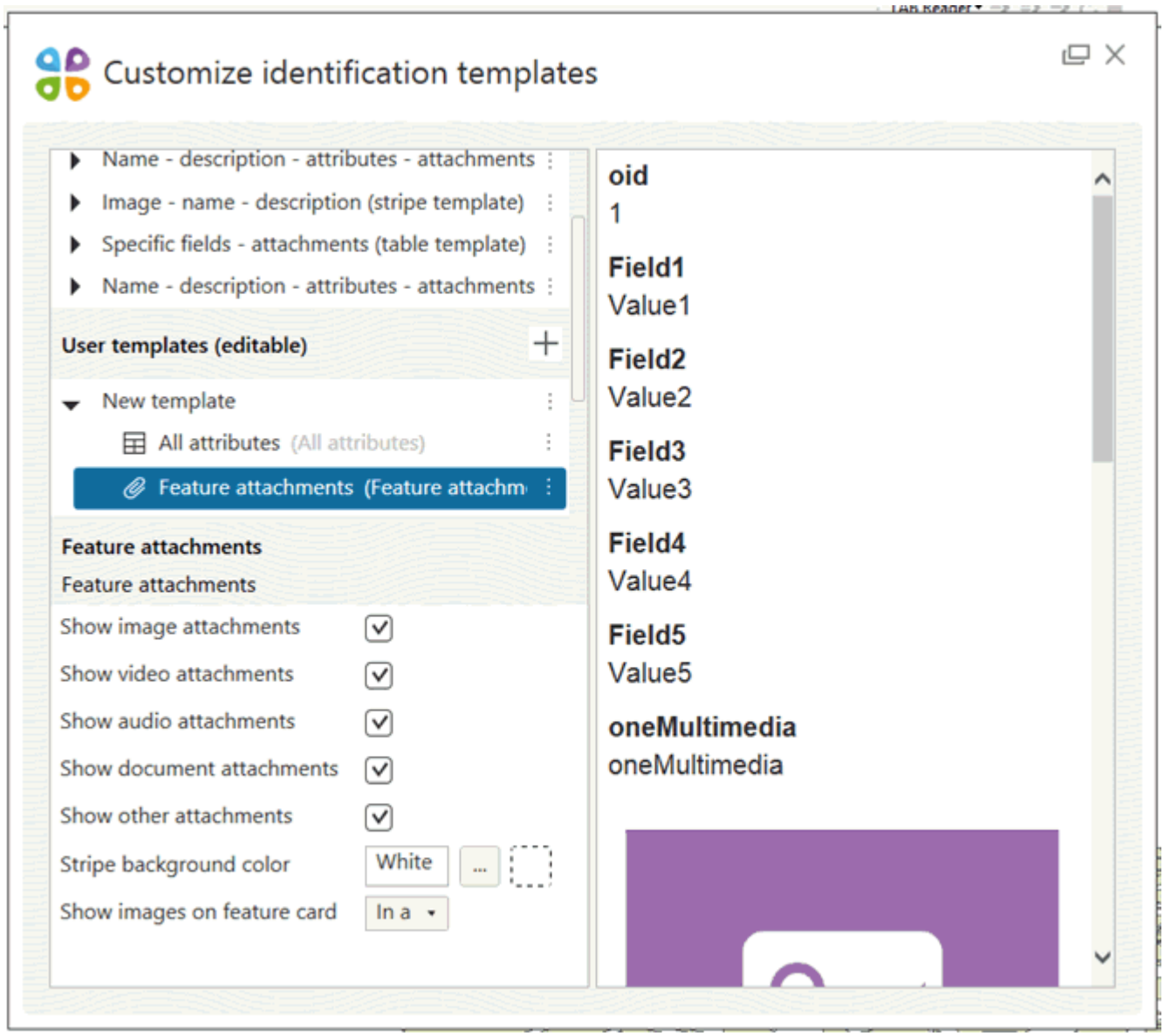


In Identify section select the template where to the correspondent stripe has been added.



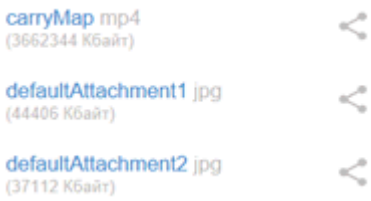
In the appeared window select fields, by which values it is needed to display attachments in the identification card.

- **Feature attachments** – this type of stripe is used to display all attachments to features (photo, video, audio, documents, etc.). You can specify which types of attachments should be displayed, to do so check the box near the required items.



The display type of attachments in the identification card can be specified as following:

- *As a list*– all attachments will be shown in the list.



- *In a preview mode* – photos will be shown as clickable thumbnails and the other attachments will be shown in the list.

- *In full size* – photos will be shown in full size, video and audio as media players and all other attachments arranged in the list.

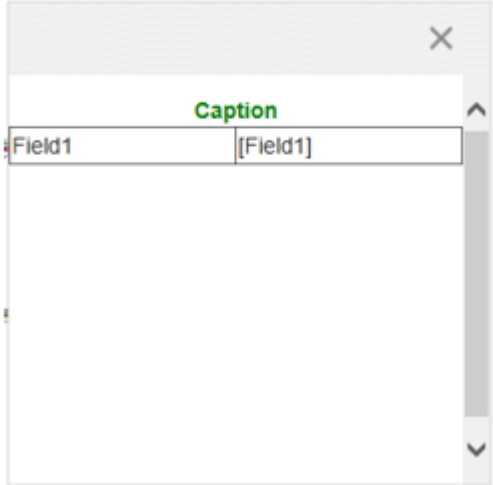
- **HTML code** – this type of stripe is used to display attribute tables same as it has been specified using HTML script.

By default by adding the HTML code stripe, the following HTML script will be used:

```
<div>
<table border="1px" width="100%">
<caption><b style="color: green">Caption</b></caption>
<tr>
<td width="50%">Field1</td>
<td width="50%">[Field1]</td>
</tr>
</table>
</div>
```

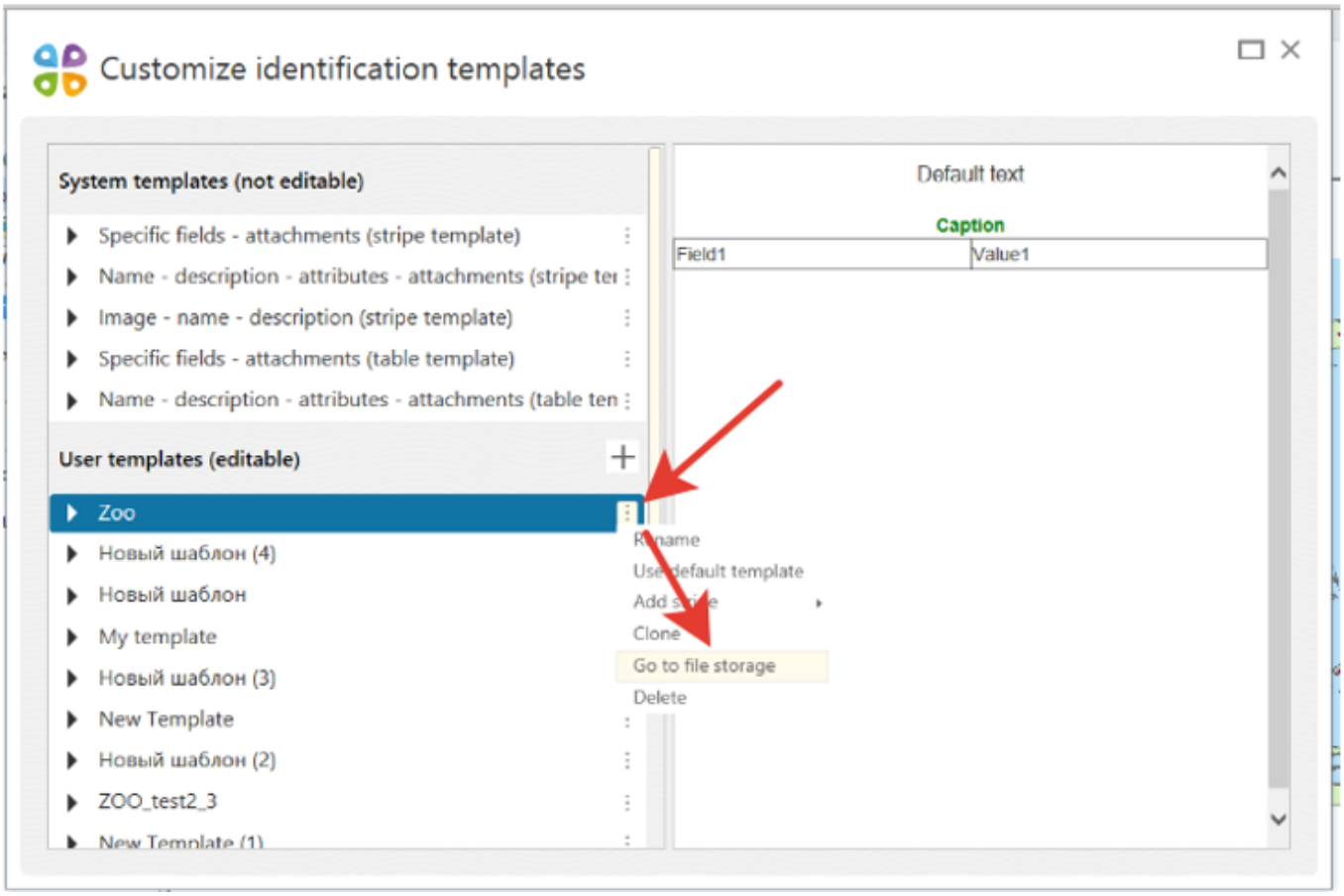
Where variable parameters are:
Green – text caption color;
Caption – caption name;
Field1 – name of field from attribute table, that needs to be shown in the identification card.

The example of displaying information using the default HTML script is shown below.



In order to show picture in the identification card using HTML script:

1. Go to the templates files folder, selecting Go to file storage in the template options.



2. Copy images you want to show in the card, to this folder.

3. In the settings of HTML code settings add this script:

Where variable parameter is:
1.png – picture name and format.

In order to show selected fields from attribute table in the identification card using HTML script, add the following script in the HTML code stripe settings:

[**Field1**]

Where variable parameter is:
Field1 – name of field from attribute table.

If you need to align your text field left using HTML script, add the following script in the HTML code stripe:

[**Field1**]

Where variable parameter is:
Field1 – name of field from attribute table that needs to be aligned left.

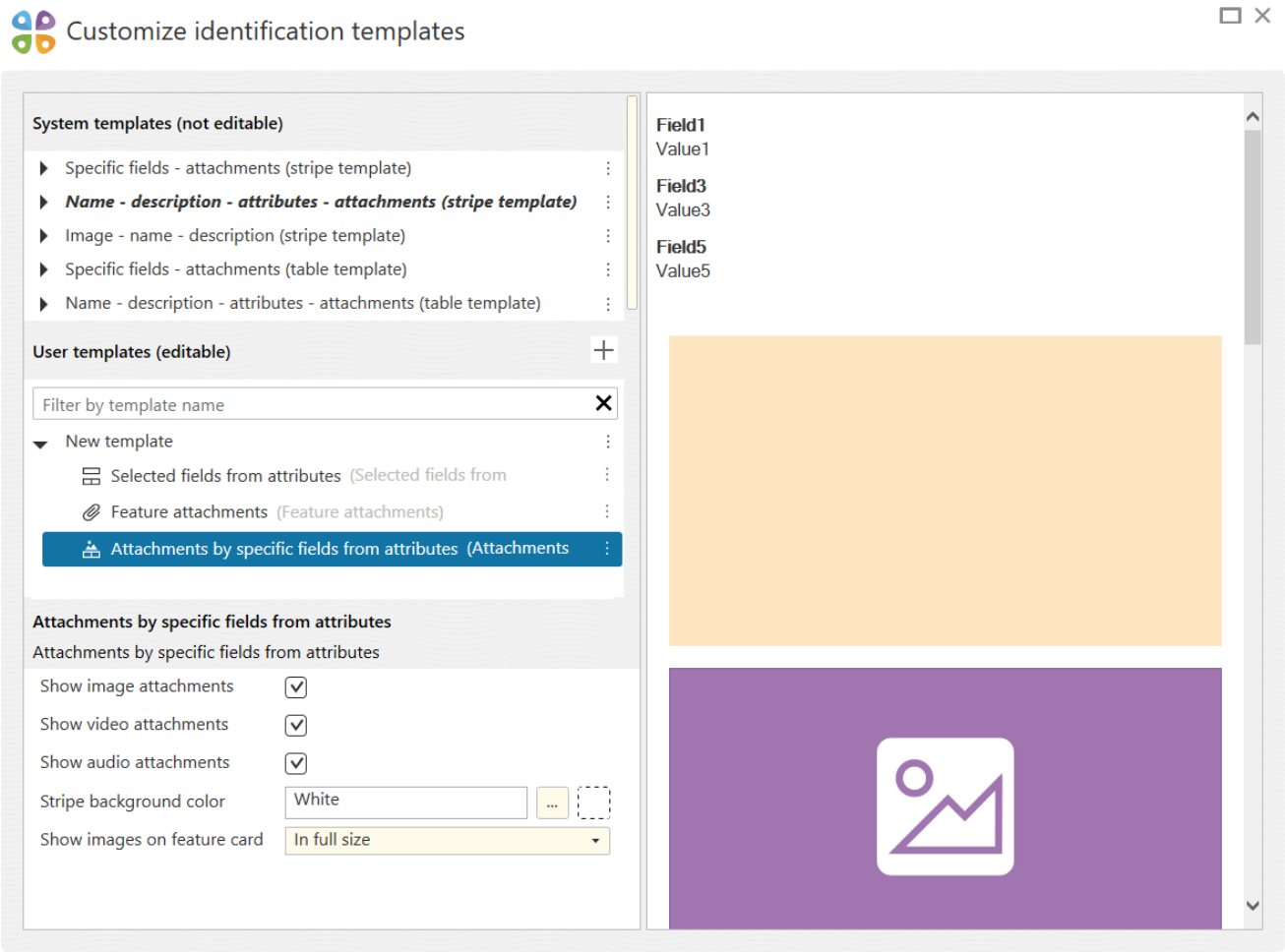
If you need to align your text field right using HTML script, add the following script in the HTML code stripe:

[**Field1**]

Where variable parameter is:
Field1 – name of field from attribute table that needs to be aligned right.

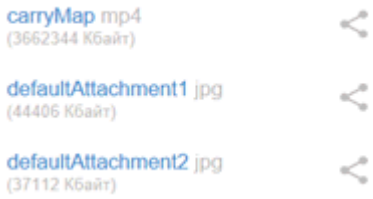
- **Attachments by specific fields from attributes** – this type of stripe is used to display multimedia files selected based on the fields values that is selected with **Customize map extraction** tool.

You can specify which types of attachments should be displayed, to do so check the box near the required items.



The display type of attachments in the identification card can be specified as following:

- *As a list*– all attachments will be shown in the list.

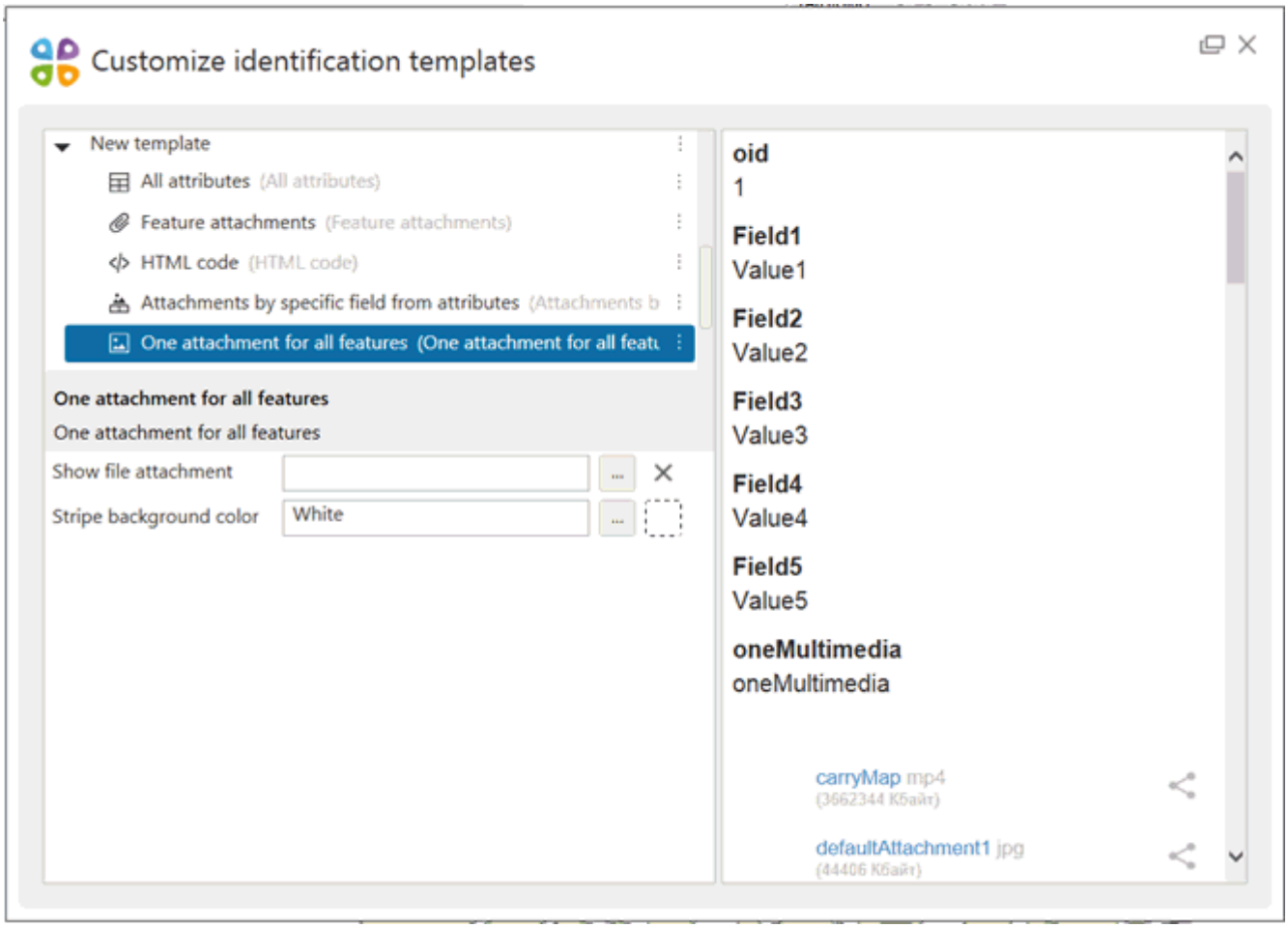


- *In a preview mode* – photos will be shown as clickable thumbnails and the other attachments will be shown in the list.

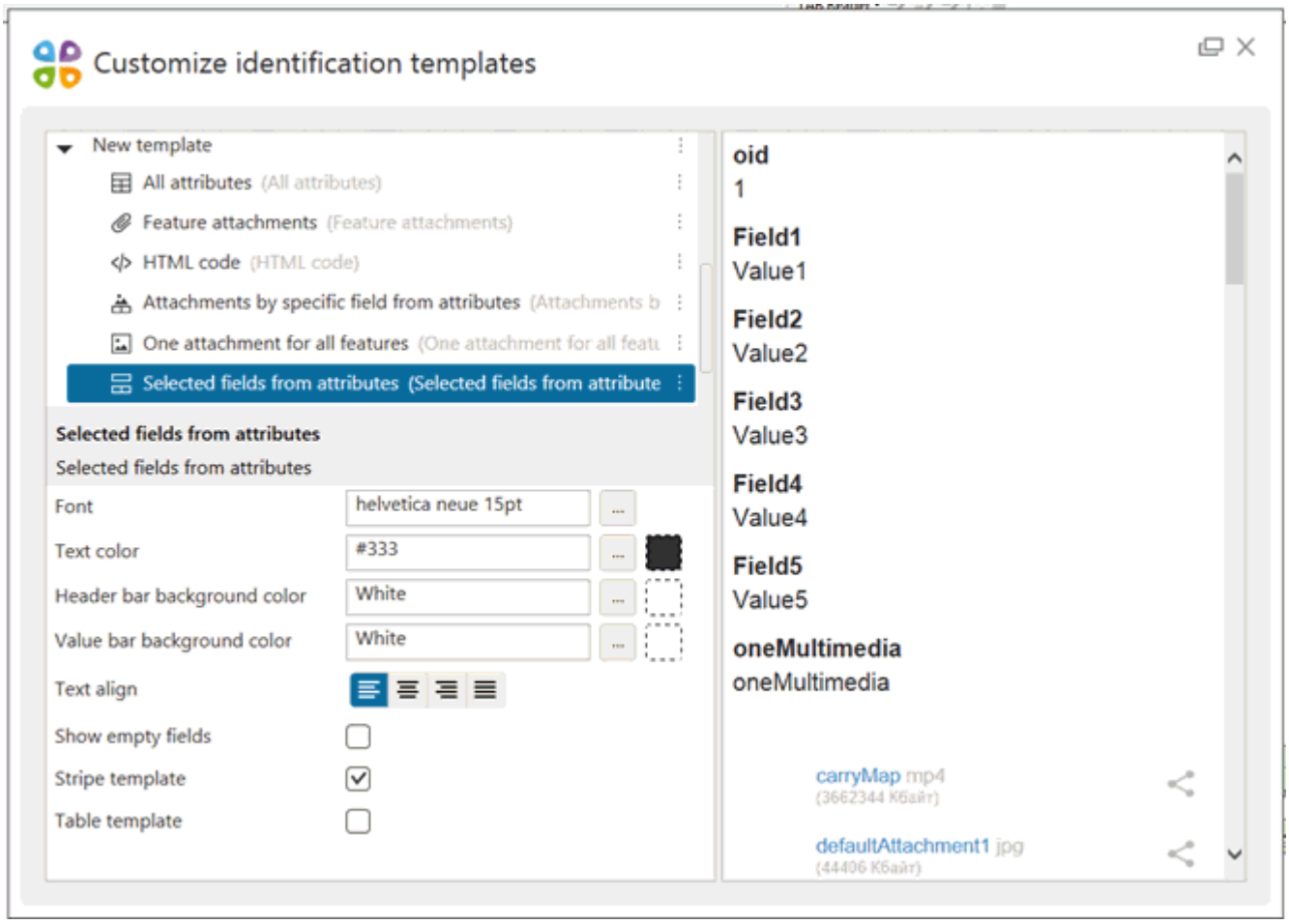
- *In full size* – photos will be shown in full size, video and audio as media players.

Note that starting from version 5.6 CarryMap Builder supports also raster fields to display image attachments in identification cards.

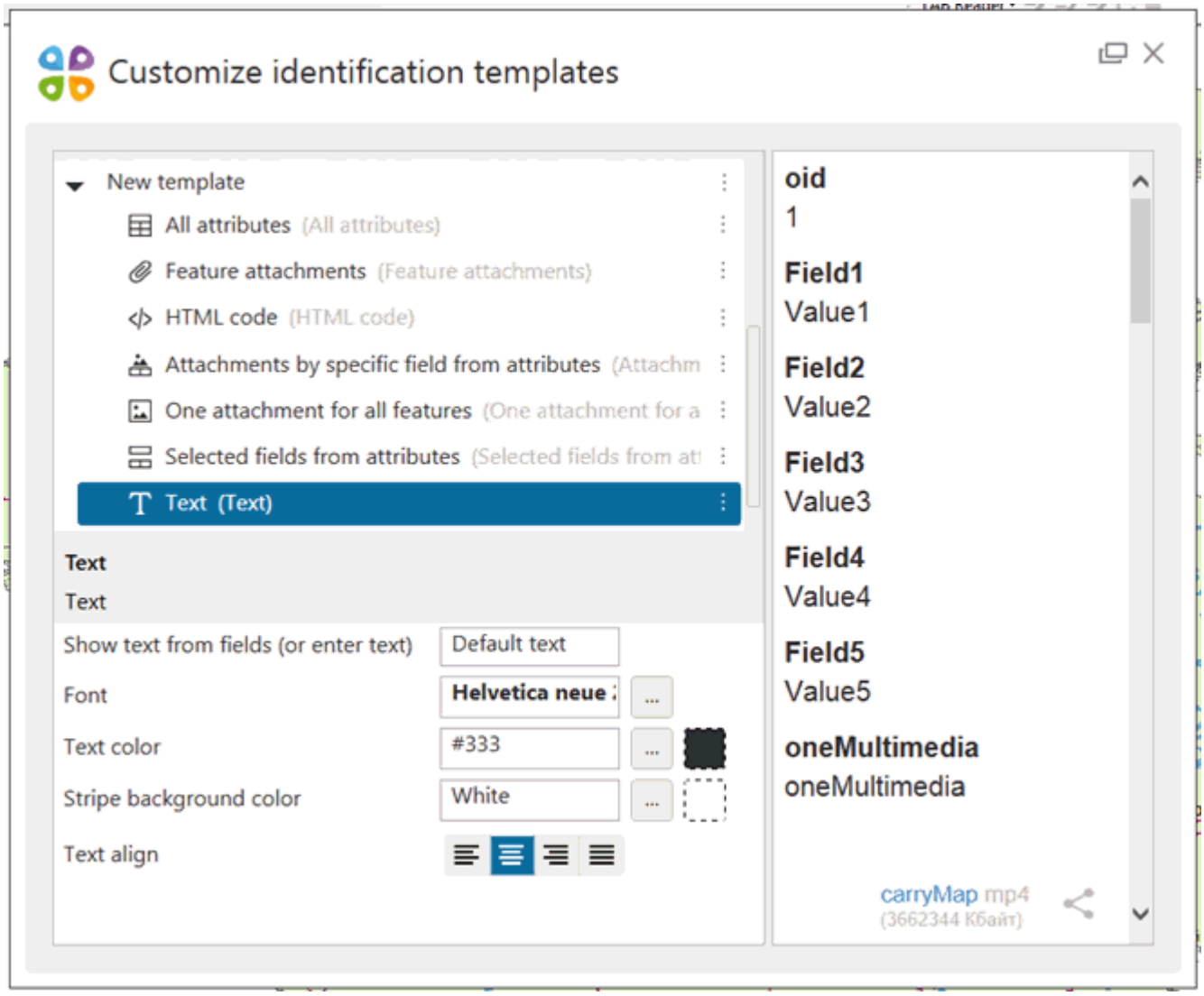
- **One attachment for all features** – this type of stripe is used to display multimedia file that needs to be displayed in identification dialogs for all features of the layer, for example, your company logo. The background color for this stripe can be selected.



- **Selected fields from attributes –** this type of stripe is used to display part of the attribute table, i.e. those attributes only that should be visible to the user. Settings for text display and background color for this stripe can be specified in **Customize identification templates** menu. Fields that need to be displayed are selected in **Map** tab of **Customize map extraction** dialog.

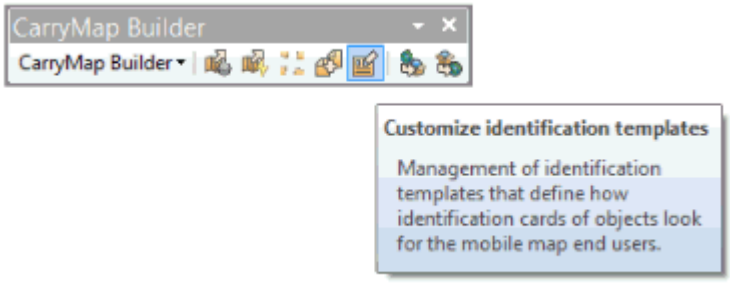


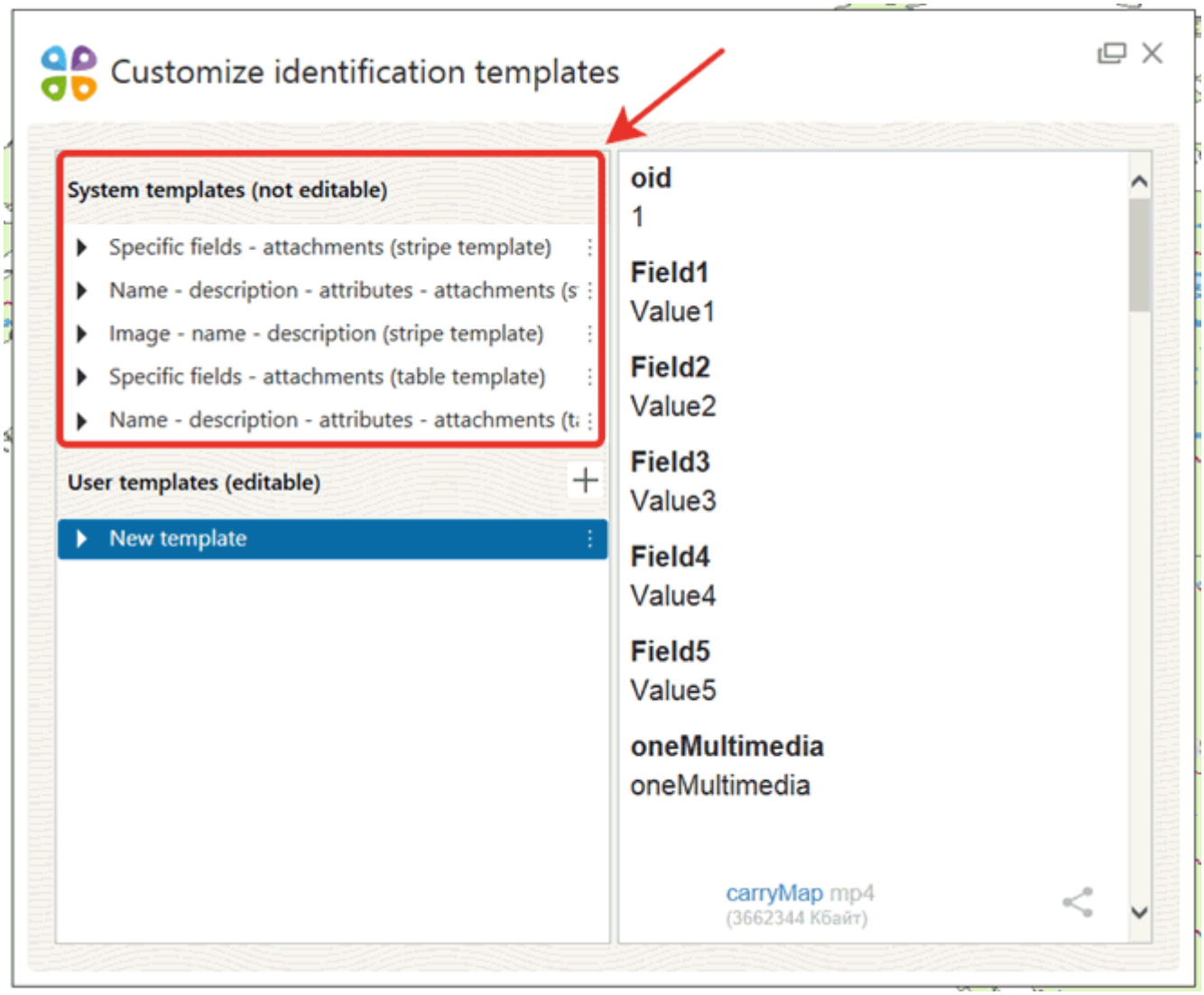
- **Text** – this type of stripe is used to display text description of feature, that can be typed manually or added using appropriate attribute text field. Settings for text display and background color for this stripe can be specified in **Customize identification templates** menu. If you want to display the field value here, this field should be selected in **Map** tab of **Customize map extraction** dialog.


Customize identification templates
New template
All attributes (All attributes)
Feature attachments (Feature attachments)
HTML code (HTML code)
Attachments by specific field from attributes (Attachm
One attachment for all features (One attachment for a
Selected fields from attributes (Selected fields from at
Text (Text)
Text
Text
Show text from fields (or enter text)
Default text
Font
Helvetica neue
Text color
#333
Stripe background color
White
Text align
oid
1
Field1
Value1
Field2
Value2
Field3
Value3
Field4
Value4
Field5
Value5
oneMultimedia
oneMultimedia
carryMap mp4
(3662344 Кбайт)

About system identification templates

For work with system identification templates run **Customize identification templates** tool on CarryMap Builder toolbar.

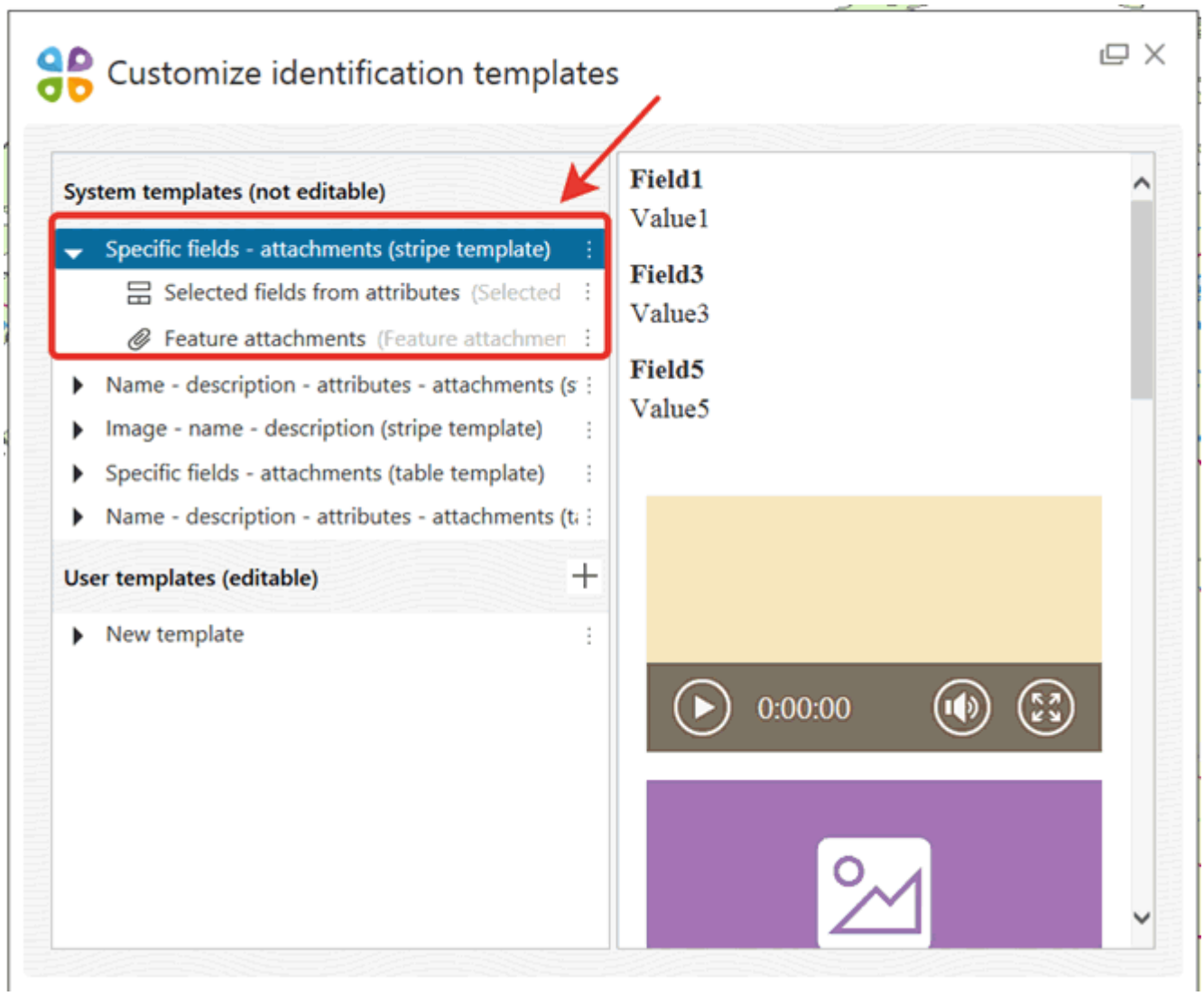




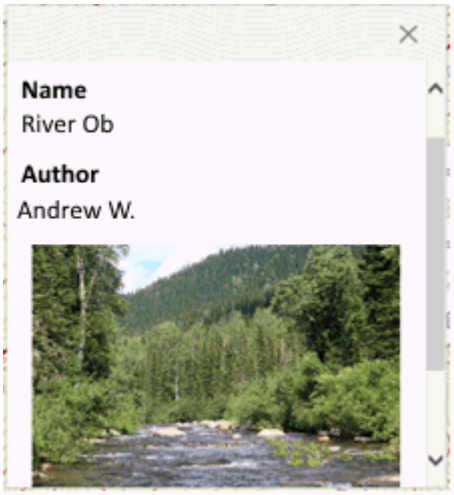
System identification template is a window divided to separate information blocks as stripes. Type of displayed data, as well as information display order in stripes are strictly defined.

Using system template Specific fields – attachments (stripe or table)

System template **Specific fields – attachments (stripe template)** consists of Selected fields from attributes and Feature attachments stripes.

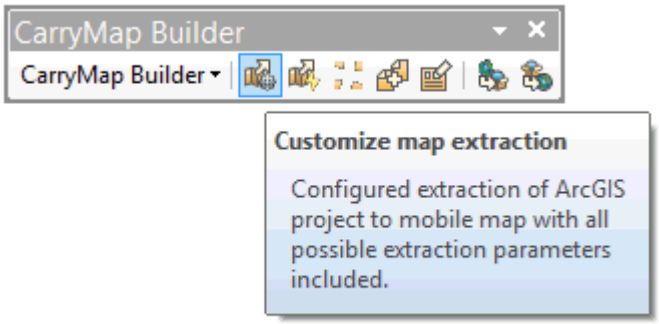


Information in the identification card created using this template is arranged as stripes.

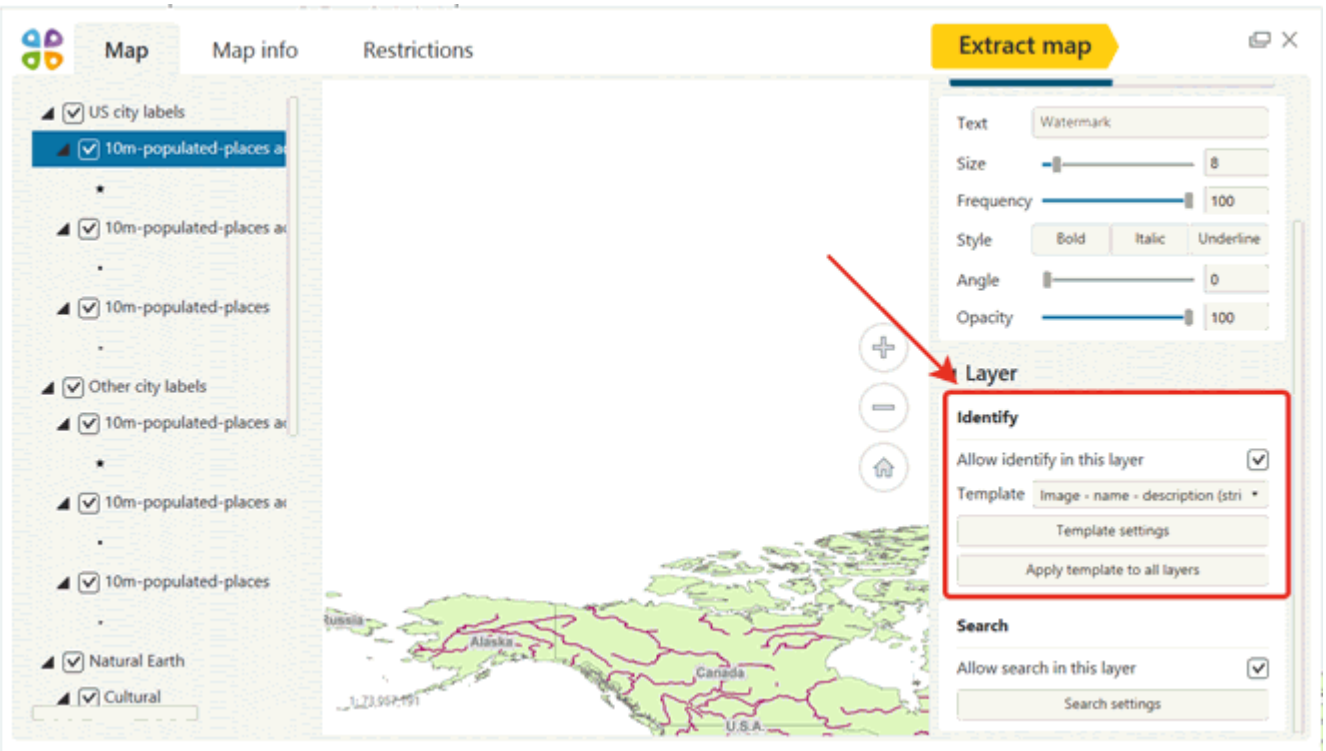


To use the same template type but with information arranged as a table, select **Specific fields – attachments (table template)**, respectively.

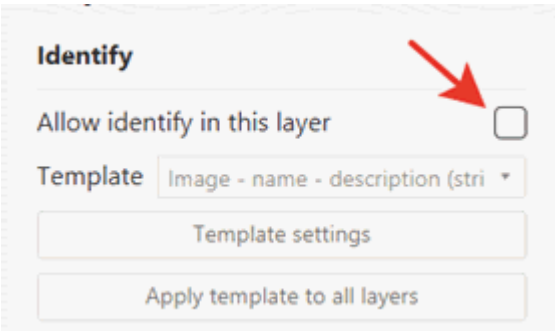
To use system template **Specific fields – attachments (stripe template)** or **Specific fields – attachments (table template)**, press **Custom map extraction**.



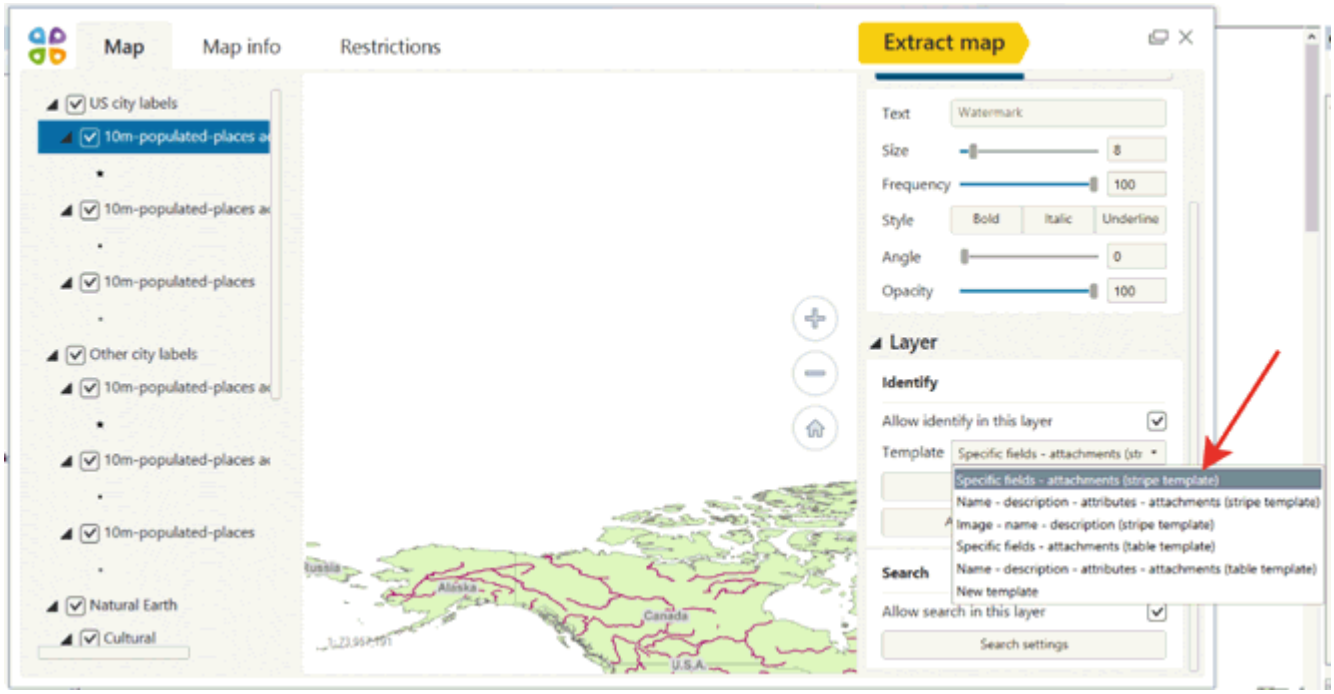
In CarryMap Builder layers list select the required layer and go to **Identify** section.



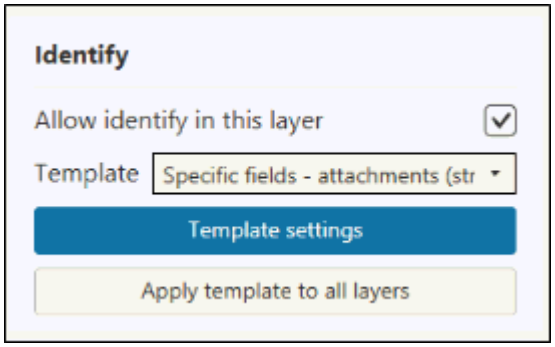
Check **Allow identify in this layer** option.



In **Template** section select **Specific fields – attachments (stripe template)** or **Specific fields – attachments (table template)** from the list.

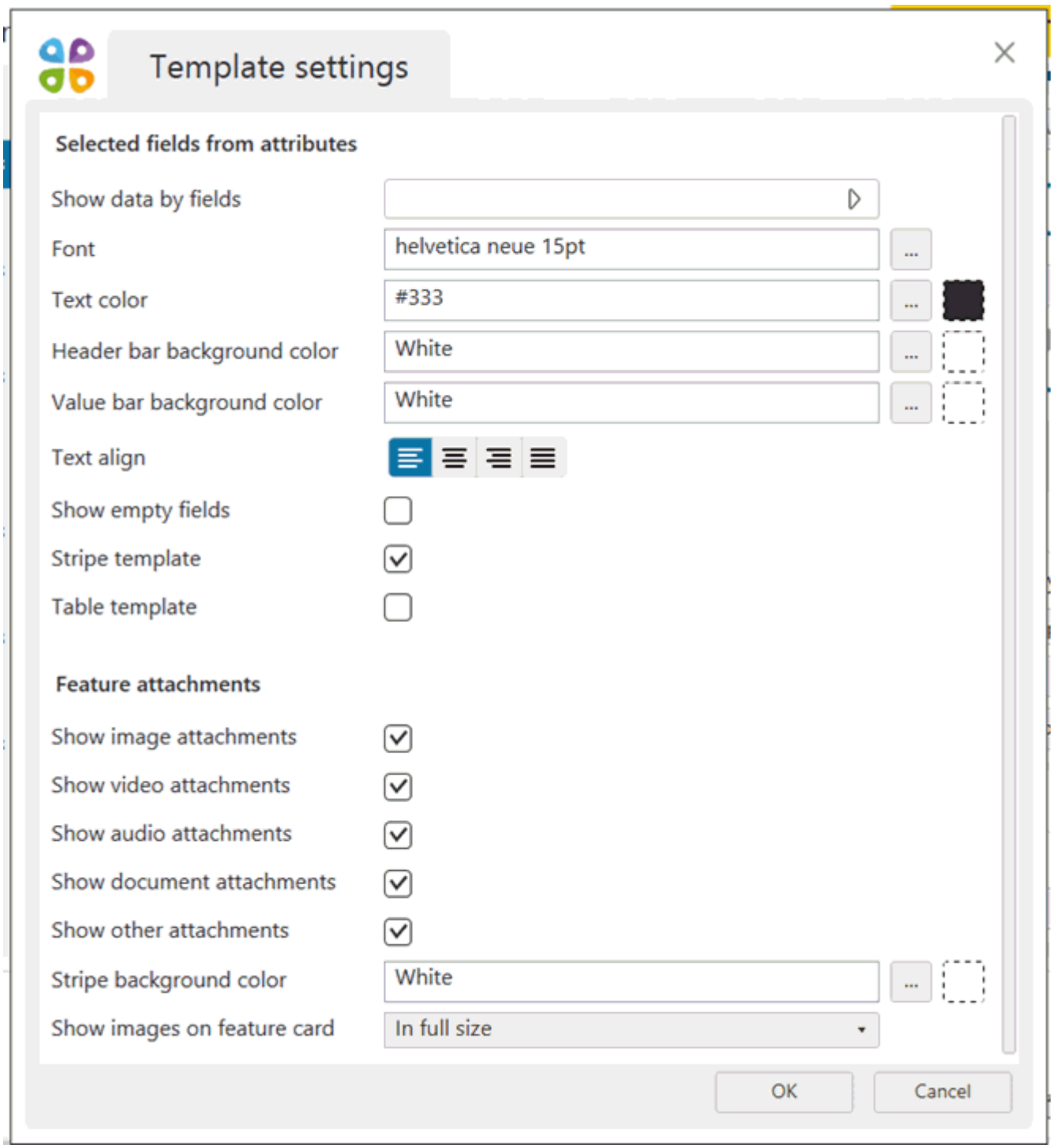


To specify additional template settings, press **Template settings**.

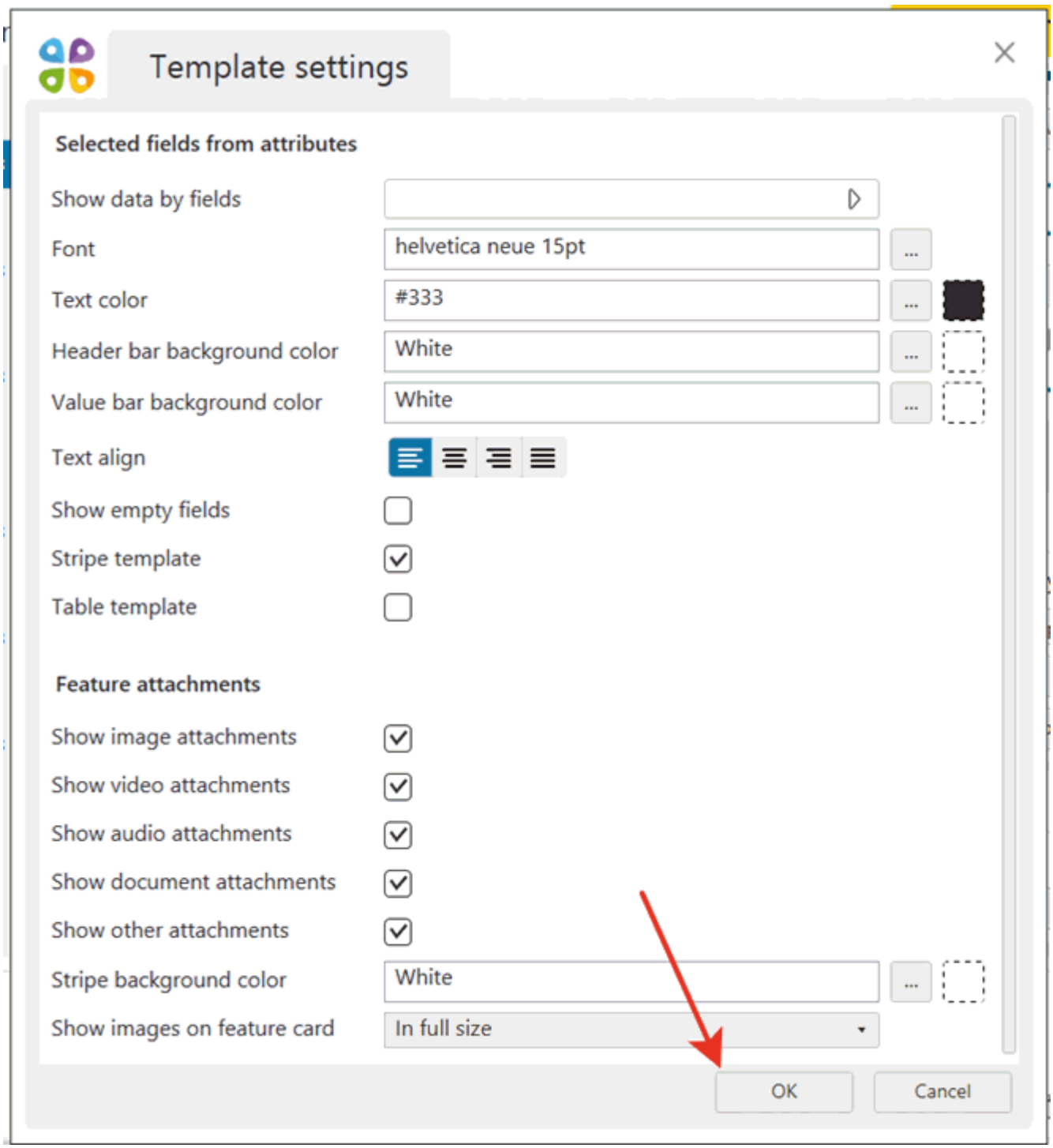


In the appeared dialog *make sure* for stripes **Selected fields from attributes** and **Feature attachments** to select fields which attributes will be shown by features identification. Select the text settings if necessary: font, color and alignment.

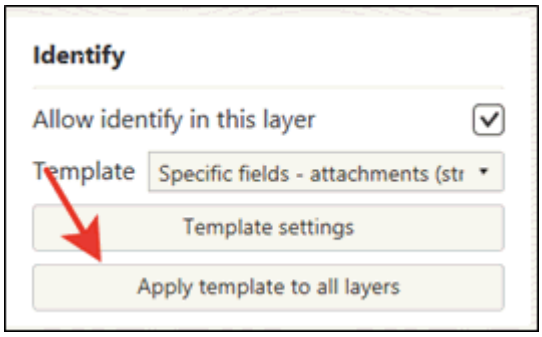
For stripe **Feature attachments** select which attachments should be displayed in the identification cards, selecting required types of attachments.



Confirm all made changes pressing **OK**.

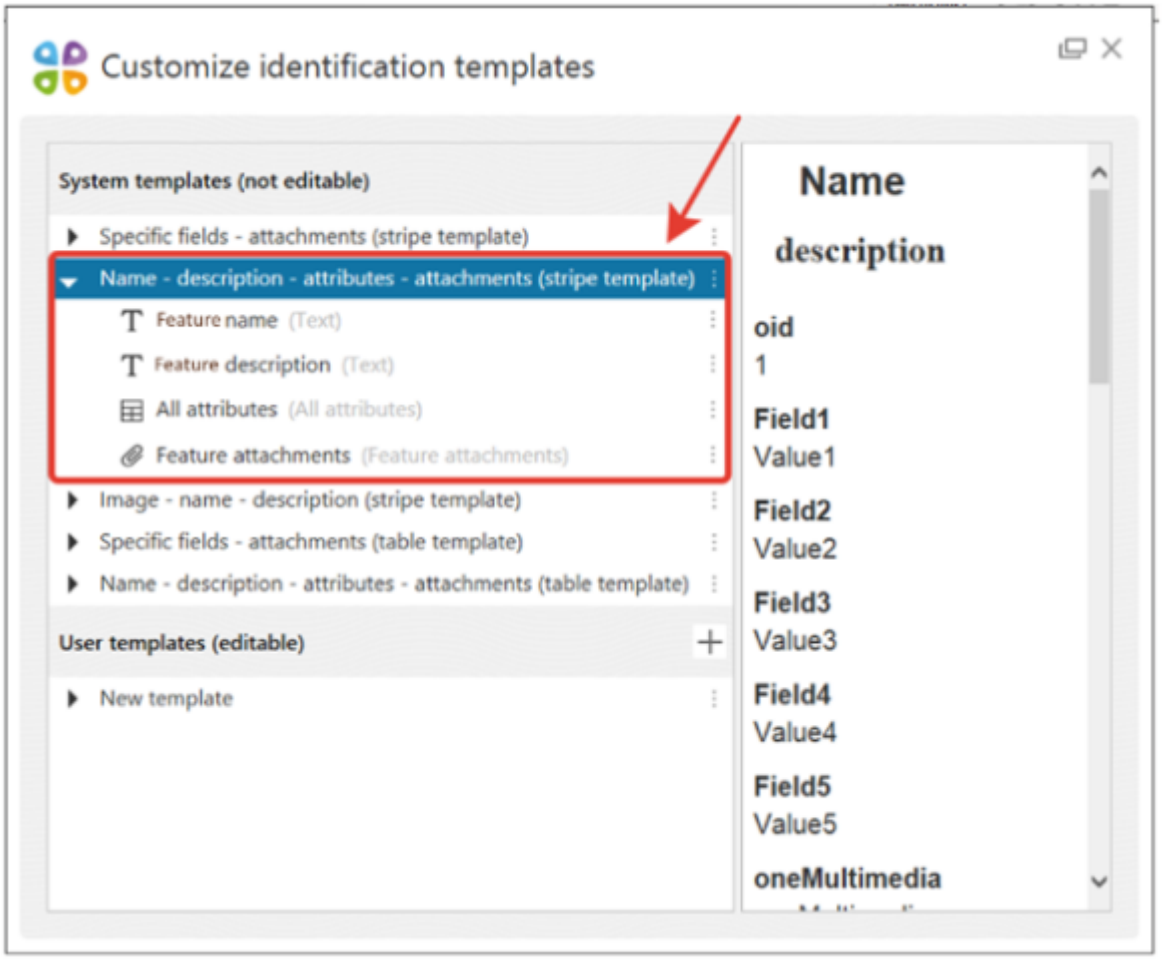


To apply selected template to all layers of your ArcMap document, press **Apply template to all layers**.

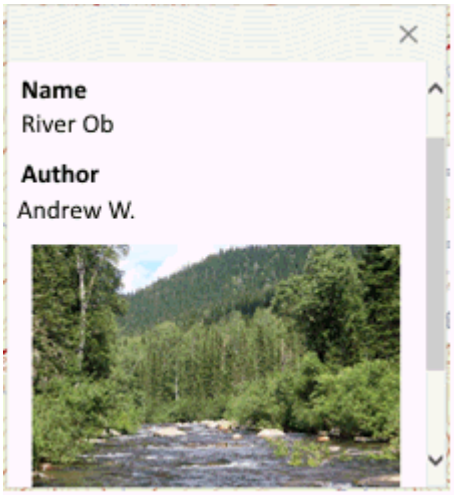


Using system template Name-description-attributes-attachments (stripe or table)

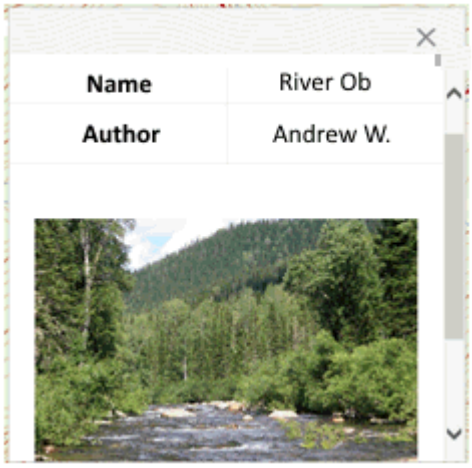
System template **Name-description-attributes-attachments (stripe)** consists of stripes Feature name (text), Description (text), and All attributes, feature attachments.



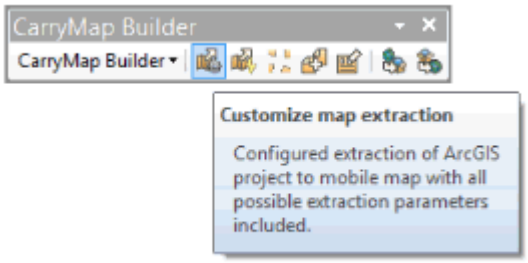
Information in the identification card created using this template is arranged as stripes.



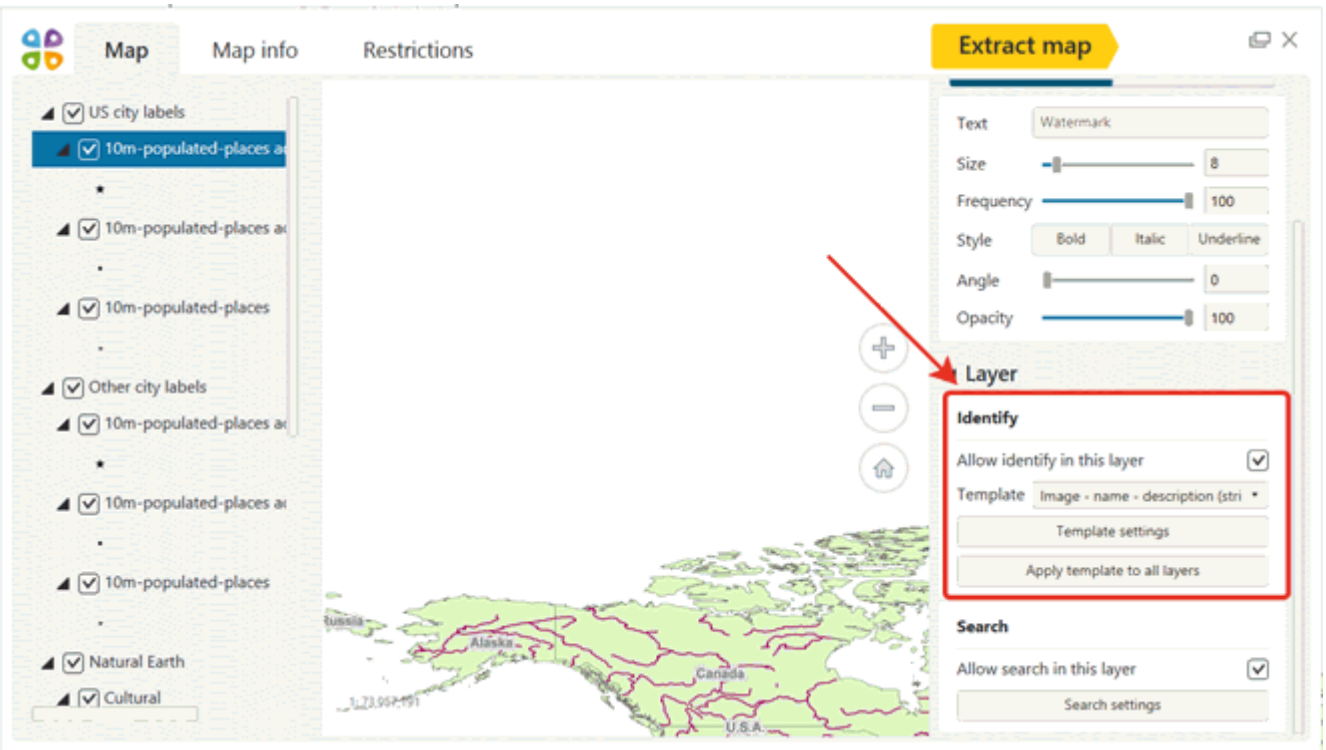
To use the same template type but with information arranged as a table, select **Name-description-attributes-attachments (table)**, respectively.



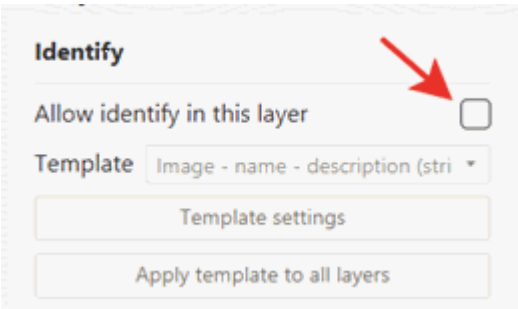
To use system template **Name-description-attributes-attachments (stripe)** or **Name-description-attributes-attachments (table)**, press **Customize map extraction**.



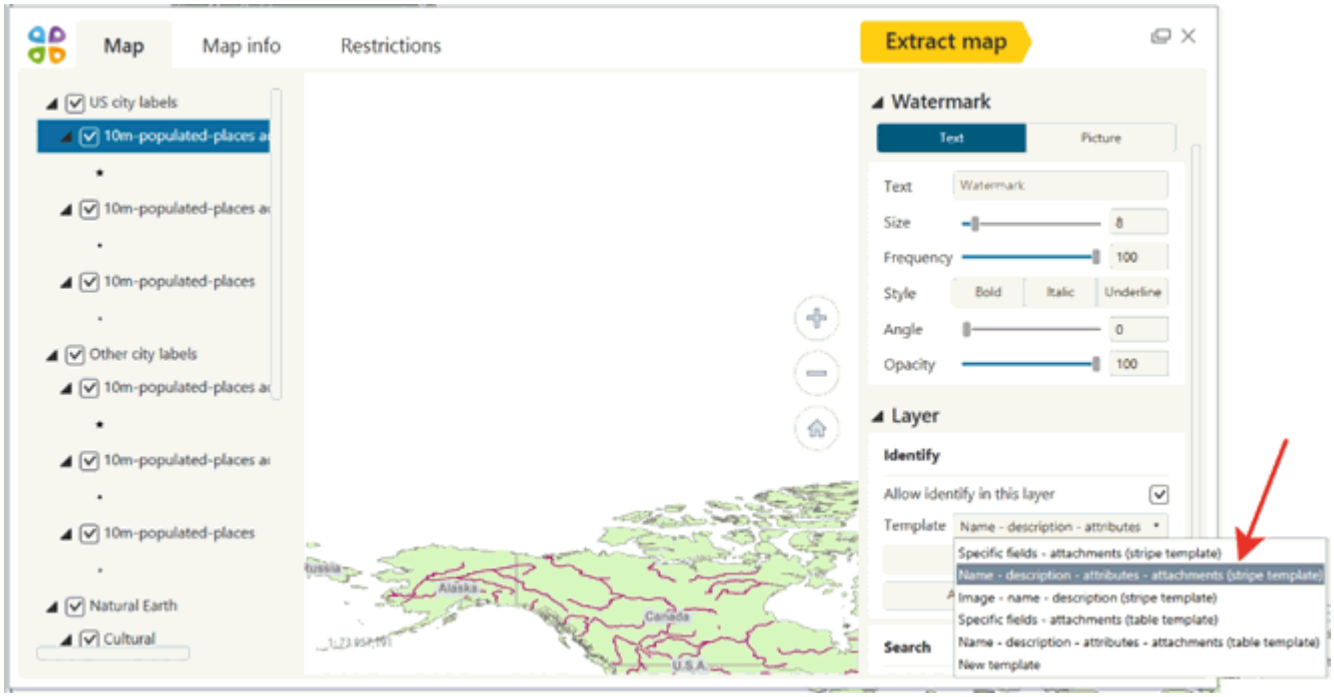
In CarryMap Builder layers list select the required layer and go to **Identify** section.



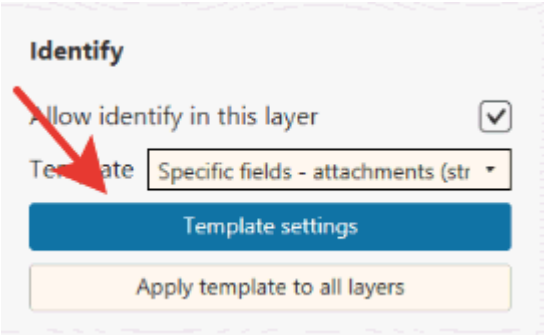
Check **Allow identify in this layer** option.



In **Template** section select **Name-description-attributes-attachments (stripe)** or **Name-description-attributes-attachments (table)** from the list.

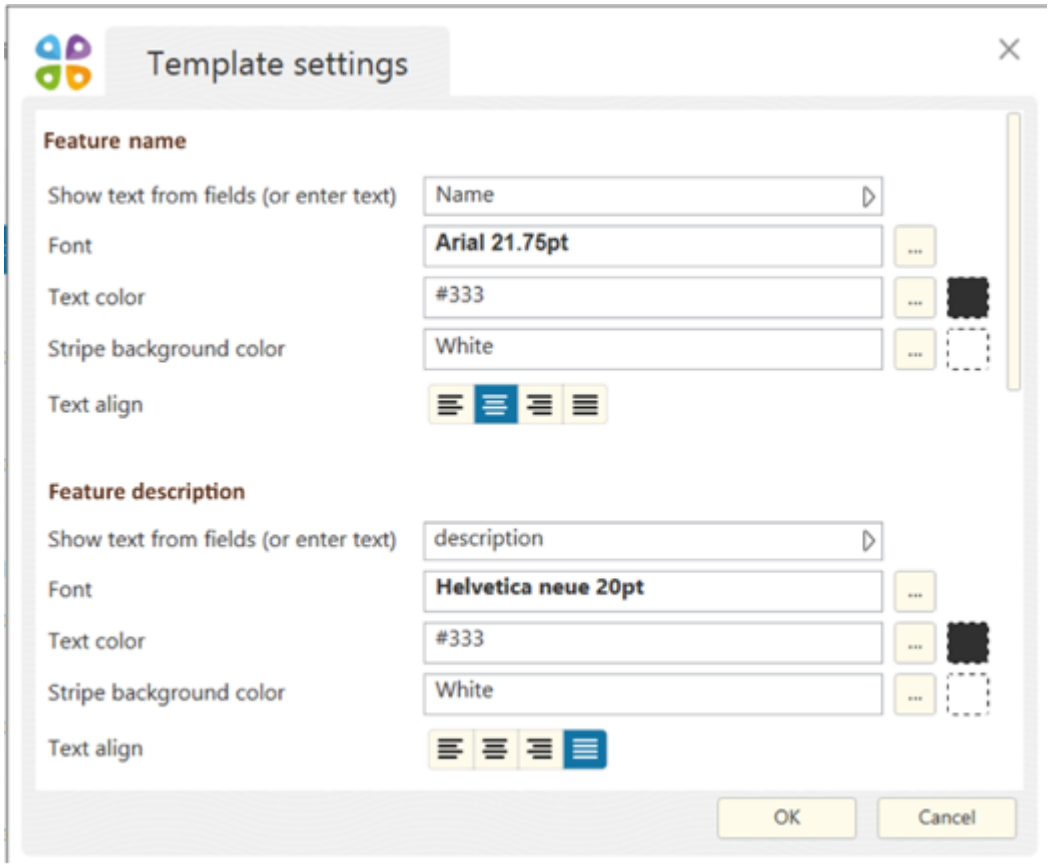


To specify additional template settings, press **Template settings**.



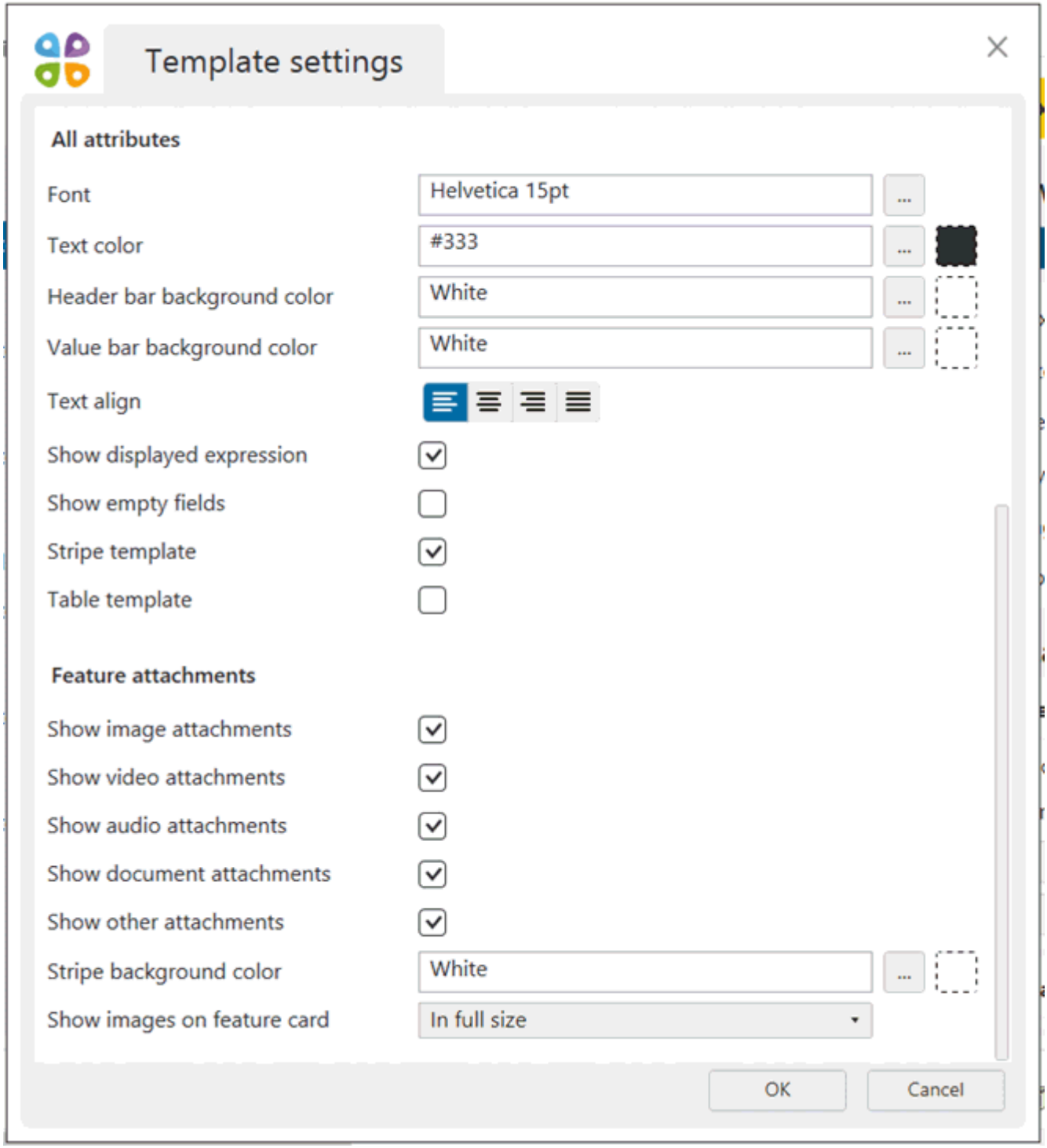
For stripe **Feature name** *make sure* to select field in **Show text from field** section. That is, during feature's identification, the feature's name will be displayed based on selected field. Select the text settings if necessary: font, color and alignment.

For stripe **Feature description** *make sure* to select field in **Show text from field** section. That is, during feature's identification, the feature's description will be displayed based on selected field. Select the text settings if necessary: font, color and alignment.

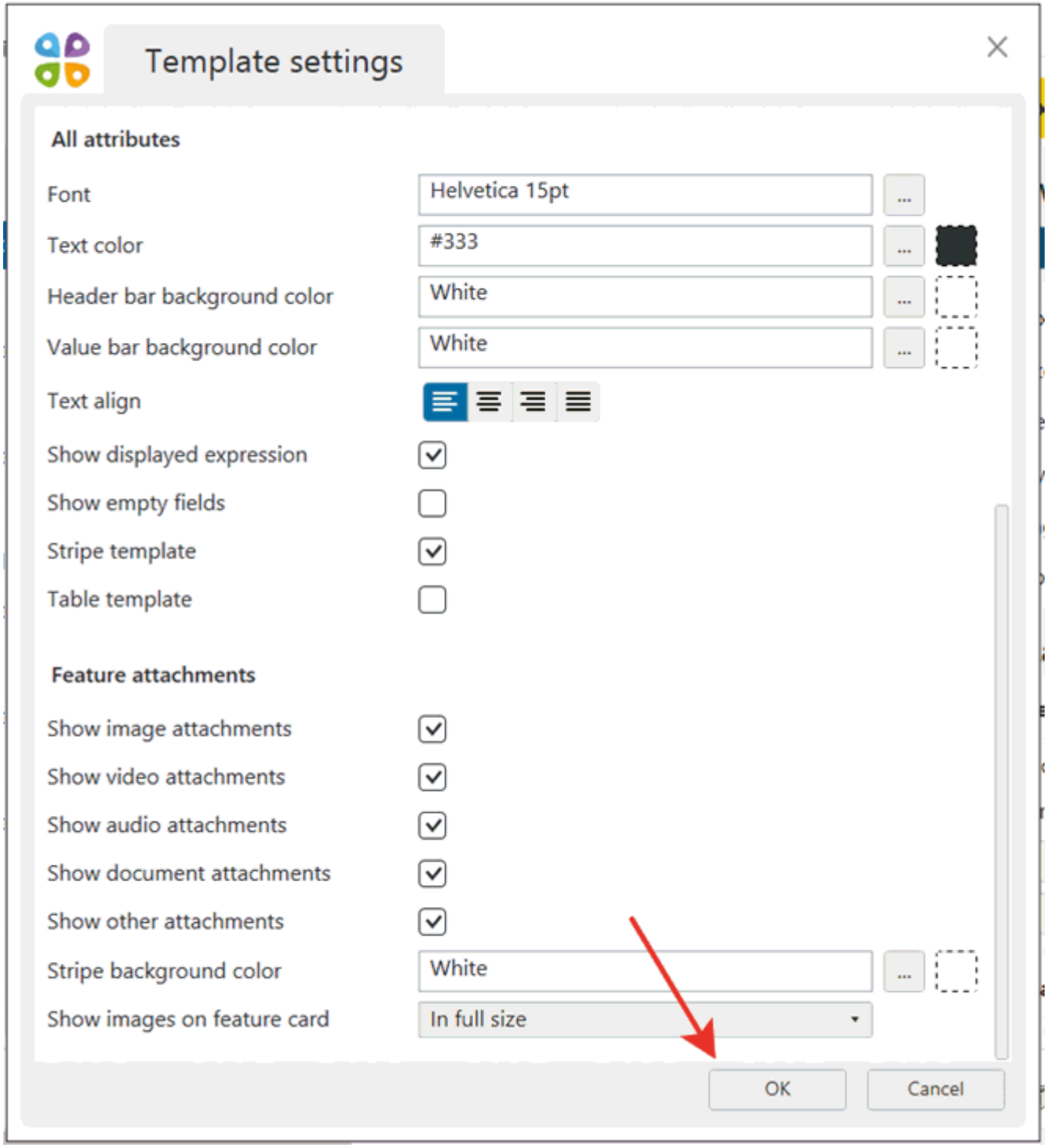


For stripe **All attributes** you can specify the following settings: text font, color and alignment, whether you need to show displayed expression (specified in ArcMap settings), data display view (stripe or table), and specify whether you need to show empty fields or not. All these settings are optional, for this stripe you can use default settings if they work for you.

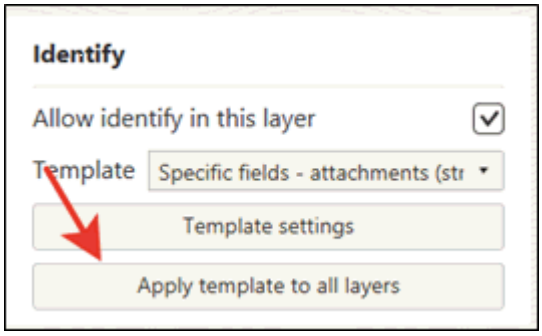
For stripe **Feature attachments** select which attachments should be displayed in the identification cards, selecting required types of attachments.



Confirm all made changes pressing **OK**.

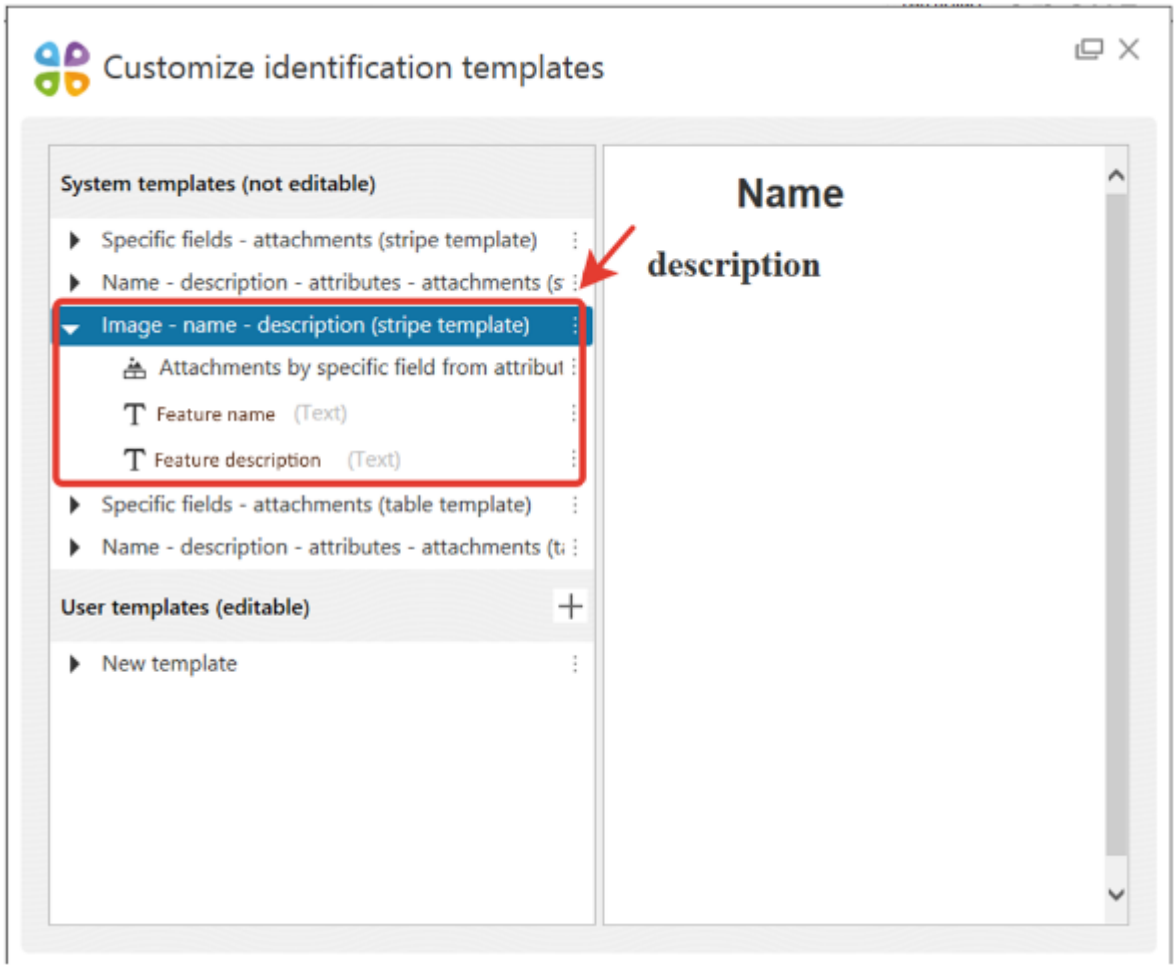


To apply selected template to all layers of your ArcMap document, press **Apply template to all layers**.

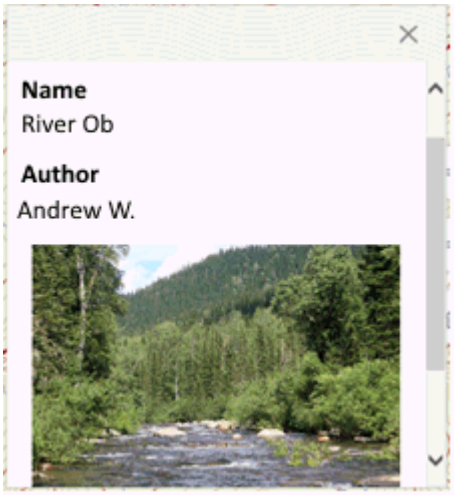


Using system template Image-name-description (stripe)

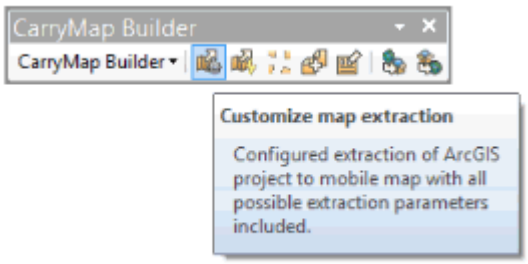
System template **Image-name-description (stripe)** consists of stripes Attachment by specific field from attributes, Feature name (text), feature description (text).



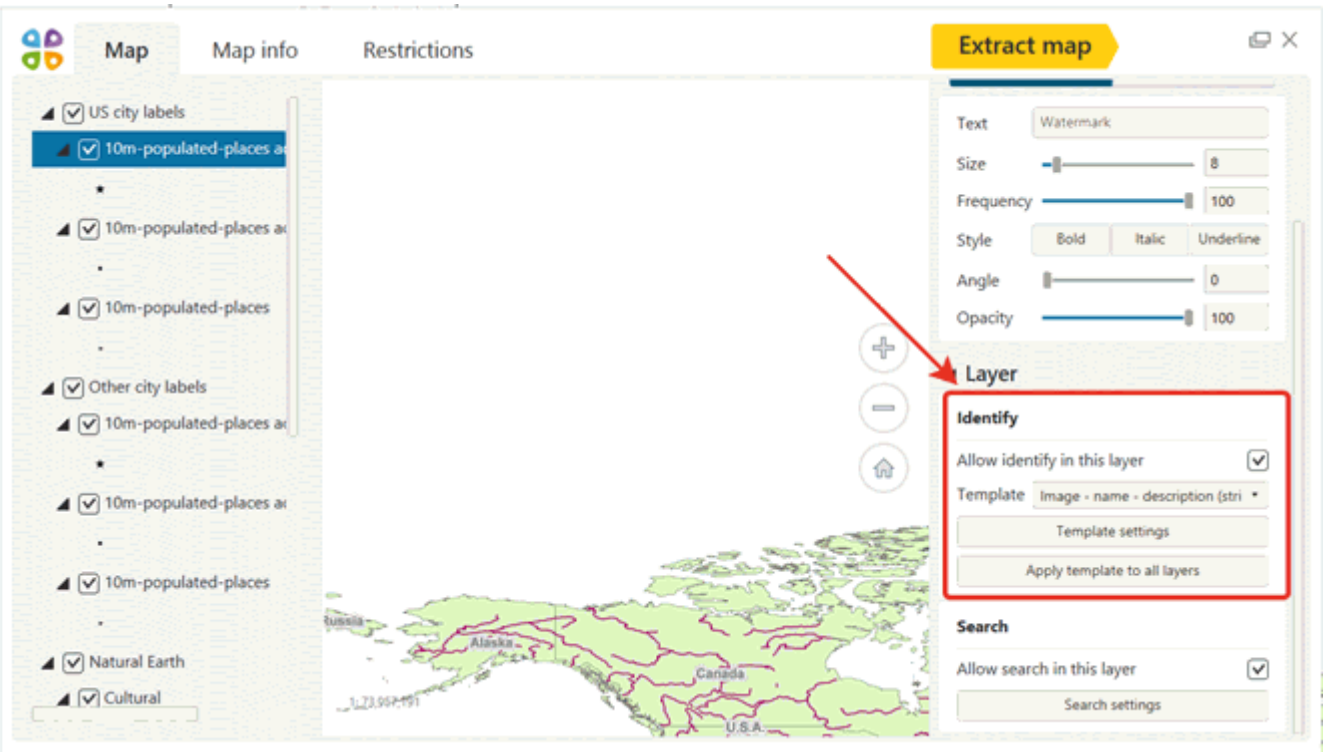
Information in the identification card created using this template is arranged as stripes.



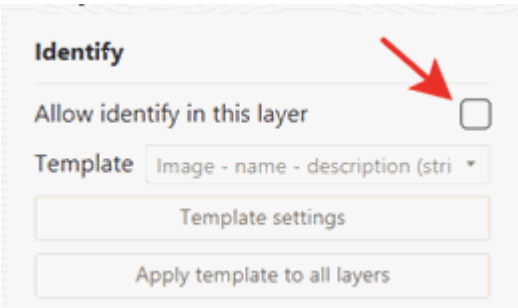
To use system template **Image-name-description (stripe),** press **Customize map extraction**.



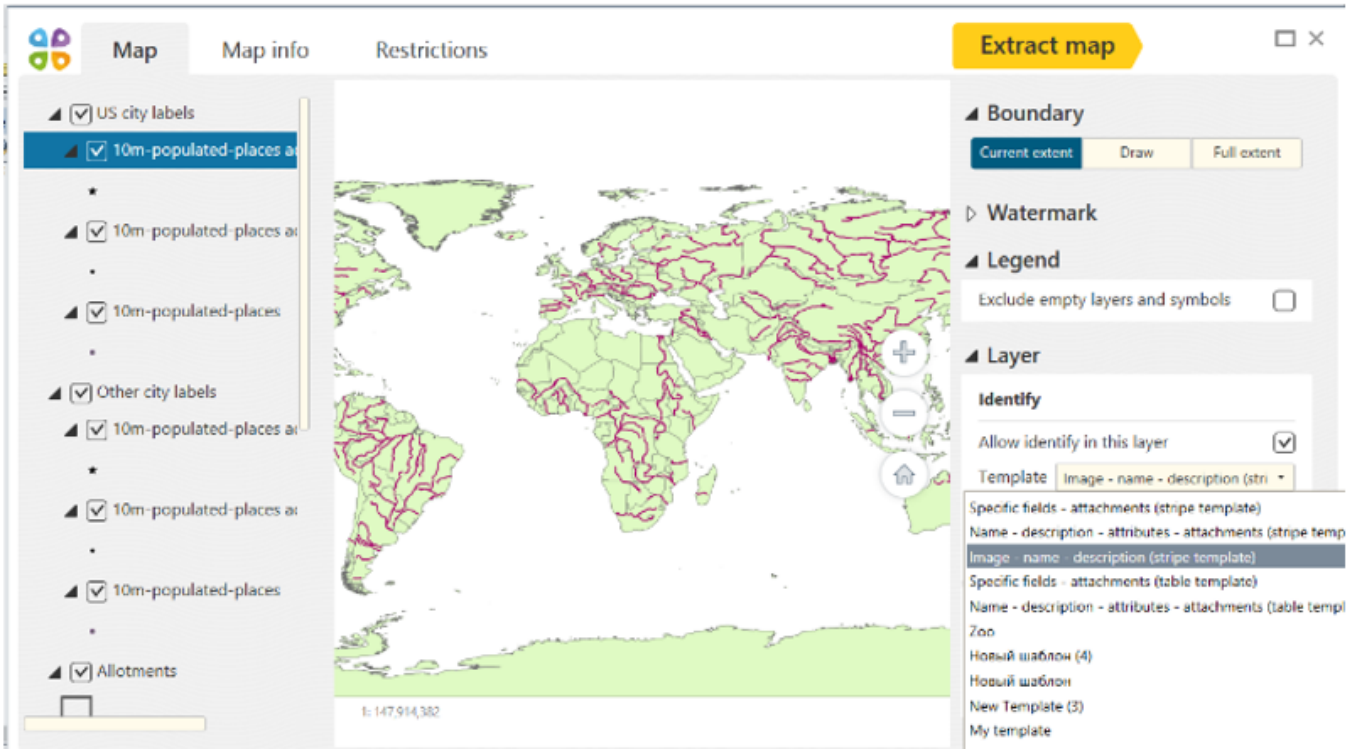
In CarryMap Builder layers list select the required layer and go to **Identify** section.



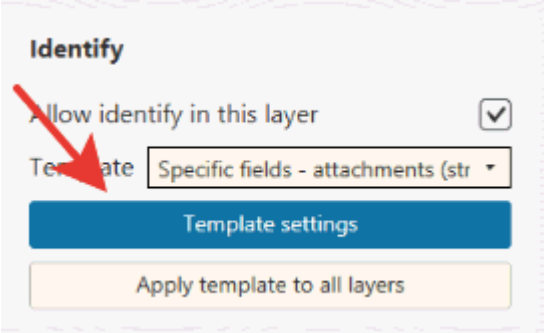
Check the **Allow identify this layer** option.



In **Template** section select **Image-name-description (stripe)** from the list.



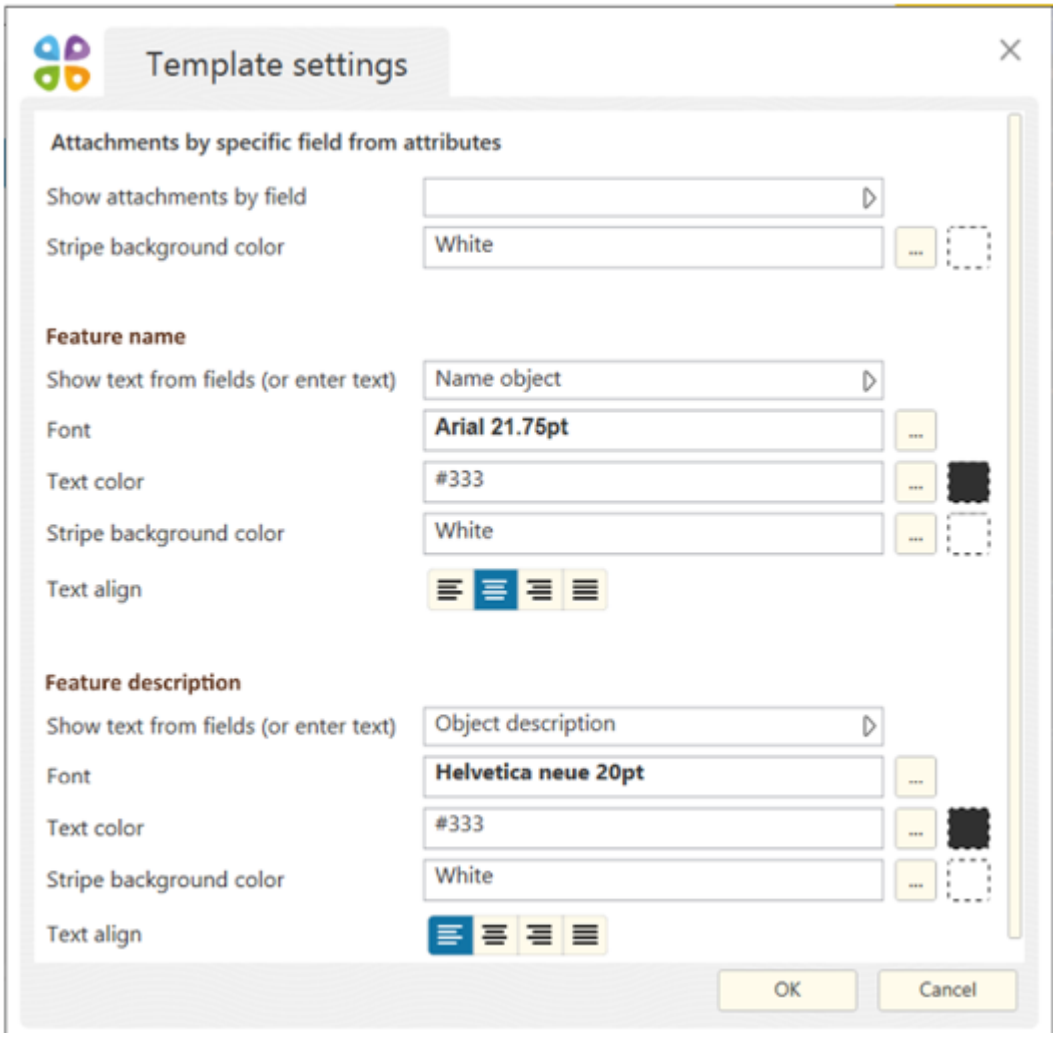
To specify additional template settings, press **Template settings**.



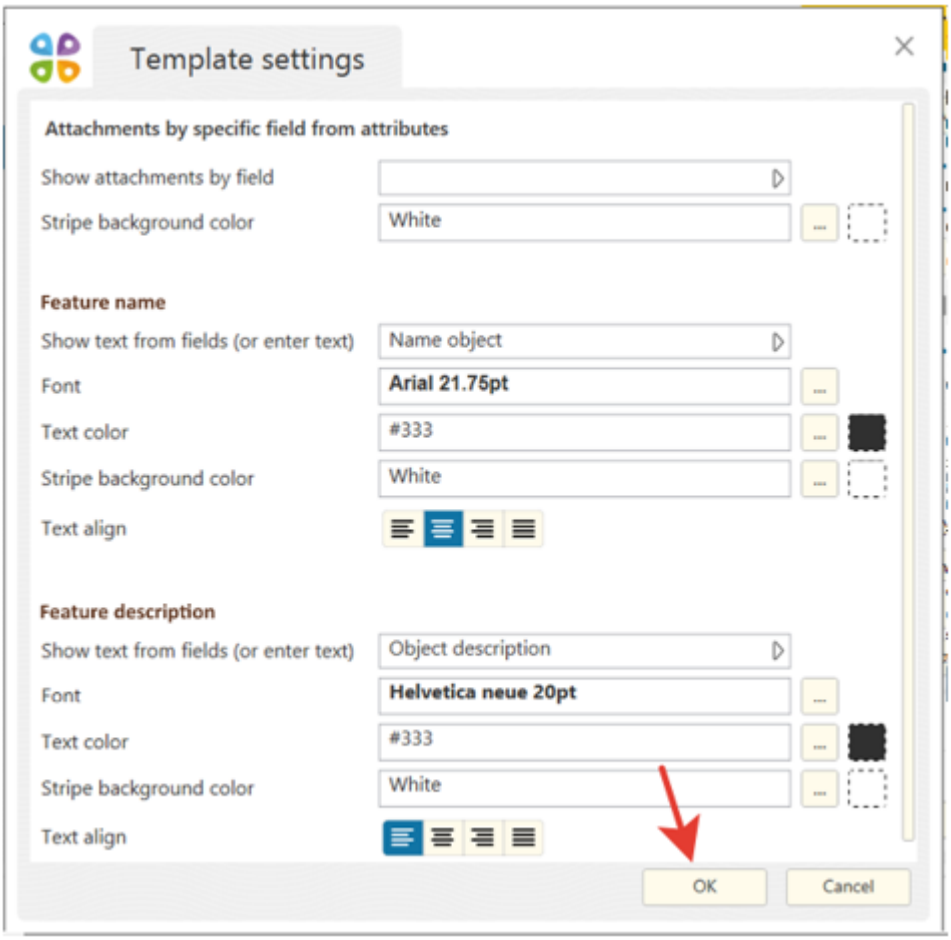
In the appeared dialog *make sure* for stripe **Attachments by specific field from attributes** in section **Show attachments by field** to select the field. Settings of stripe background color are optional.

For stripe **Feature name** *make sure* to select field in **Show text from field** section. That is, during feature's identification, the feature's name will be displayed based on selected field. Select the text settings if necessary: font, color and alignment.

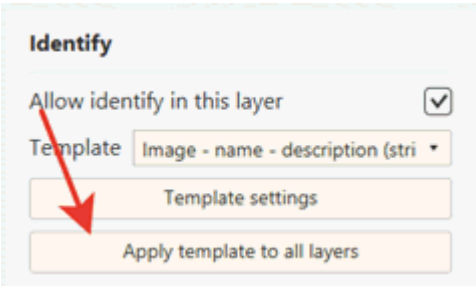
For stripe **Feature description** *make sure* to select field in **Show text from field** section. That is, during feature's identification, the feature's description will be displayed based on selected field. Select the text settings if necessary: font, color and alignment.



Confirm all made changes pressing **OK**.

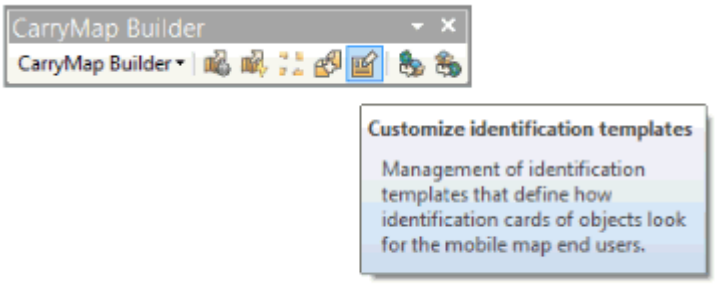


To apply selected template to all layers of your ArcMap document, press **Apply template to all layers**.

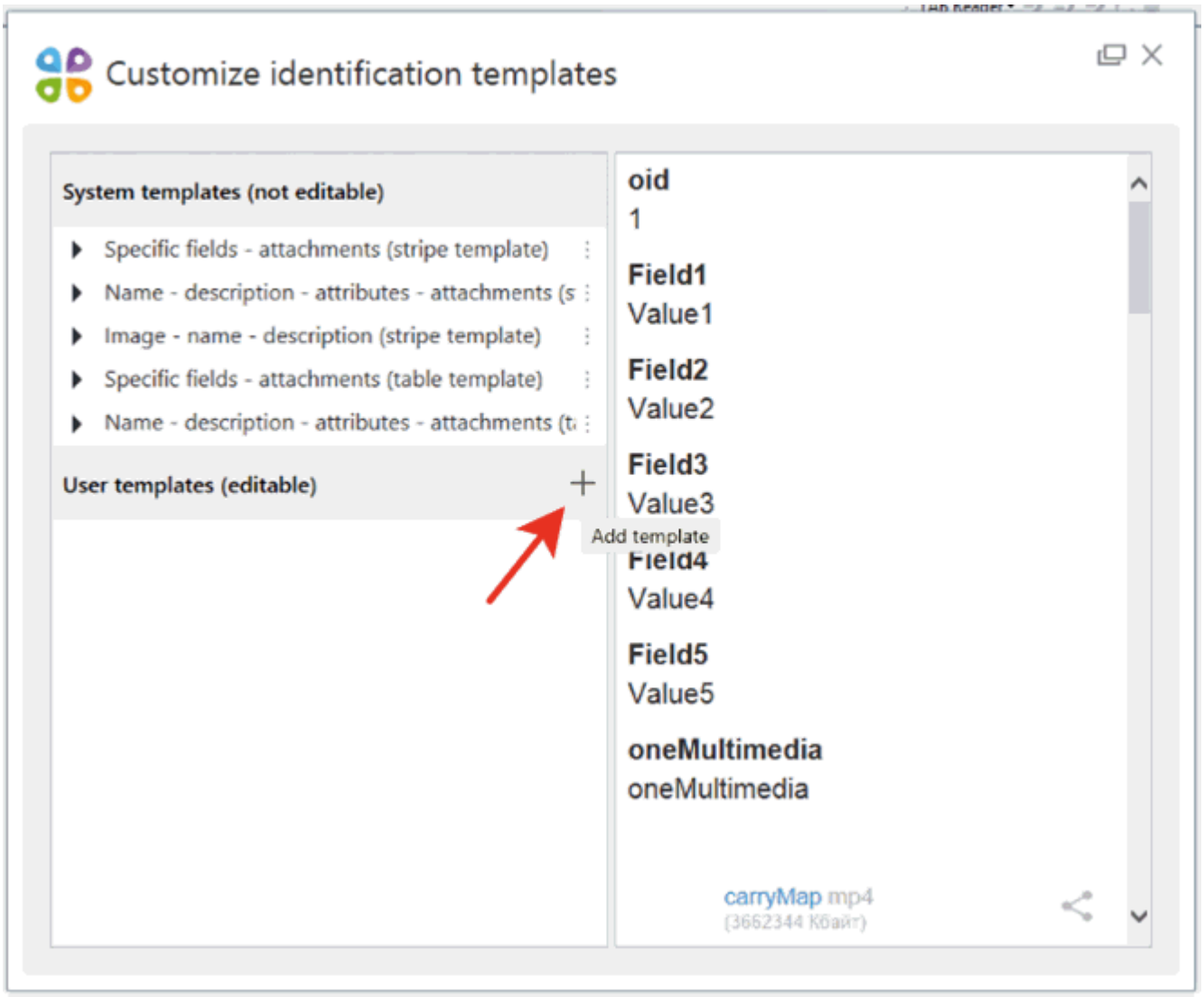


Creating user identification template

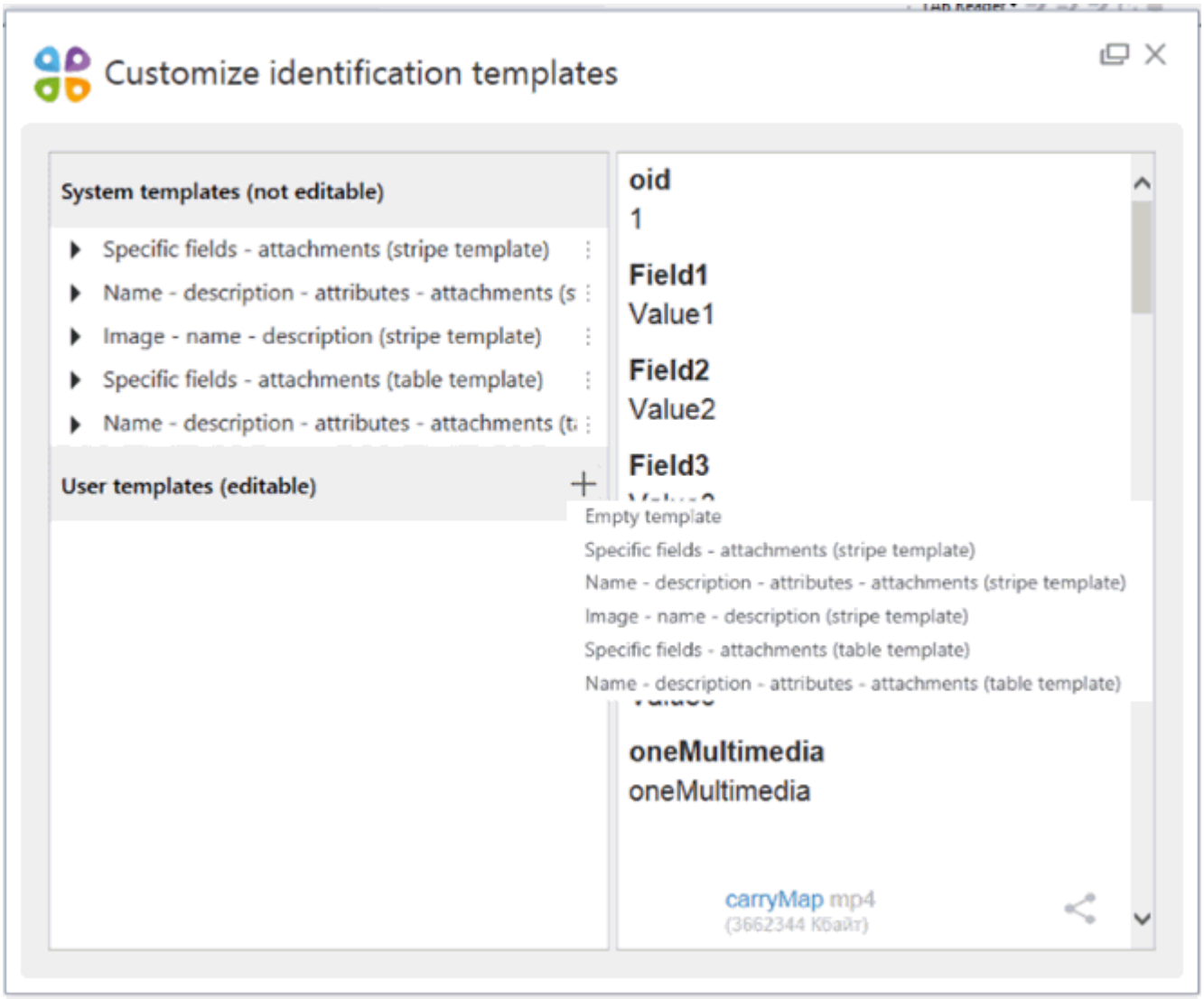
To create user identification template, run **Customize identification templates** tool.



To create new template, press +.

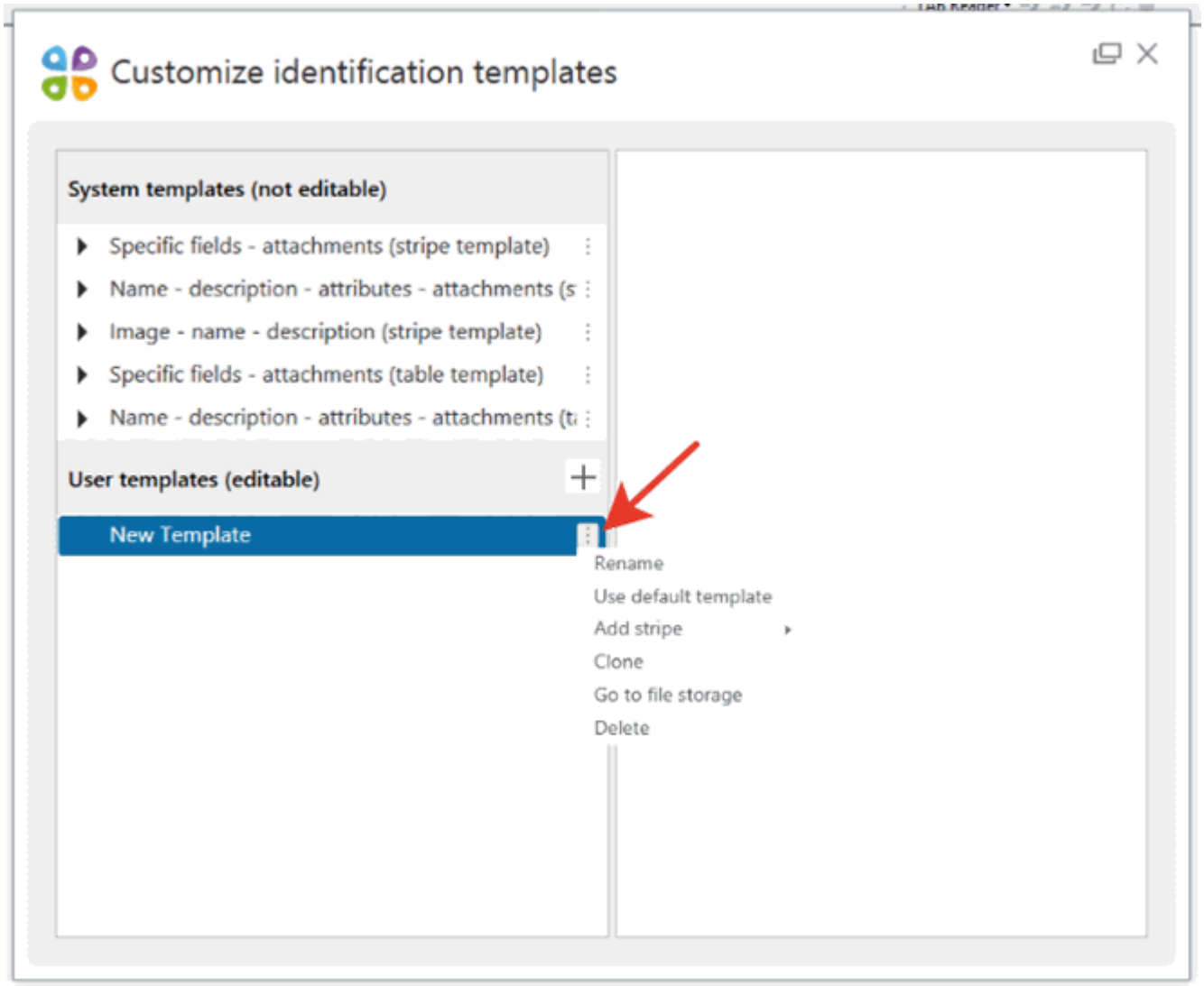


In the dropdown list select the empty template or template with predefined set of stripes.



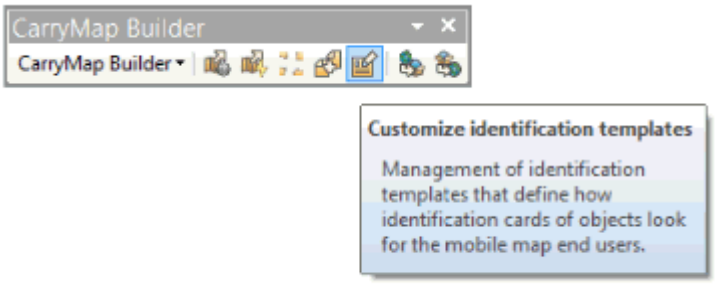
Note that to any user template, either empty or with predefined set of stripes, you can add as many stripes as needed.
With created template you will be able to do the following:

– *Rename.*
– *Use default template* – selected template will be applied as the default template when opening other ArcMap projects.
– *Add stripes* – adding other stripes (attachments, HTML code, description), you can make your identification cards more informative.
– *Clone* – make copy of selected template with other name.
– *Delete*.

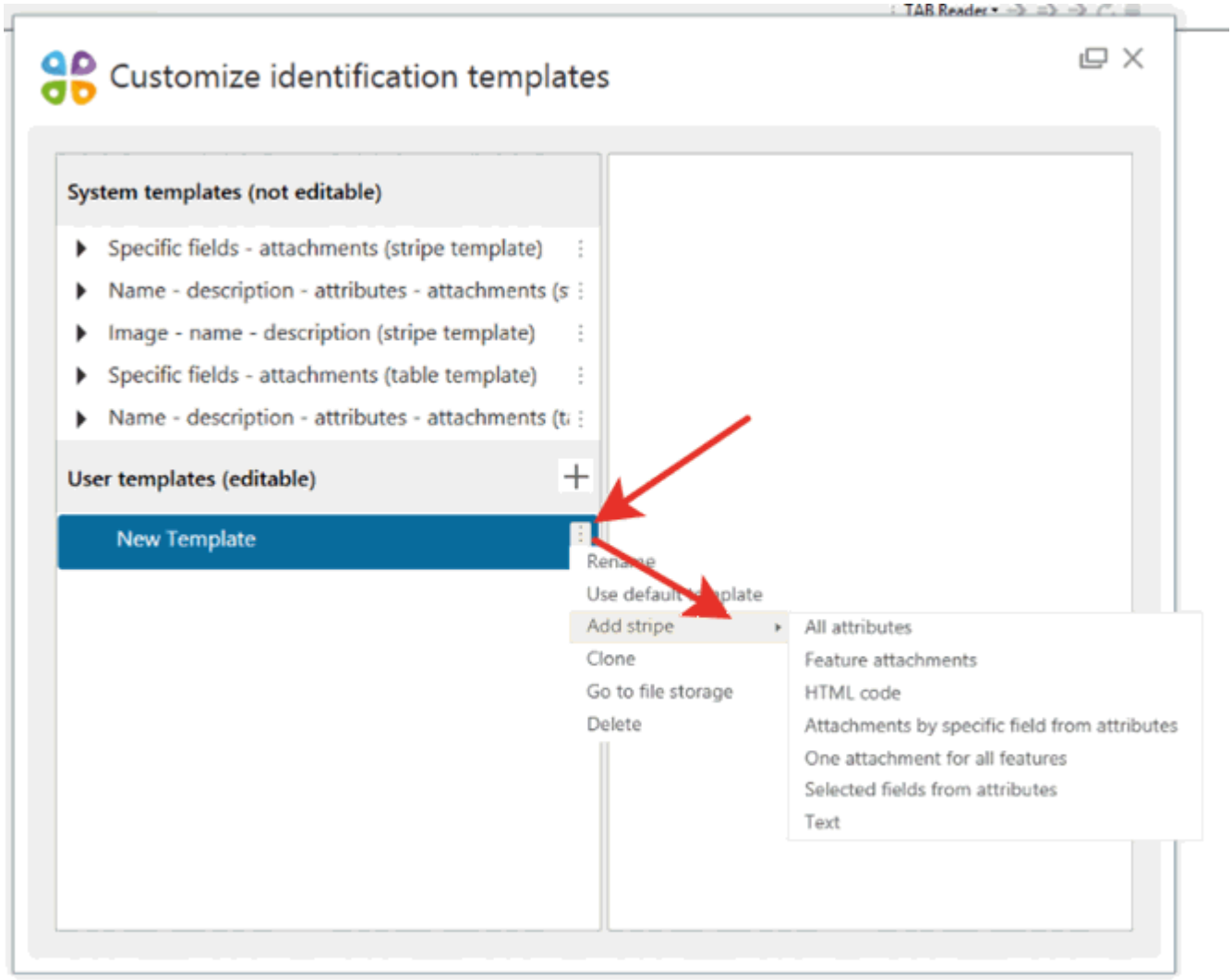

Customize identification templates
System templates (not editable)
Specific fields - attachments (stripe template)
Name - description - attributes - attachments (s
Image - name - description (stripe template)
Specific fields - attachments (table template)
Name - description - attributes - attachments (ta
User templates (editable)
New Template
Rename
Use default template
Add stripe
Clone
Go to file storage
Delete

Adding stripe to user template

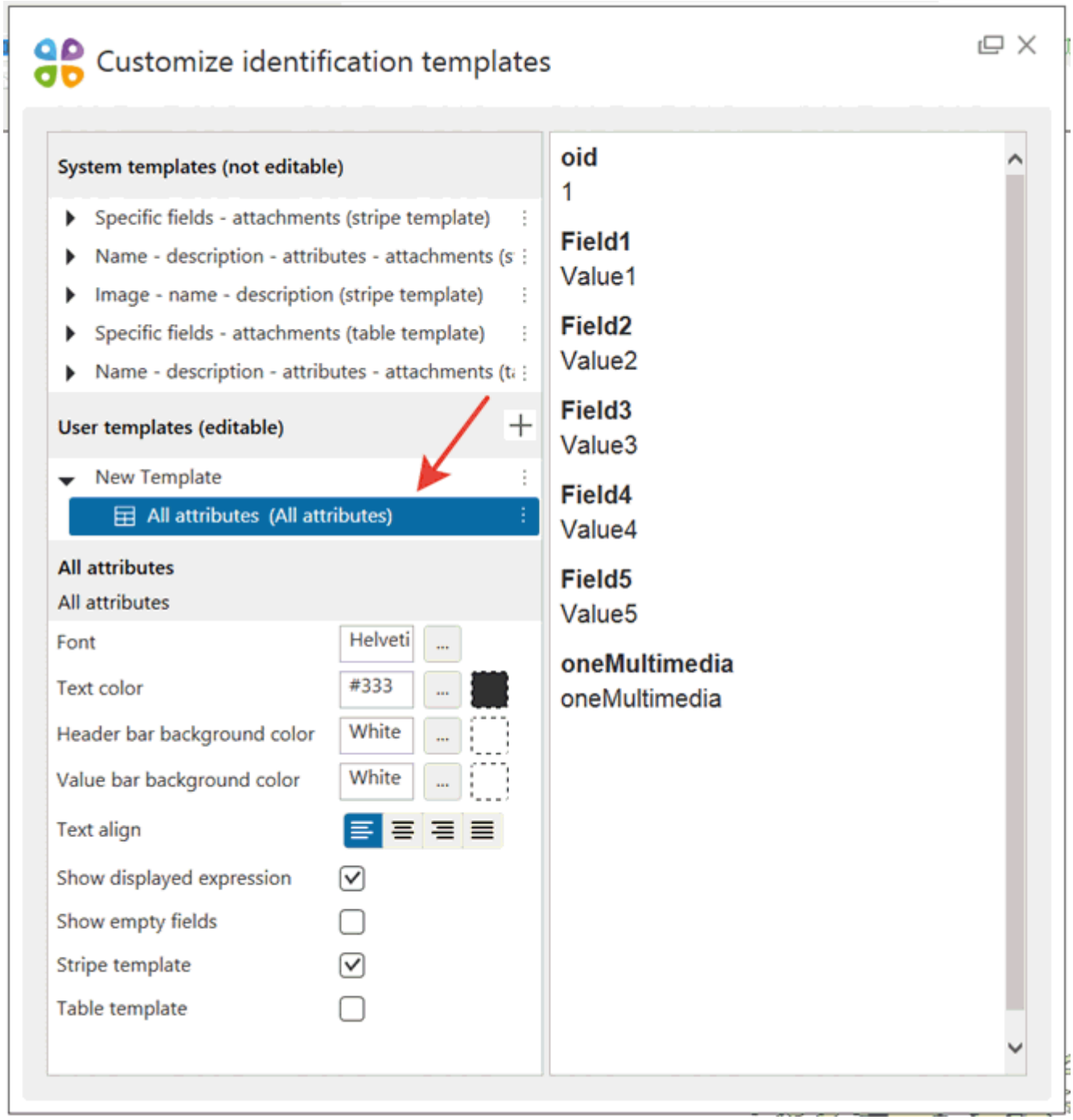
To create new stripe in user template, run **Customize identification templates** tool.



In the appeared dialog select user template to which you want to add new stripe, press three dots icon and then press **Add stripe**.

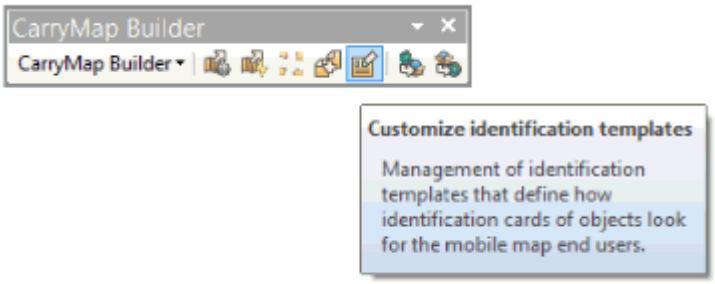


Select the needed stripe and it will be added to the template.

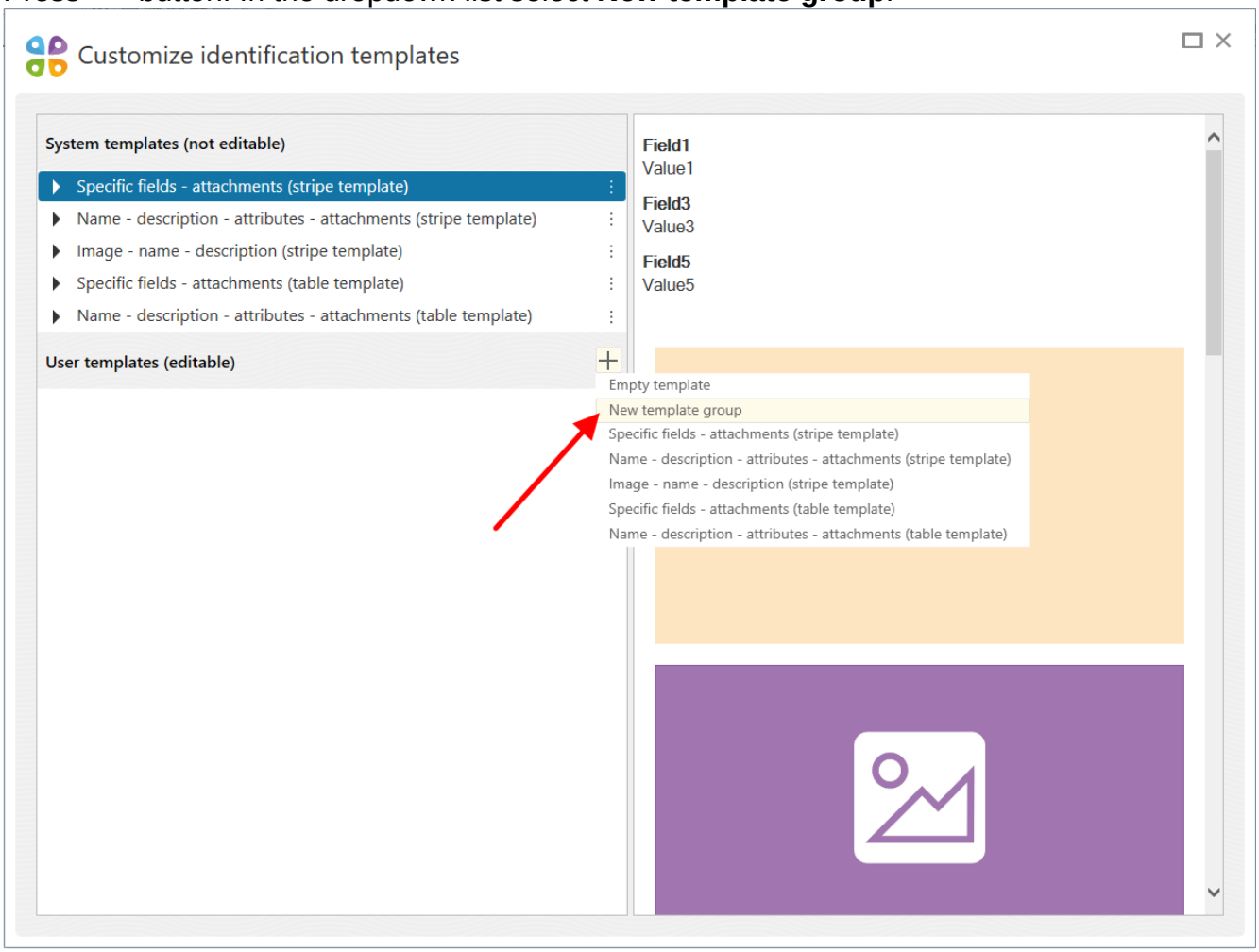

Customize identification templates
System templates (not editable)
Specific fields - attachments (stripe template)
Name - description - attributes - attachments (s
Image - name - description (stripe template)
Specific fields - attachments (table template)
Name - description - attributes - attachments (t
User templates (editable)
New Template
All attributes (All attributes)
All attributes
All attributes
Font
Helveti
Text color
#333
Header bar background color
White
Value bar background color
White
Text align
Show displayed expression
Show empty fields
Stripe template
Table template
oid
1
Field1
Value1
Field2
Value2
Field3
Value3
Field4
Value4
Field5
Value5
oneMultimedia
oneMultimedia

Creating template group

To create template group, run **Customize identification templates** tool.

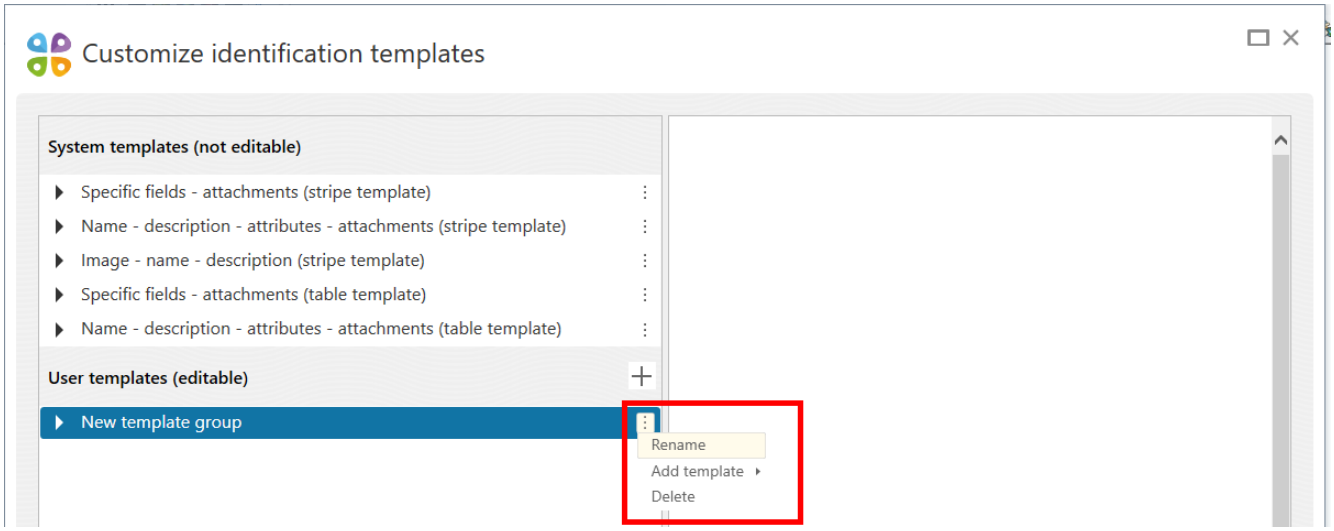


Press button. In the dropdown list select **New template group**.

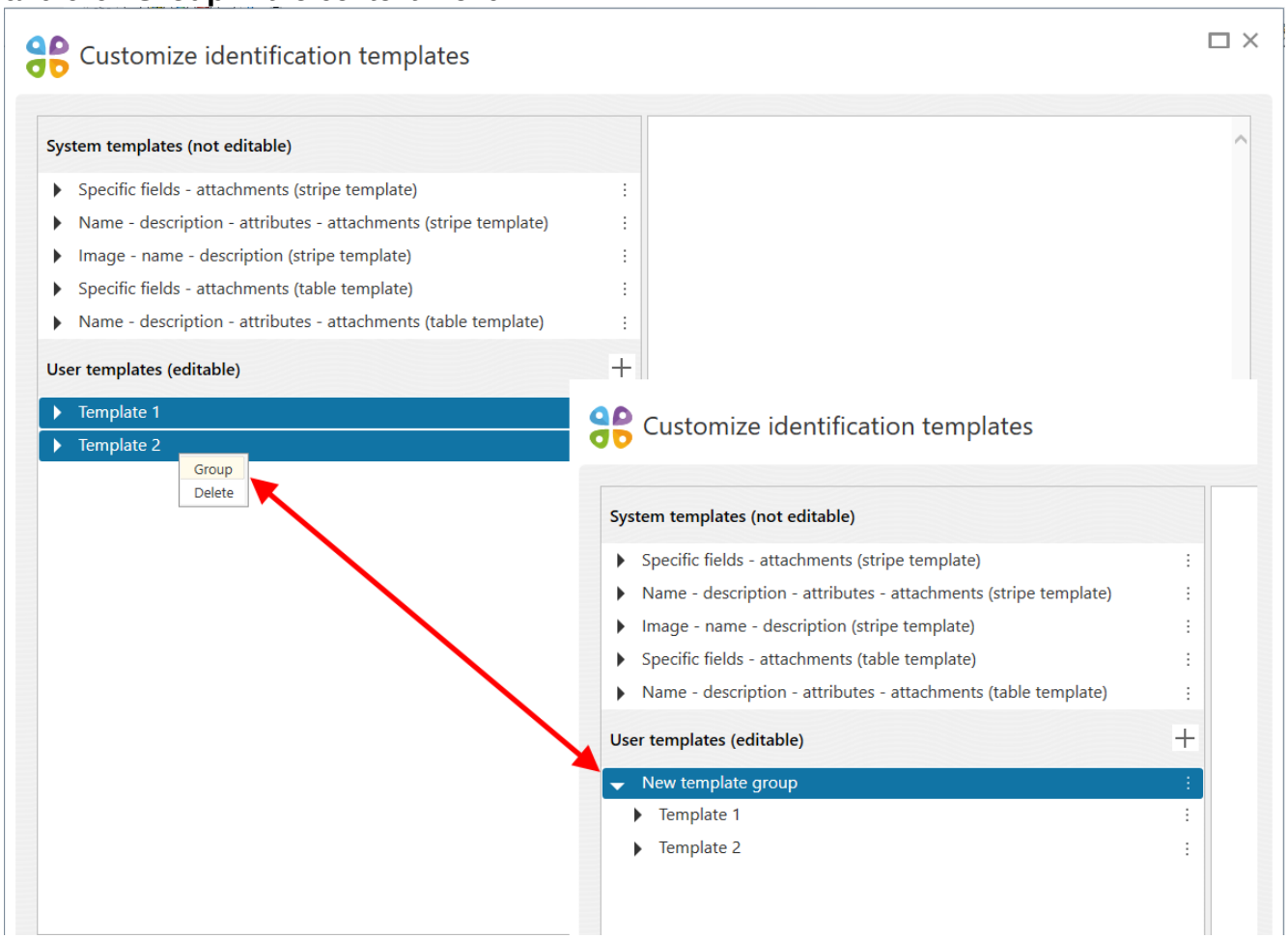


Operations available for the created template group are as follow:

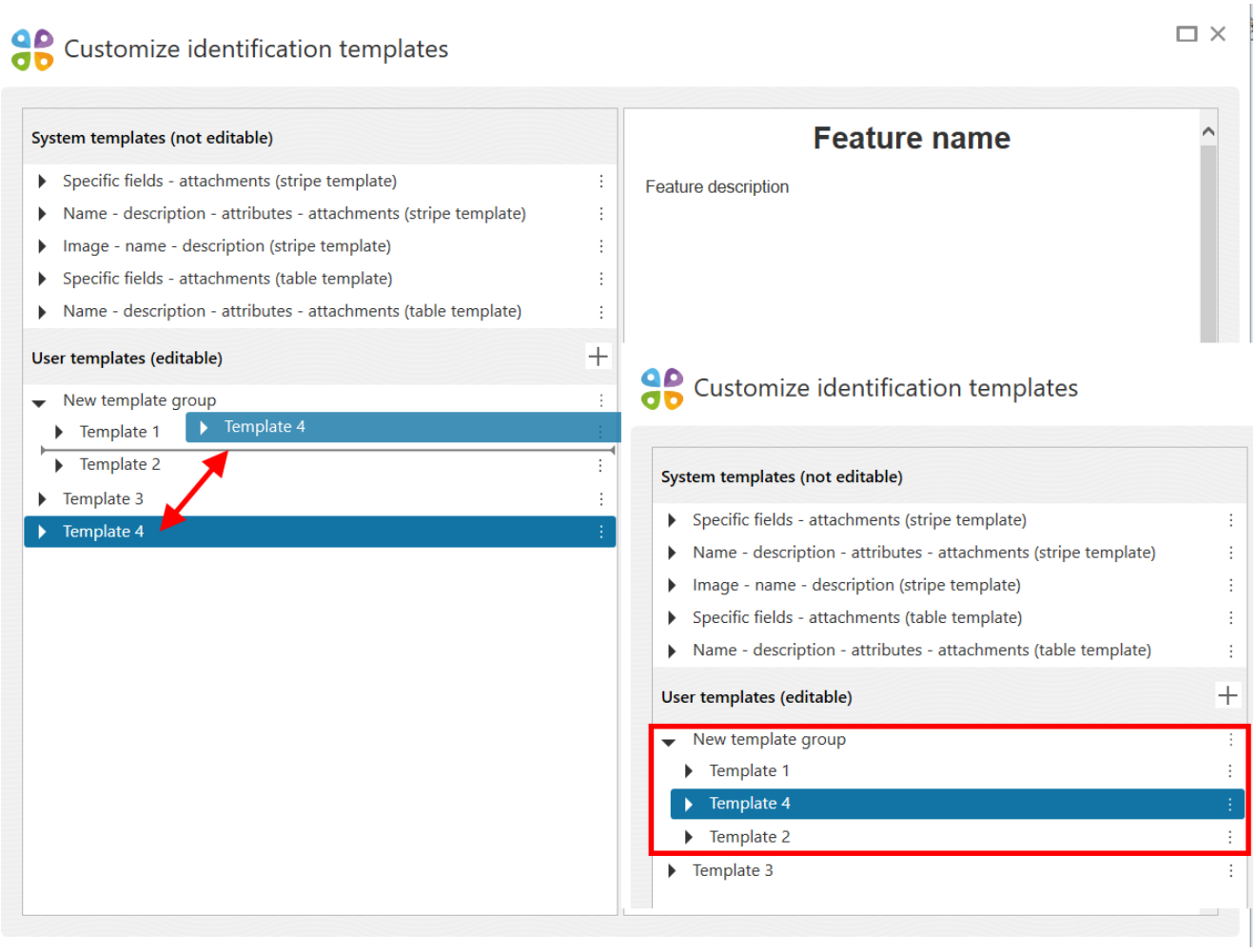
– *Rename.*
– *Add template* – create an empty template or template with predefined set of stripes.
– *Delete*.



To create the group from the existing user templates, select the required templates in the list and click **Group** in the context menu.

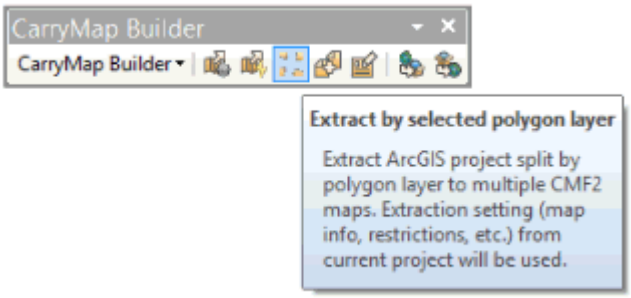


To move templates to the existing template group, select them in the list and then move to the required group.

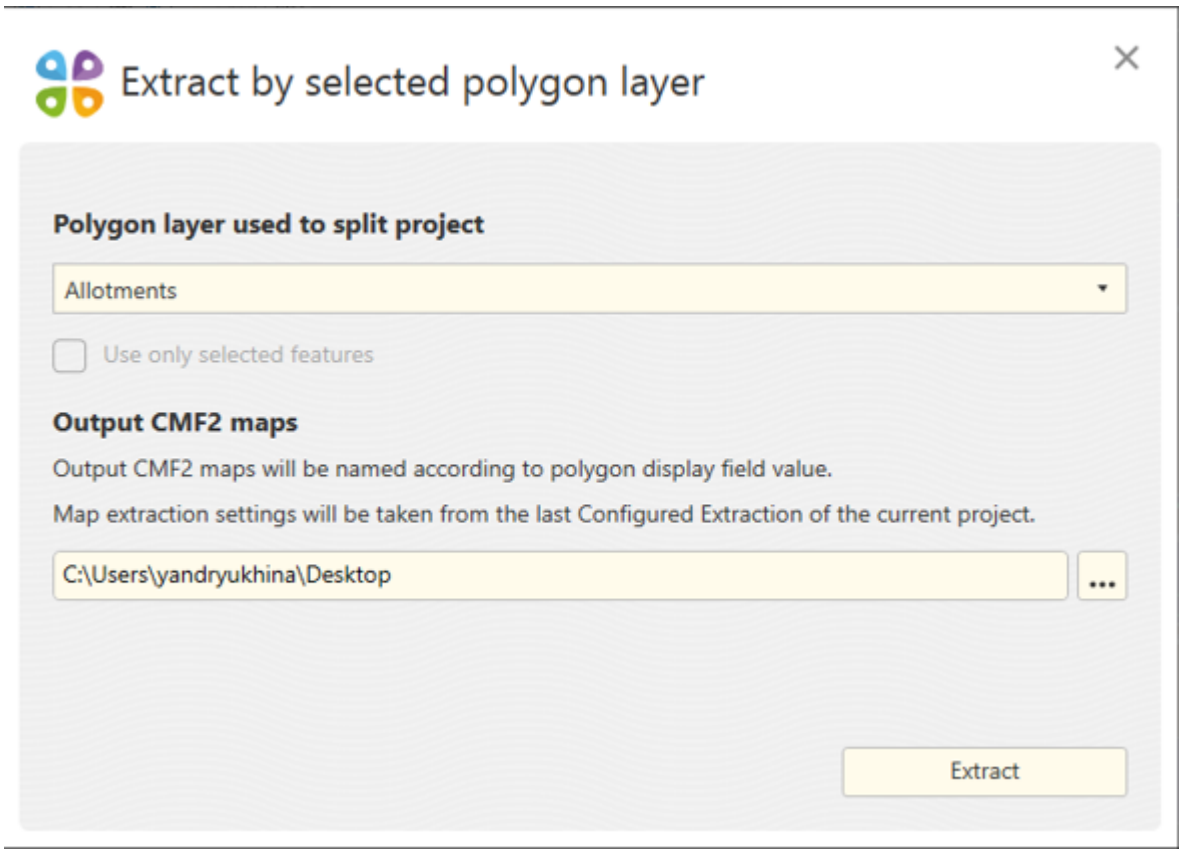

Customize identification templates
System templates (not editable)
Specific fields - attachments (stripe template)
Name - description - attributes - attachments (stripe template)
Image - name - description (stripe template)
Specific fields - attachments (table template)
Name - description - attributes - attachments (table template)
User templates (editable)
New template group
Template 1
Template 4
Template 2
Template 3
Template 4
Feature name
Feature description
Customize identification templates
System templates (not editable)
Specific fields - attachments (stripe template)
Name - description - attributes - attachments (stripe template)
Image - name - description (stripe template)
Specific fields - attachments (table template)
Name - description - attributes - attachments (table template)
User templates (editable)
New template group
Template 1
Template 4
Template 2
Template 3

Extracting map by selected polygons

To create multiple mobile maps with borders specified by selected polygon layer, run **Extract map by selected polygon layer** tool.

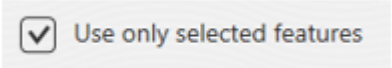


The tool dialog will appear.

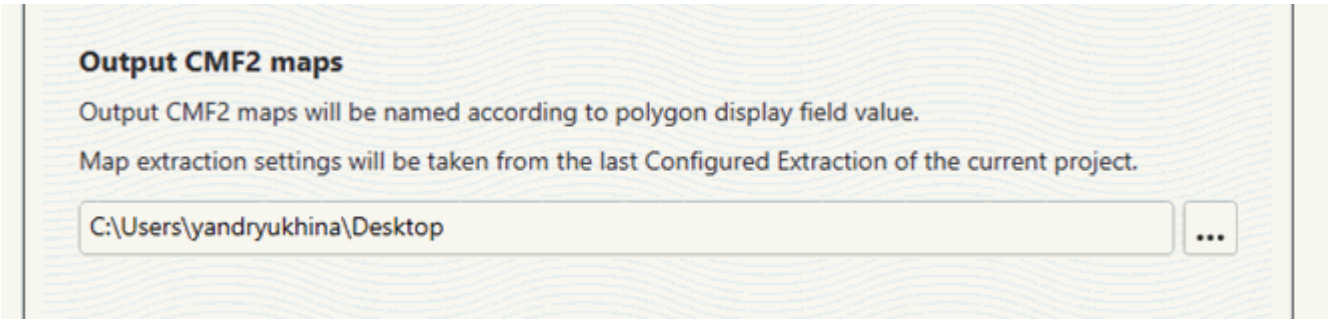


Select polygon layer by which your map should be extracted pressing the arrow icon. In the dropdown list you will see all polygon layers of your current ArcMap project.

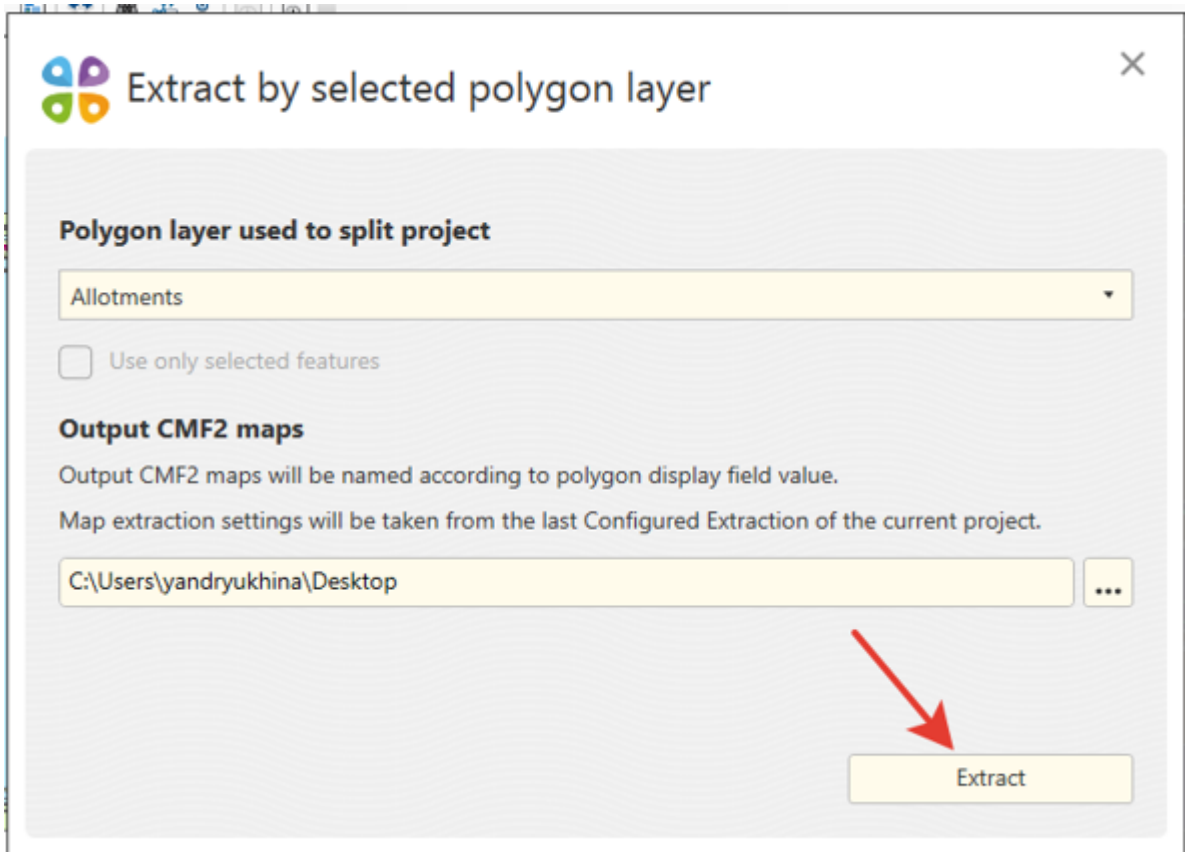
To perform extraction by selected polygon features only, you need to preliminary select these features on your map with the Select features tool in ArcMap. Select the separation layer where you selected features and check the Use only selected features option.



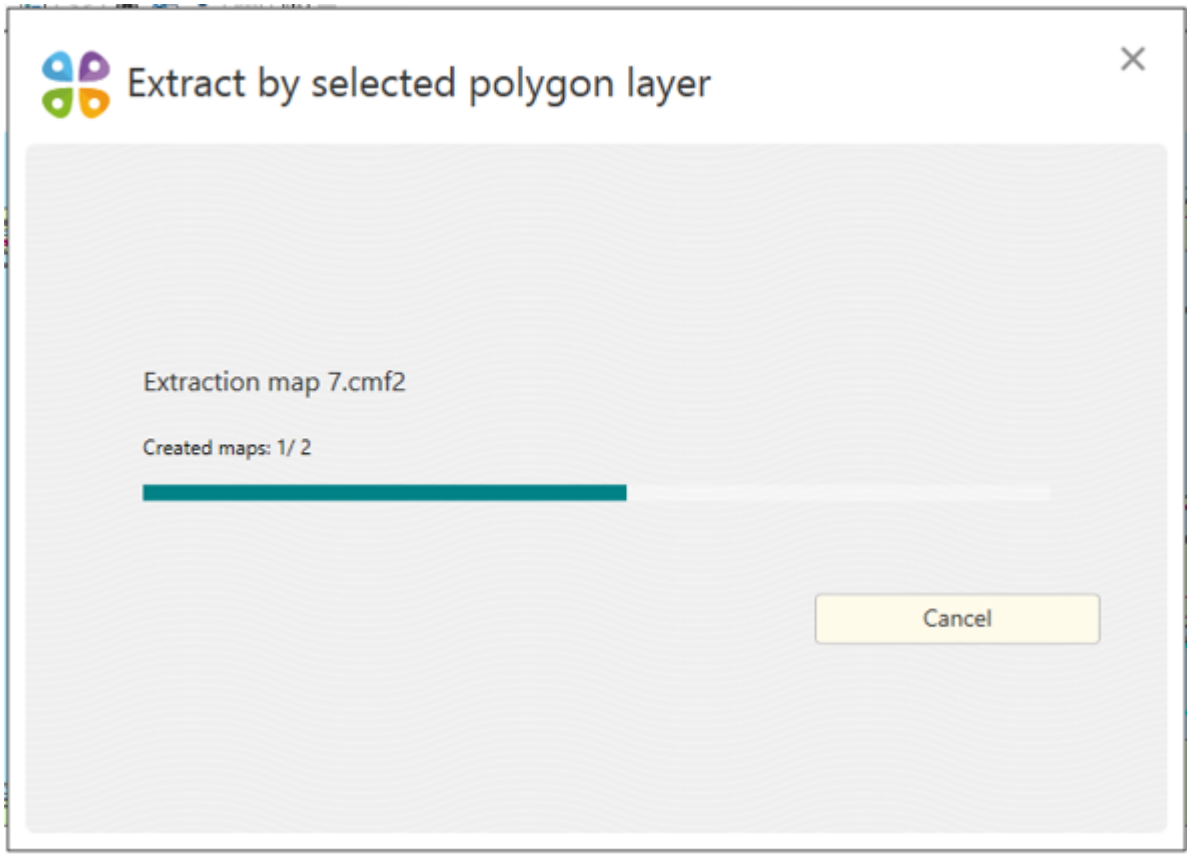
Select where to the output CMF2 file should be saved.



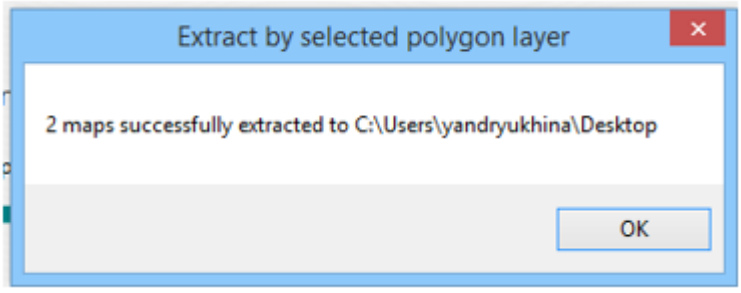
To change location of the output file, press ... and select another destination folder. Now press **Extract** button.



The dialog showing the process progress will appear.



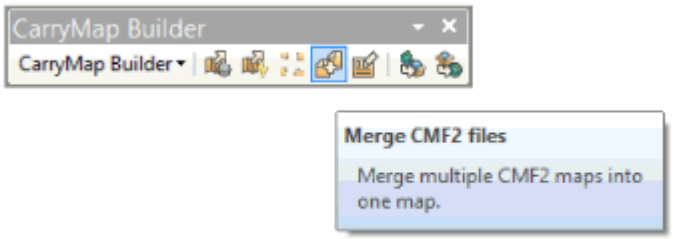
Upon the process completion you will see the appropriate dialog.



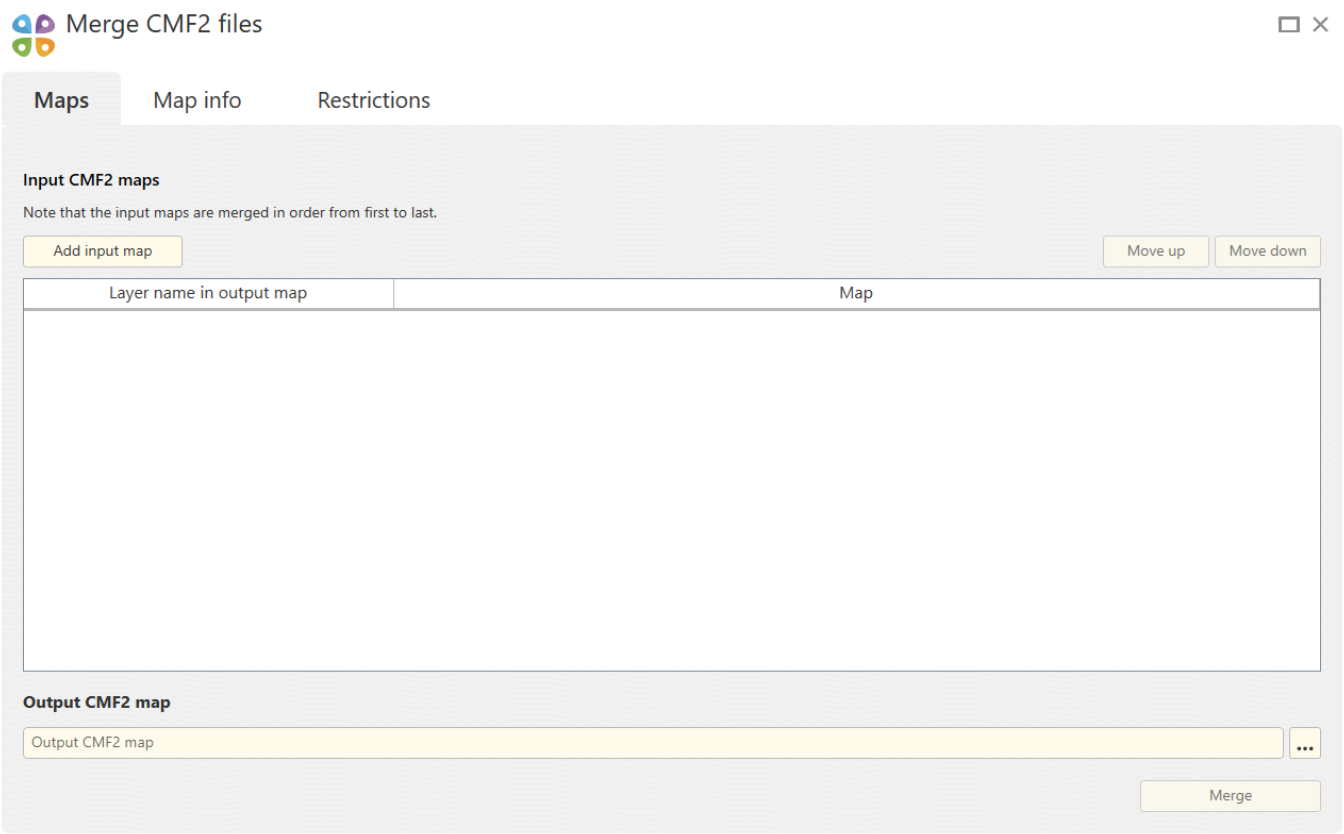
Make sure that the output maps have been saved to specified folder.

Run Merge CMF2 files tool

If you have multiple CMF2 maps covering the same area, they can be merged to one map for your convenience. To do so, run **Merge CMF2 files** tool on CarryMap Builder toolbar.

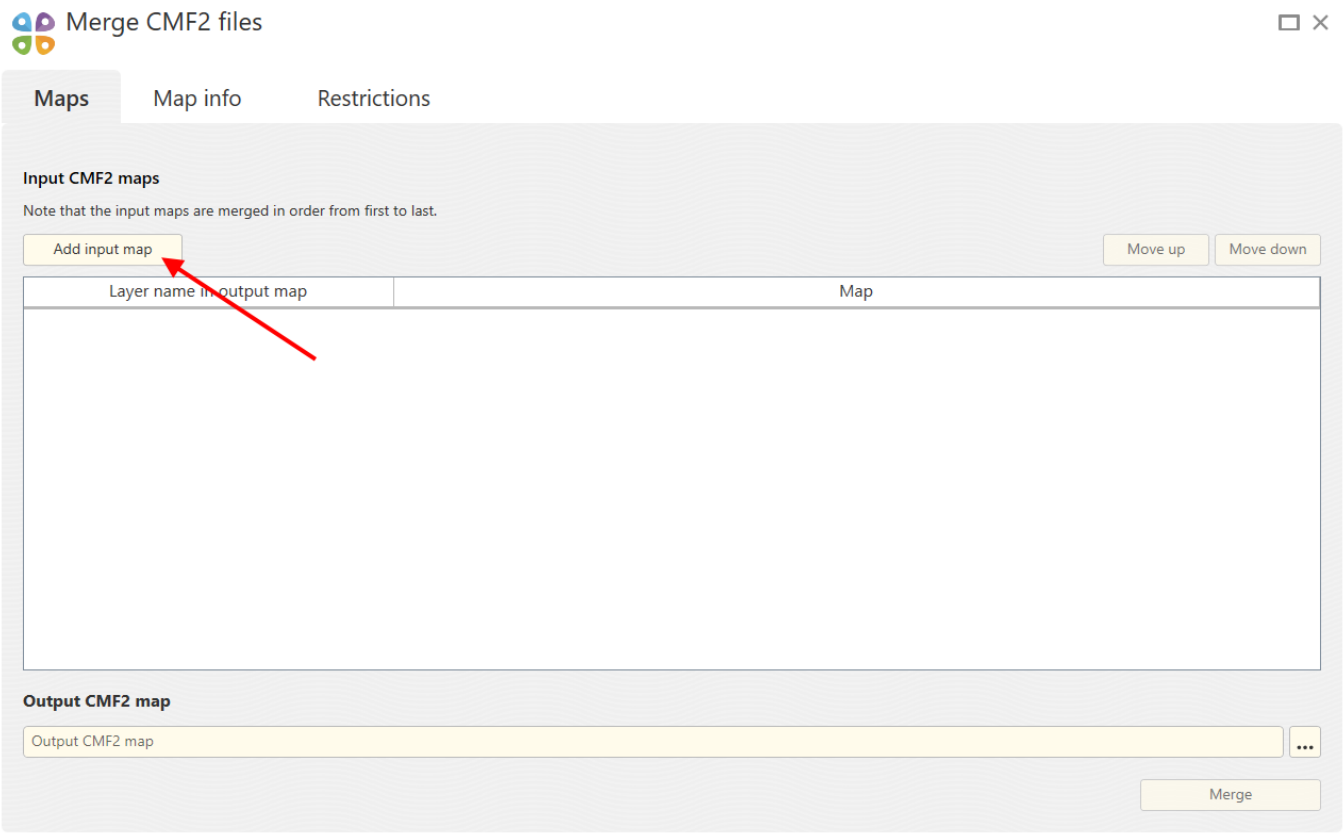


The tool dialog will appear.

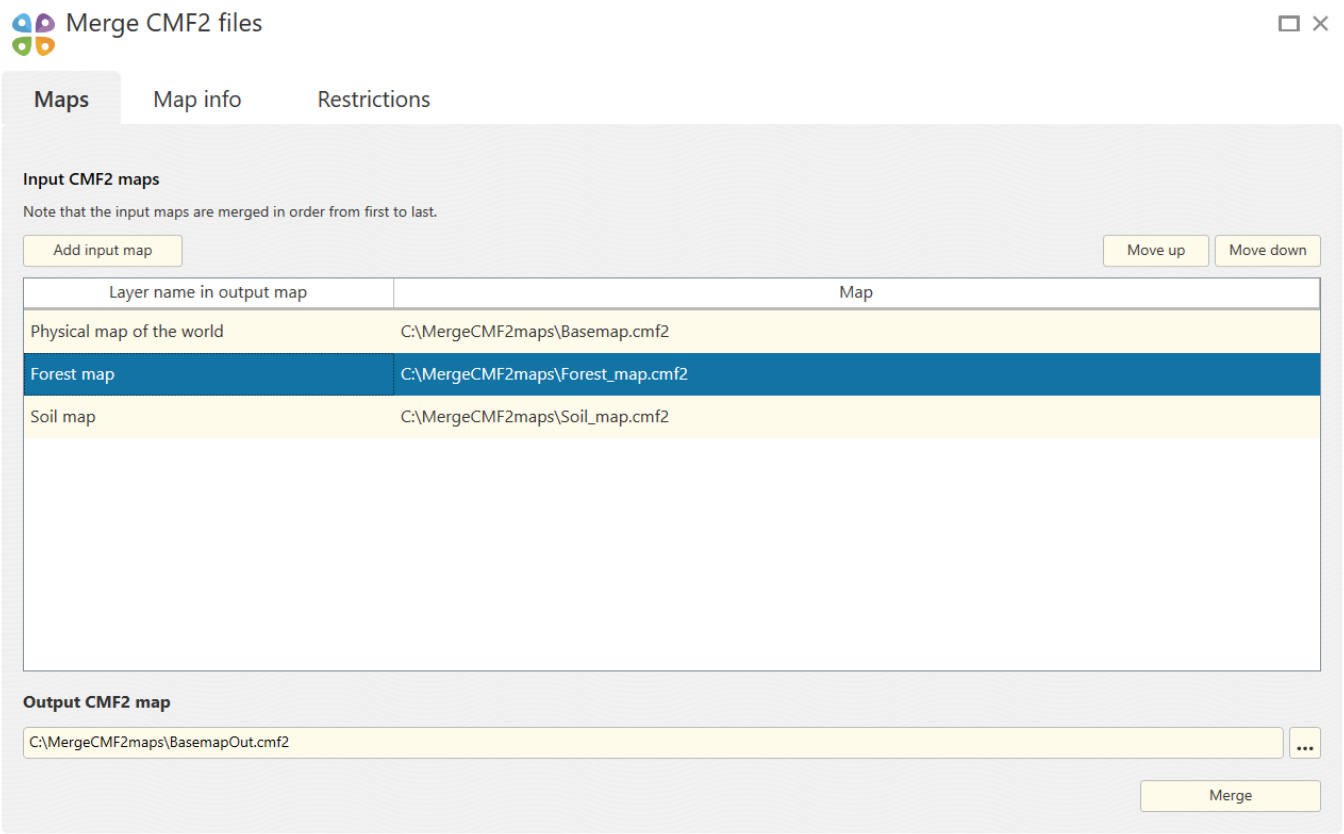


Selecting maps to be merged

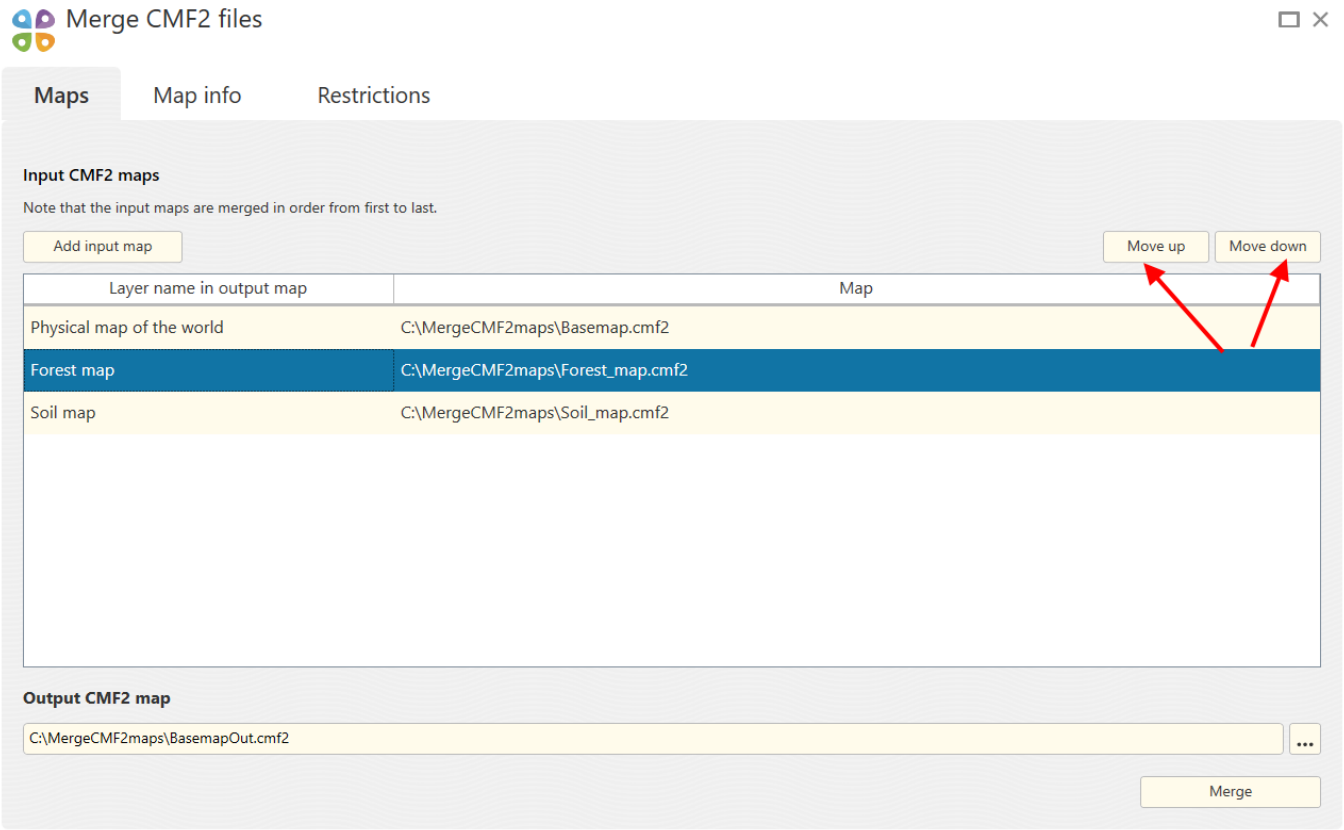
Select CMF2 maps that you want to merge pressing **Add input map** button.



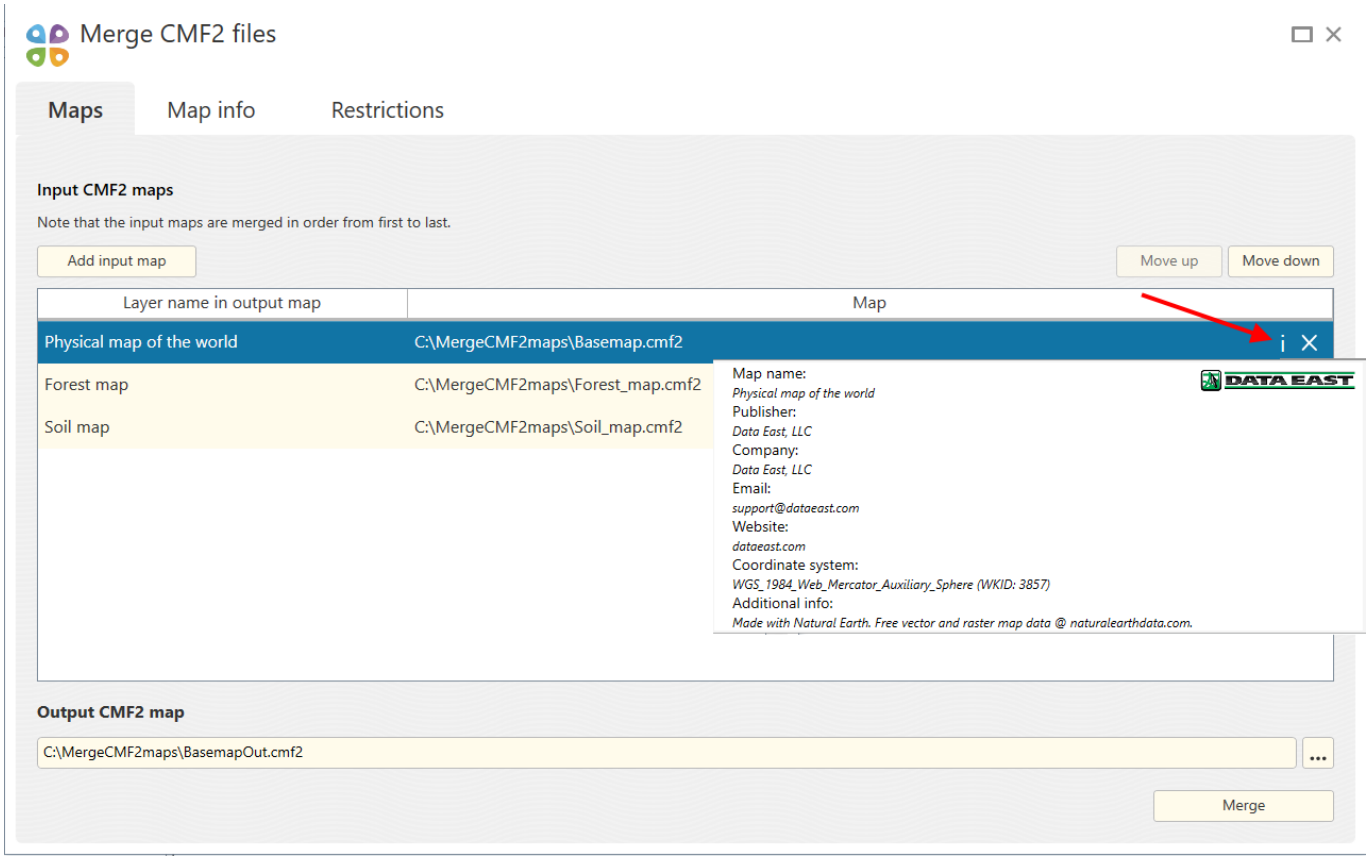
In the appeared dialog select the required maps and their names will be shown in the tool window.



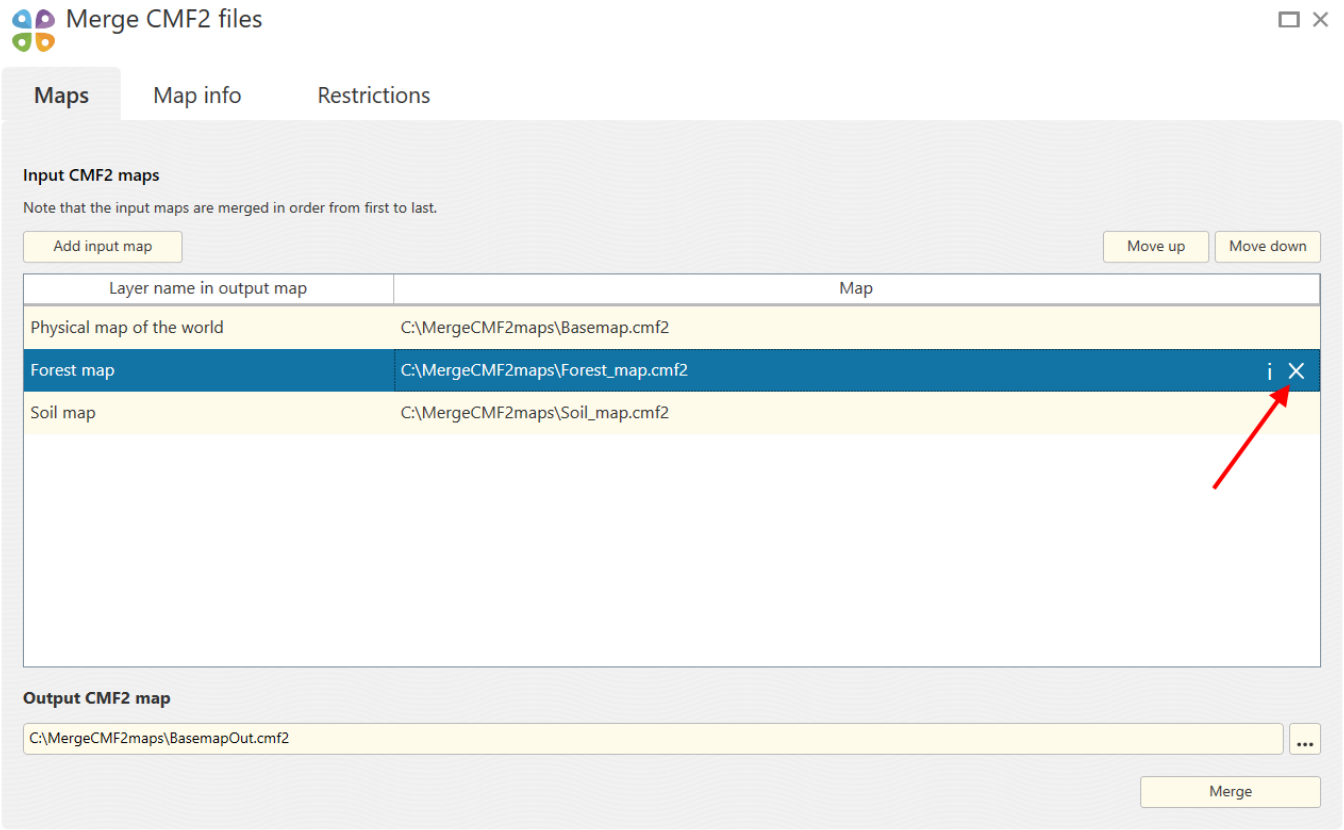
To change the order of the added maps, select them in the list and press **Move up** or **Move down** button, or long press the left mouse button and reorder the selected maps as needed.



To view information about the added map, select it and press the **i** button on the right of the map name.

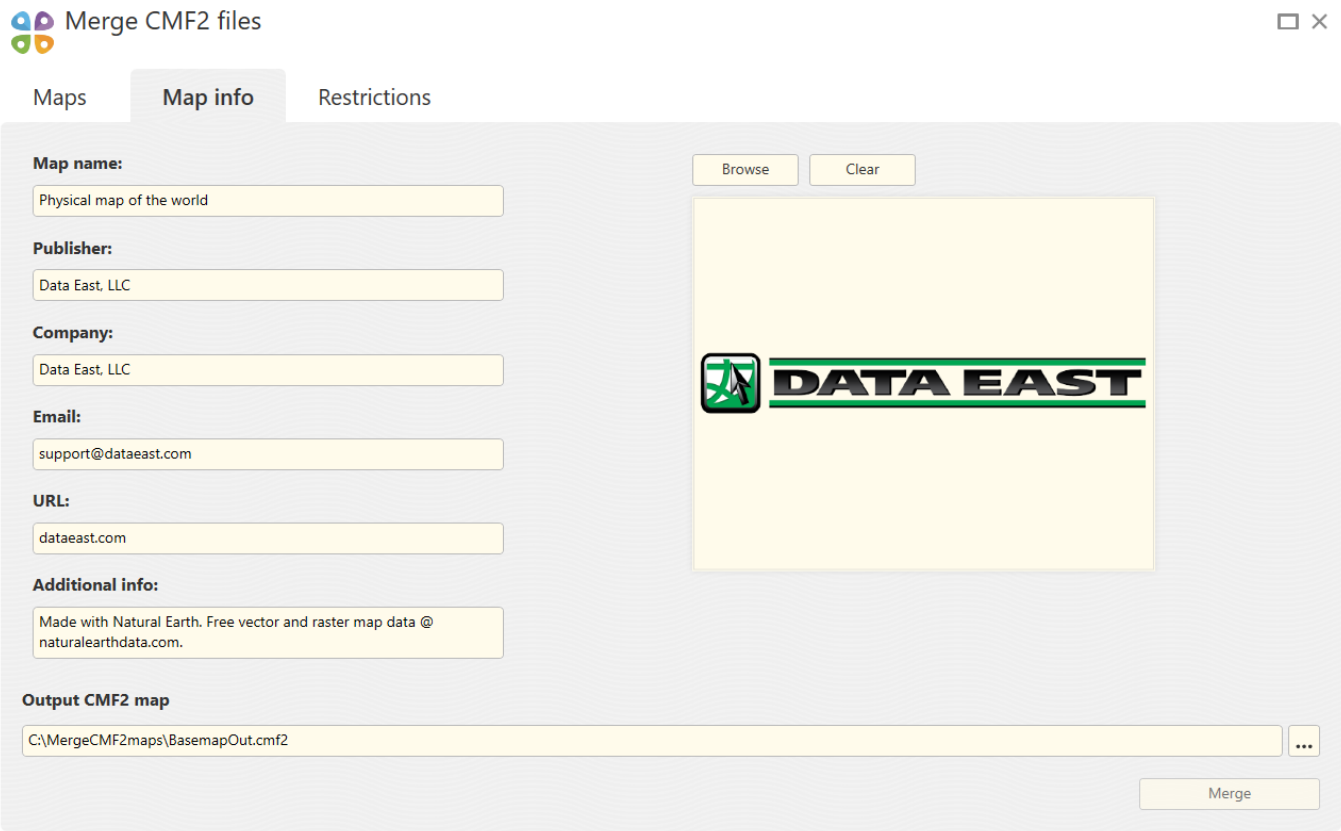


To delete the added map/maps from the list, select the required map/maps and press the cross icon on the right of the map name or click the **Delete** command in the context menu.

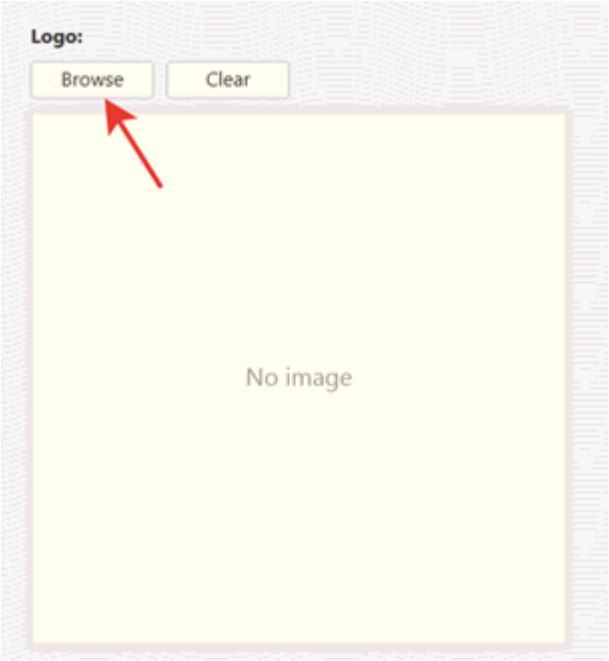


Specifying map properties

You can create a summary info about your map that will be shown in the **About map** dialog. That is, when opening this dialog, your users will see information about the map publisher, company name and logo, website, contact email, and map description.
To set the **About map** dialog content, go to **Map info** tab and fill in all the required fields: map name, publisher, company, email, URL, additional info.

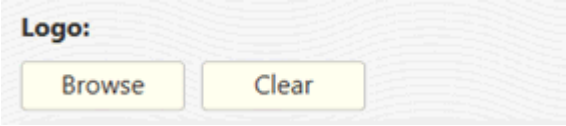


To add logo, press **Browse**.



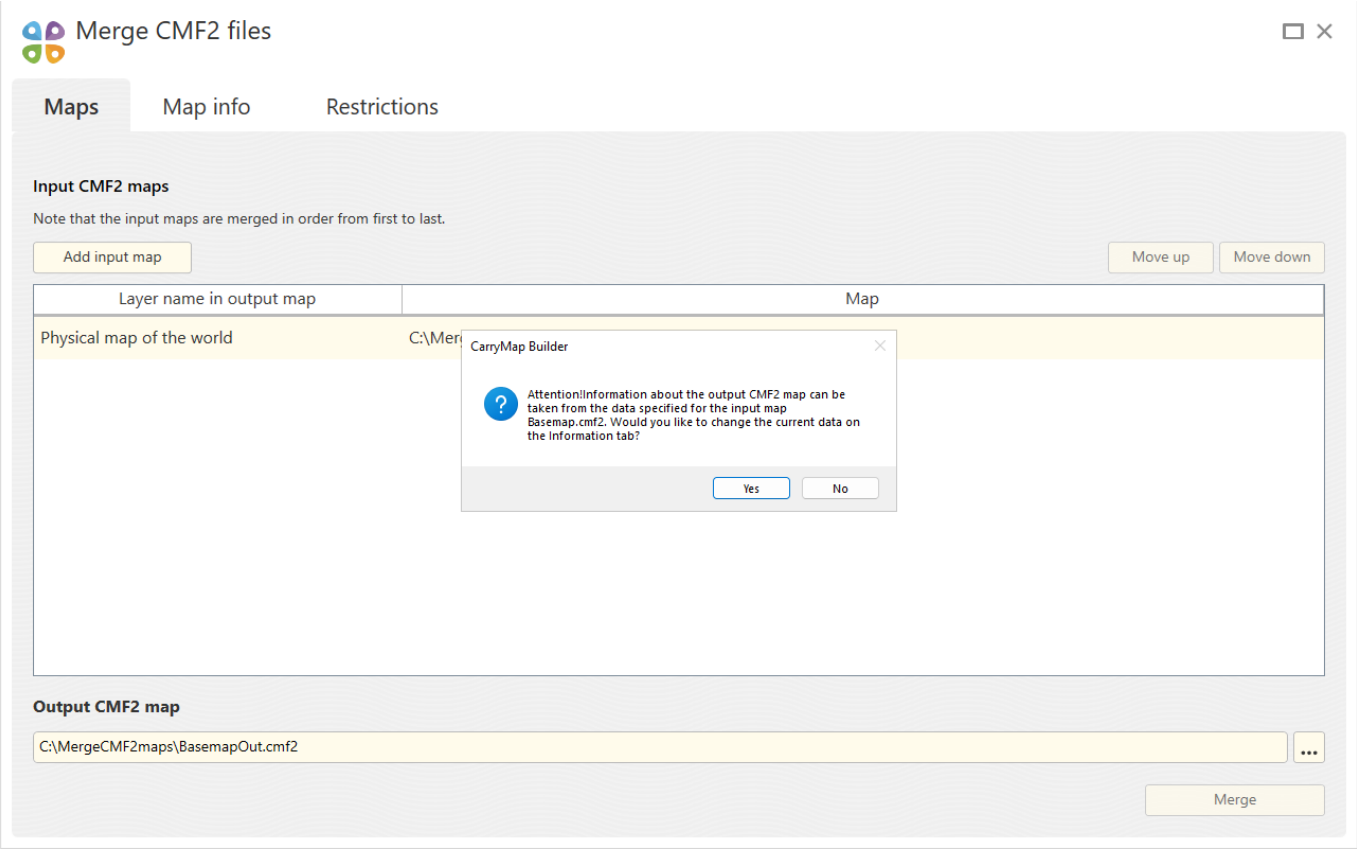
In the appeared window select the required pic and it will be shown in the preview window.

To delete added logo, press **Clear**.

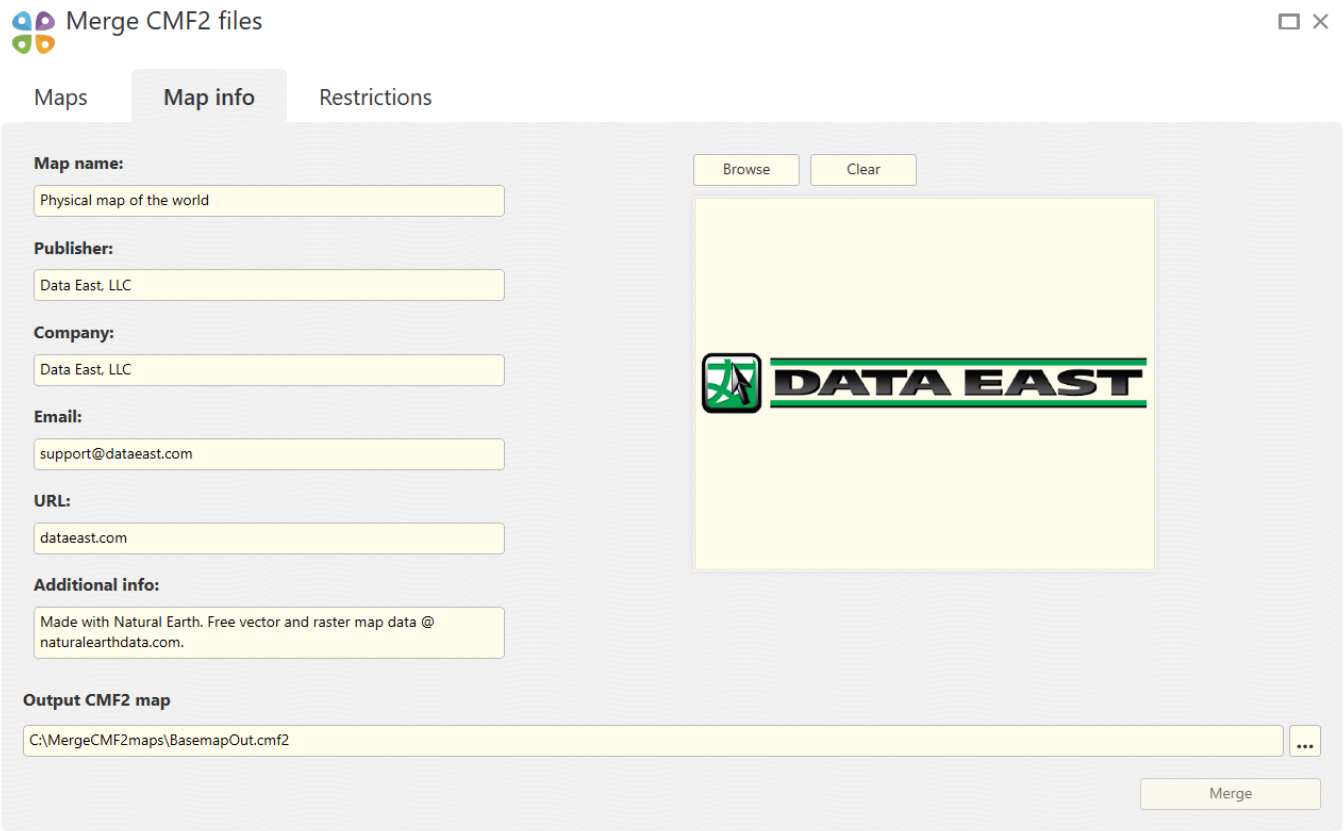


Note that information about the output CMF2 map can be taken from the data specified for the first input map.

To do this, click ***Yes*** in the notification that appears when adding the first map or changing the maps order.

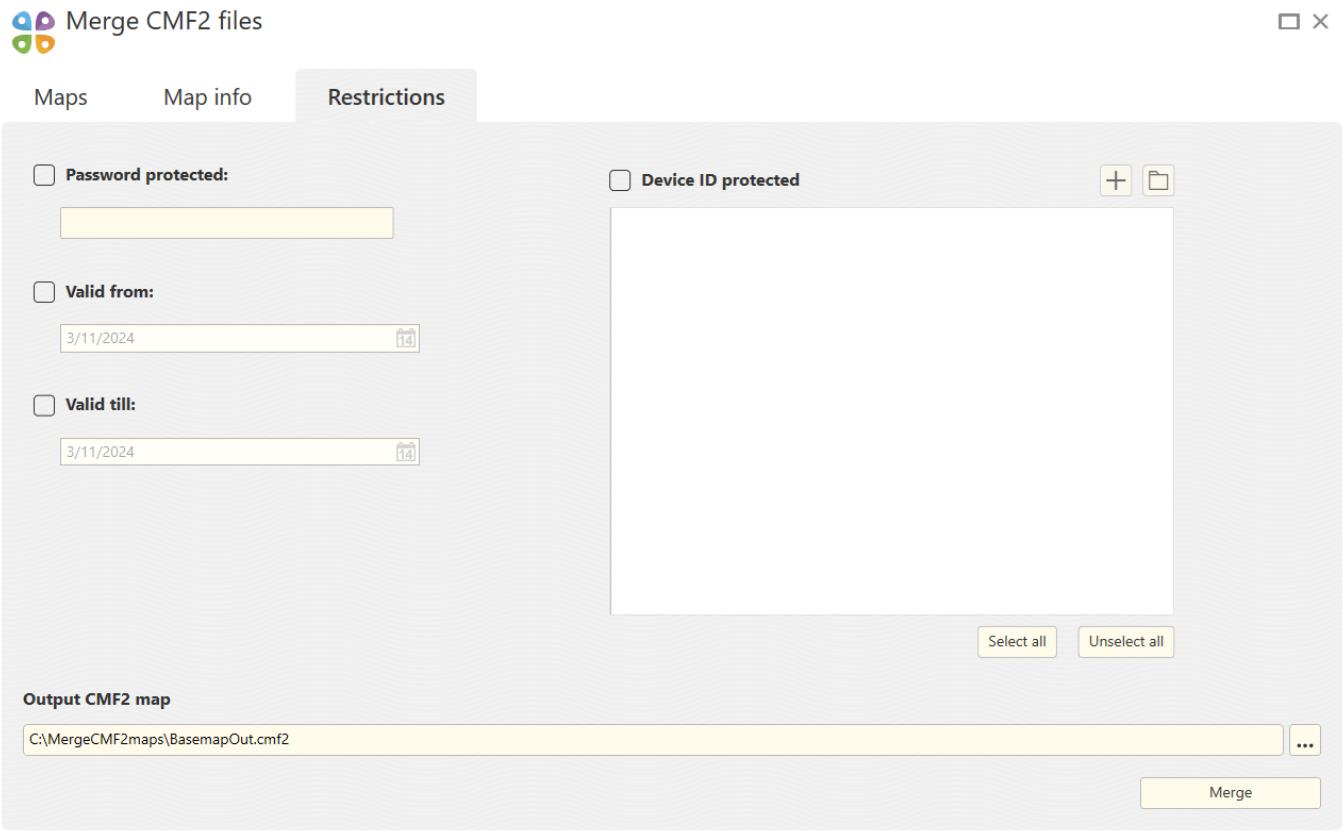


The corresponding fields on the Information tab will be automatically updated.



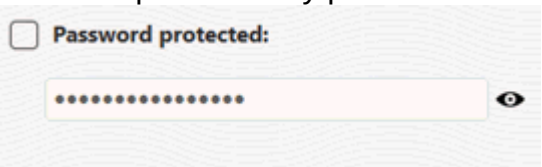
Setting mobile map protection

You can protect your mobile map with password, or allow access for selected devices only, or set map availability date specifying period when your mobile map will be available for users. Thus, each time the users open your mobile map in CarryMap app, they will be asked to either enter the password or the device ID, or the map will become unavailable after specified date, respectively.
To specify map protection settings, go to **Restrictions** tab.



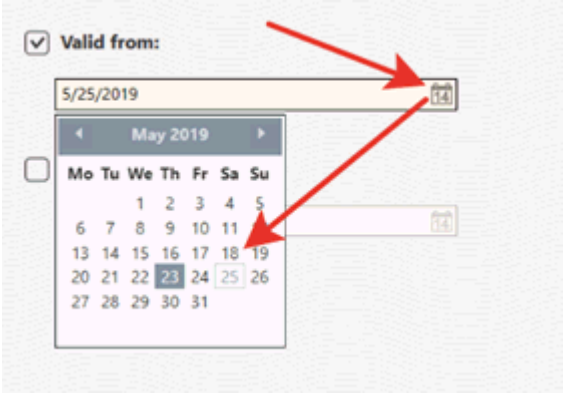
To protect your map by password, check **Password protected**. In the appeared dialog enter the password.

To cancel protection by password setting, uncheck **Password protected** option.



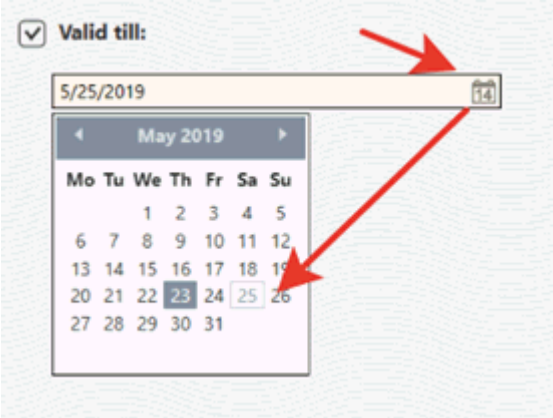
To protect you map by availability date, check **Valid from**.

This will be the date starting from which your map will be available for use. By default the current date is suggested, but you can change it pressing the calendar icon and selecting the needed date



To set the date from which your map will not be allowed for use, check **Valid till**.

By default the current date is suggested, but you can change it pressing the calendar icon and selecting the needed date.



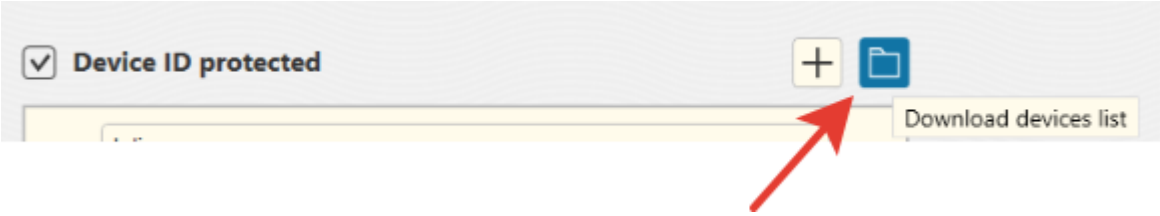
To cancel protection by map availability date, uncheck **Valid from** and **Valid till** options.

To allow opening your map on selected devices only, check **Device ID protected** option.

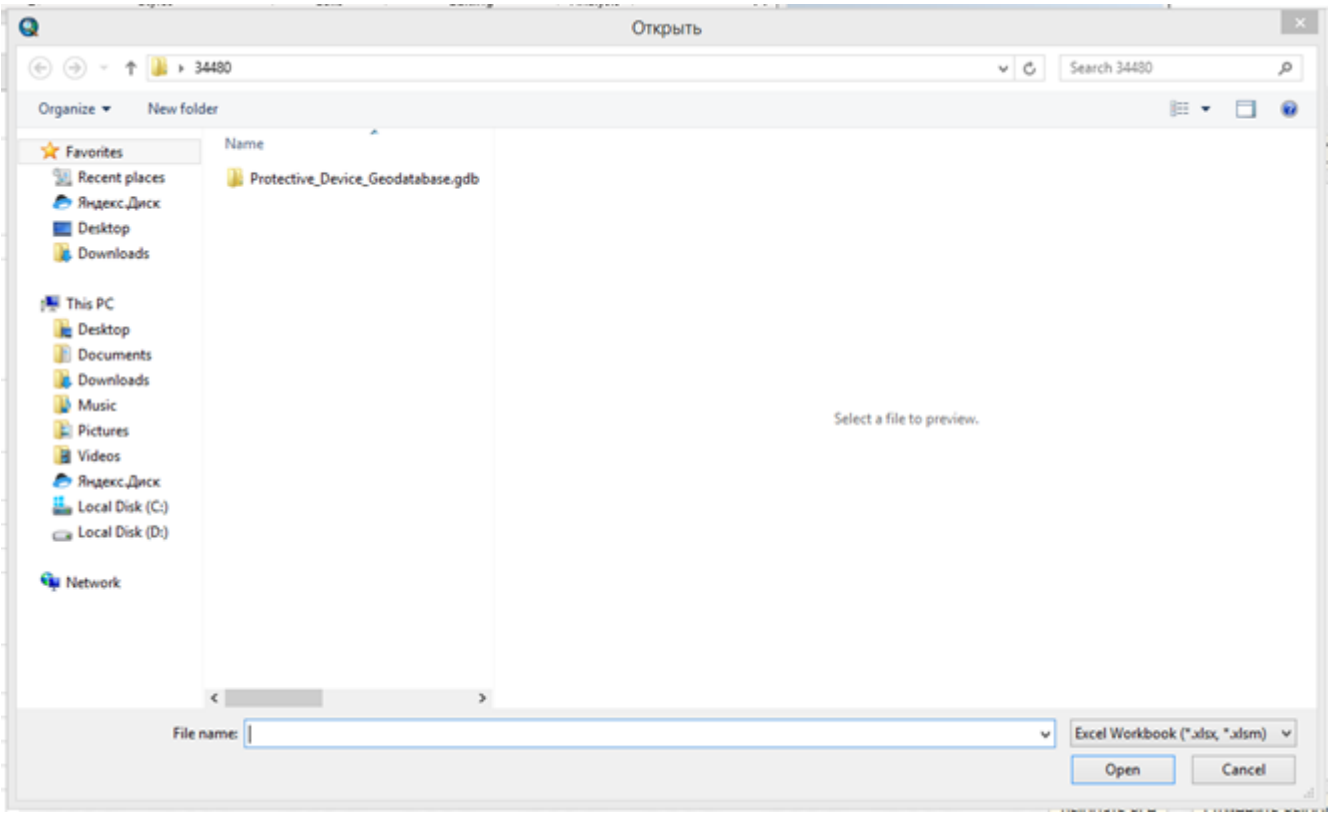
Press and enter the device name (device owner name, for example) and device ID.

You can allow opening your map on multiple devices, to do so press and add as many devices as needed same as described above.

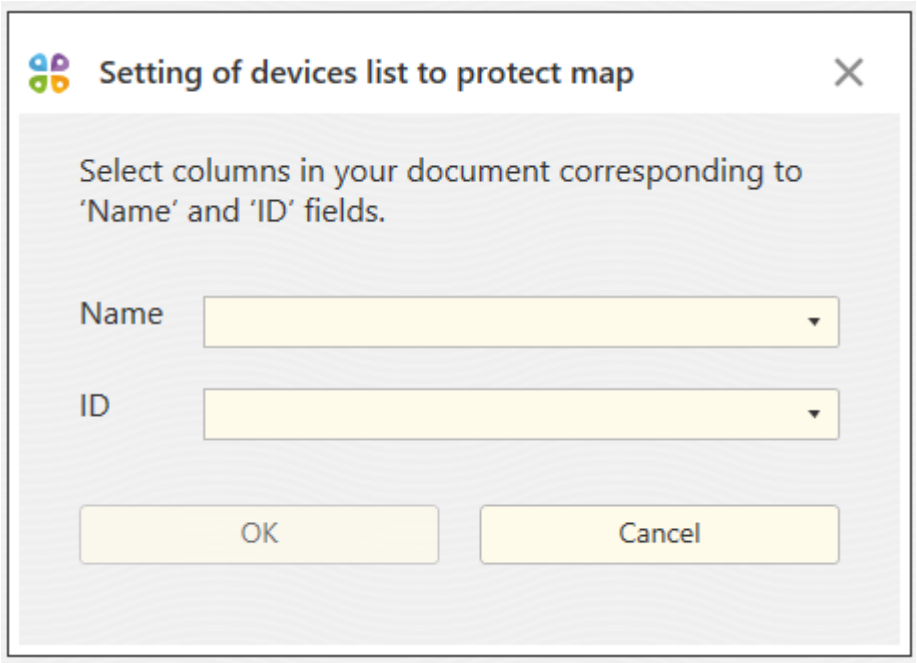
For your convenience, you can download the pre-arranged list of authorized devices in Excel or CSV format, to do so, press Download devices list button.



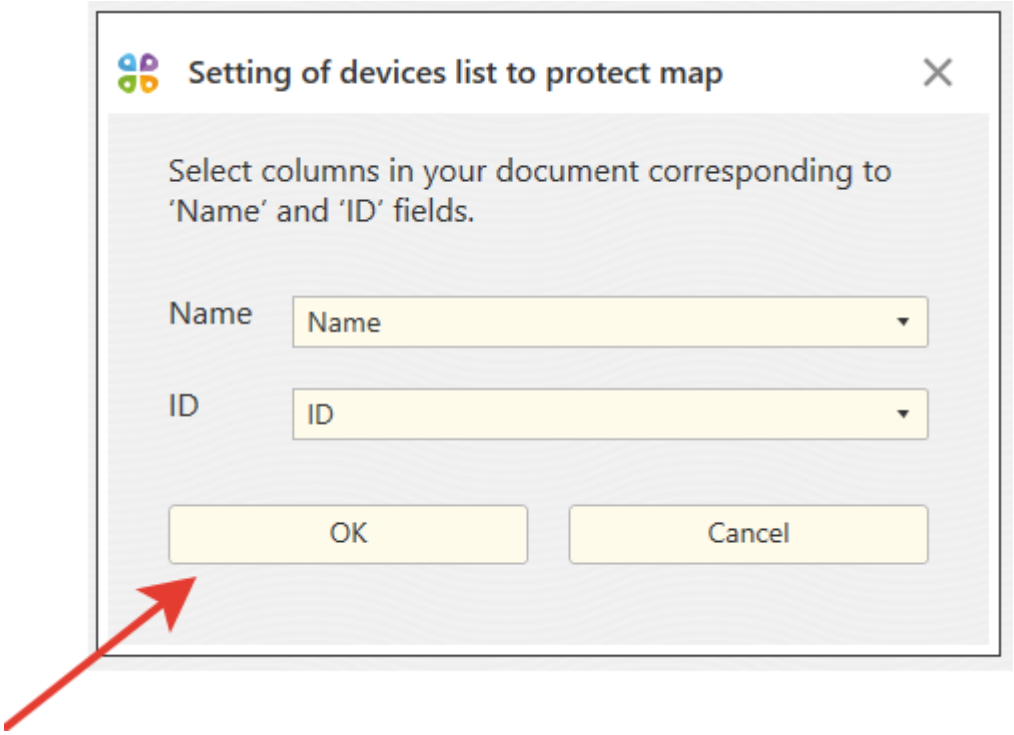
In the appeared window select the needed file and press Open.



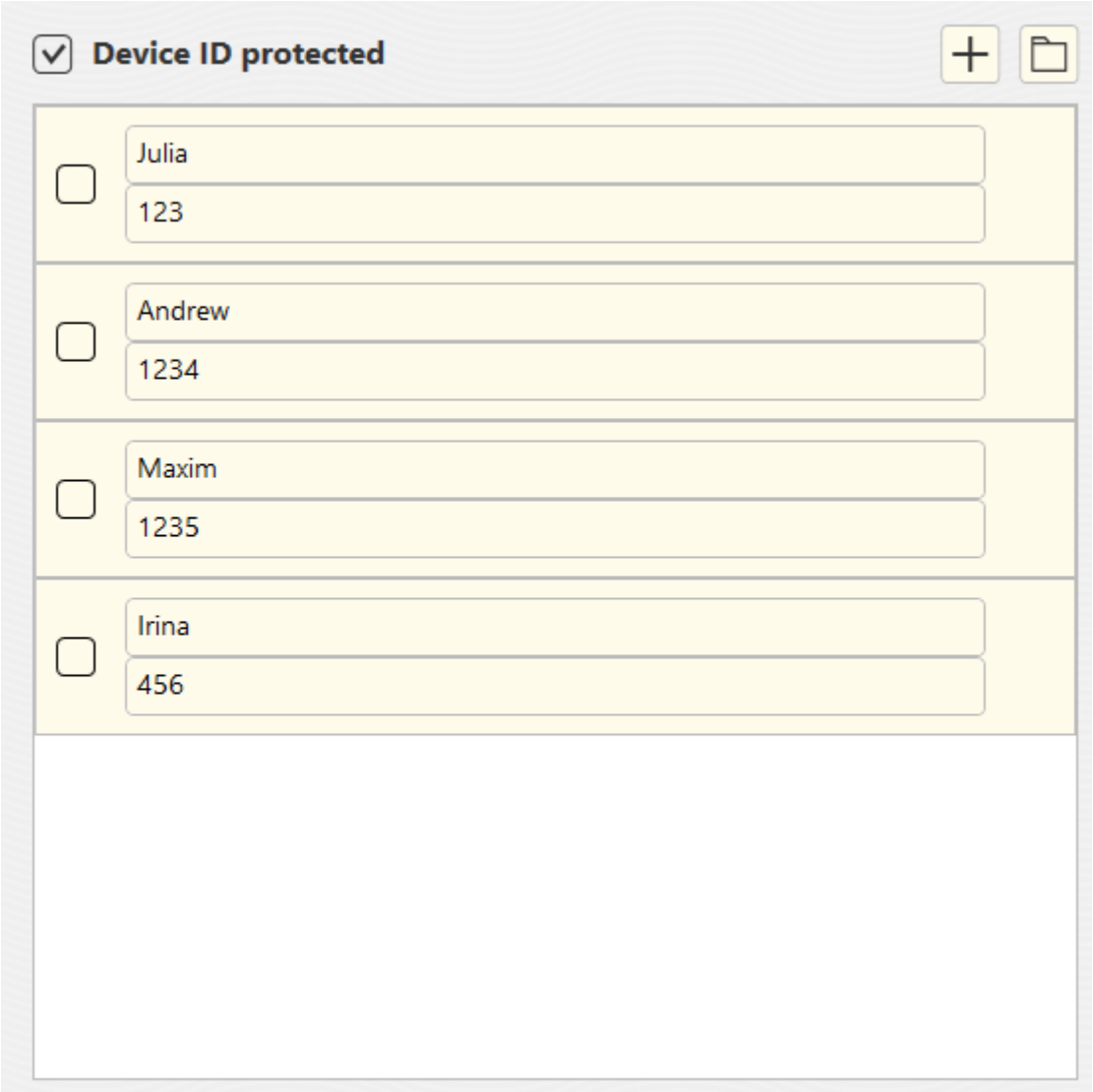
In the appeared table select columns containing the devices owners names and devices IDs.



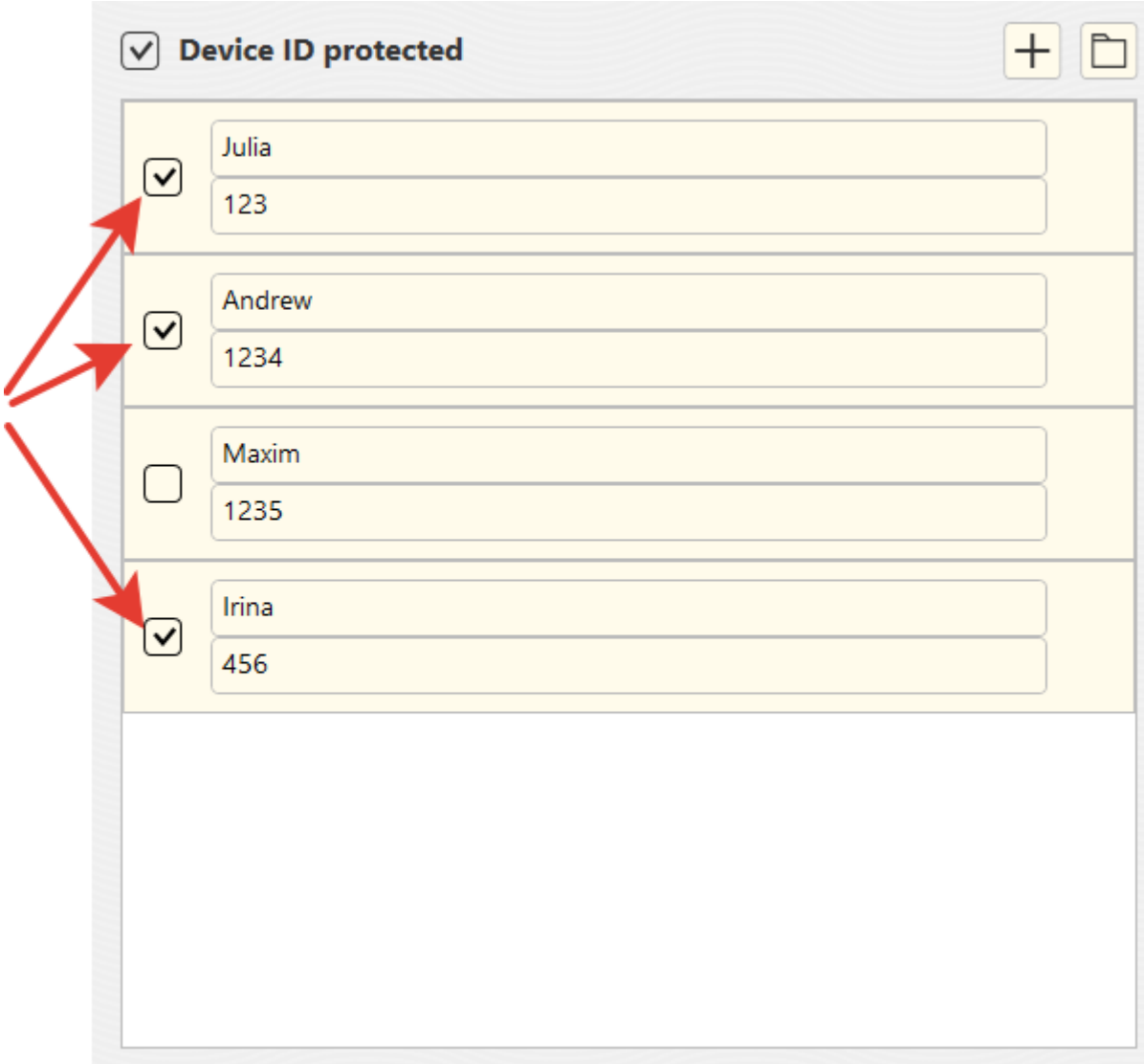
Press OK.



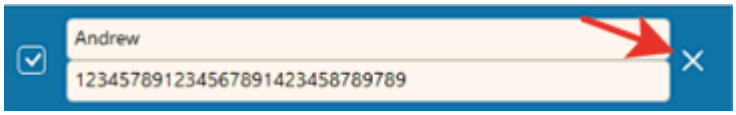
In the appeared window you will see the names and IDs of all devices from your list.



Check the boxes near the devices that should be authorized to open your map or press Select all to select all devices at a time.

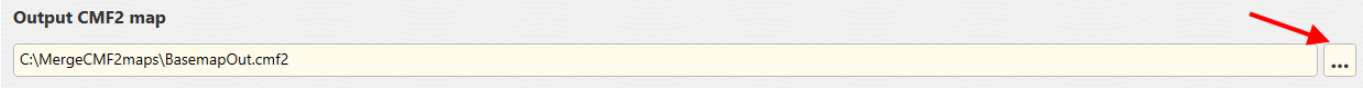


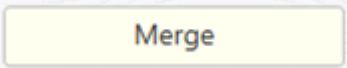
To delete added device, press cross icon near its name.



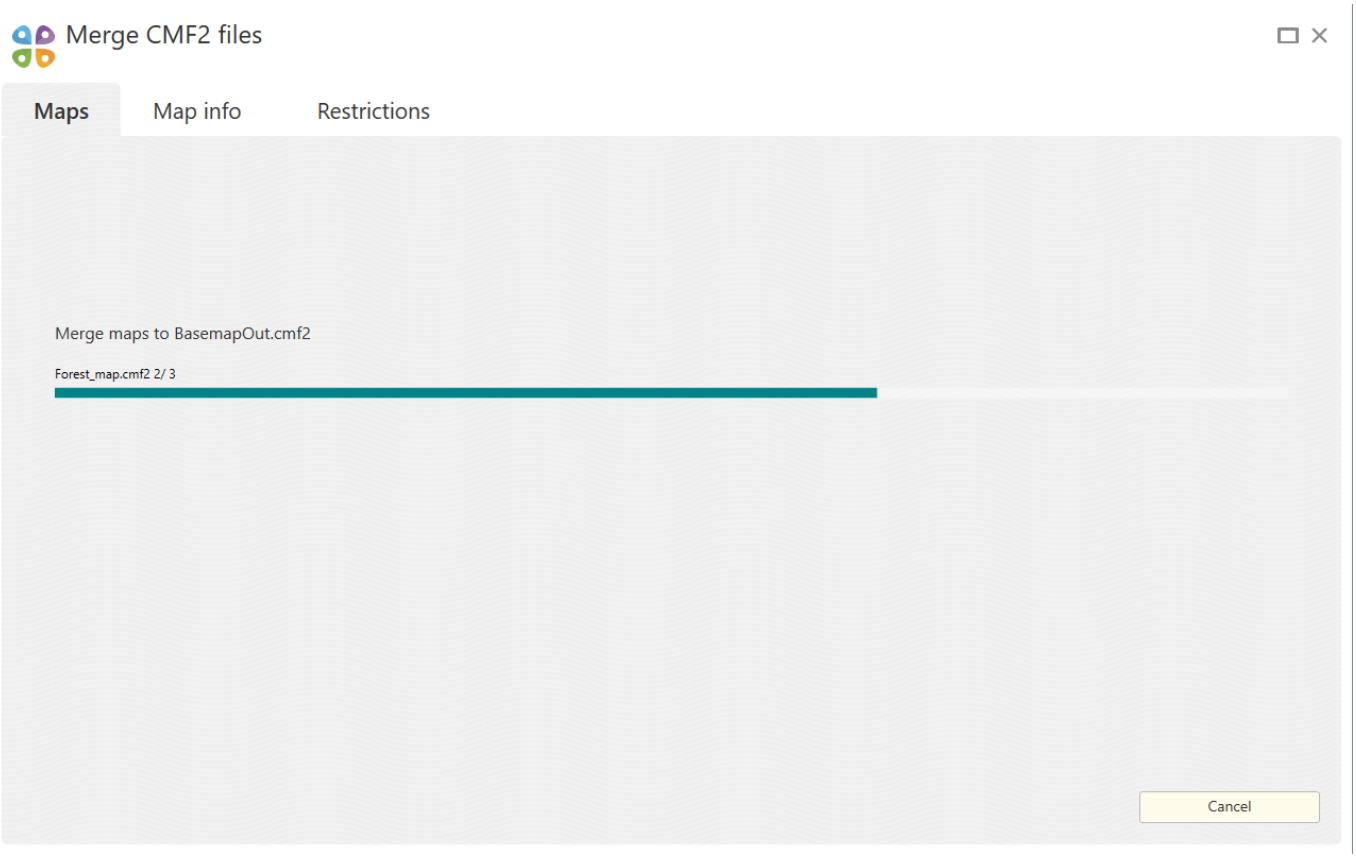
Merging maps

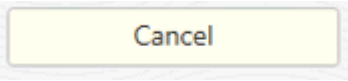
Specify the output merged map name and location pressing the three dots button.



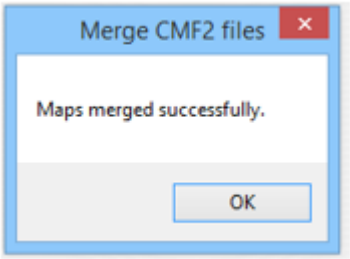
After that press 

to start the maps merging process.



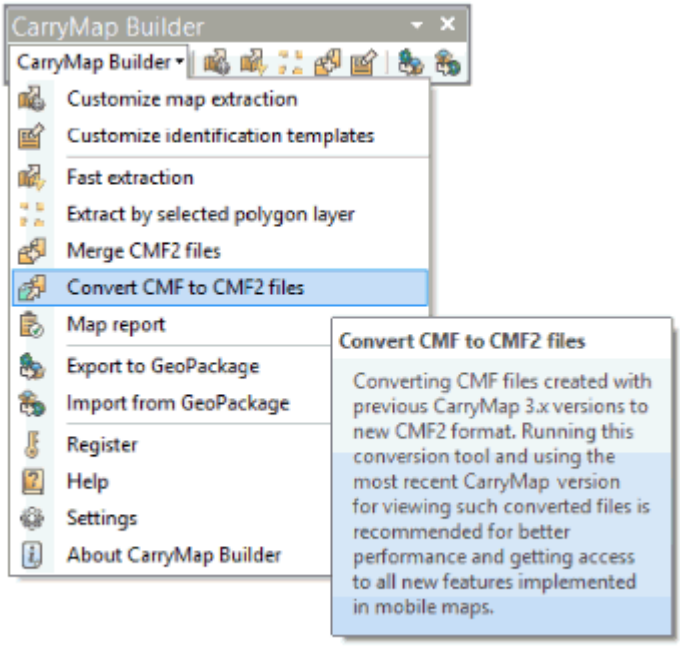
To cancel merging of multiple CMF2 maps to one map, press 

. Upon the process completion you will see the appropriate dialog.

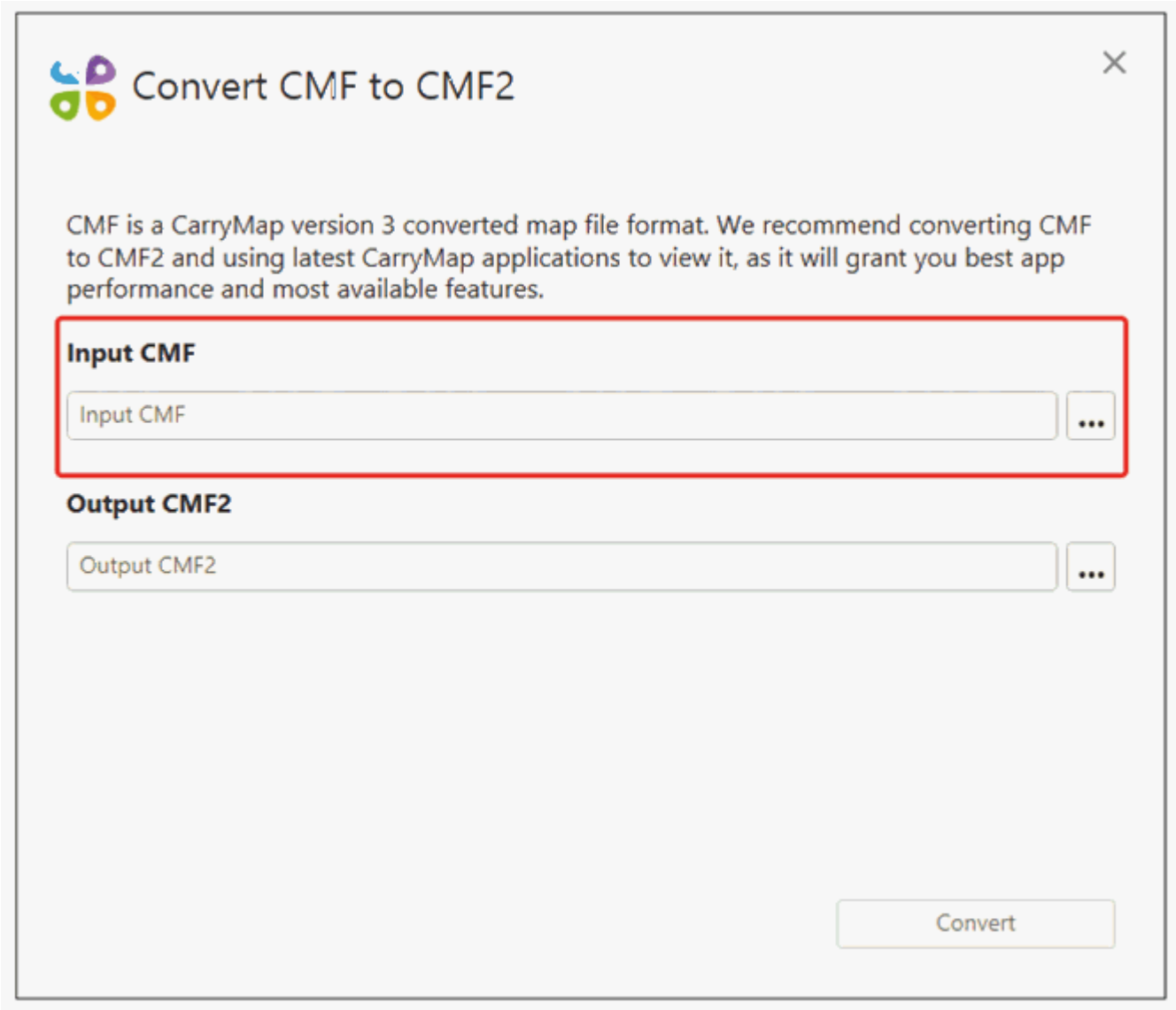


Converting CMF to CMF2

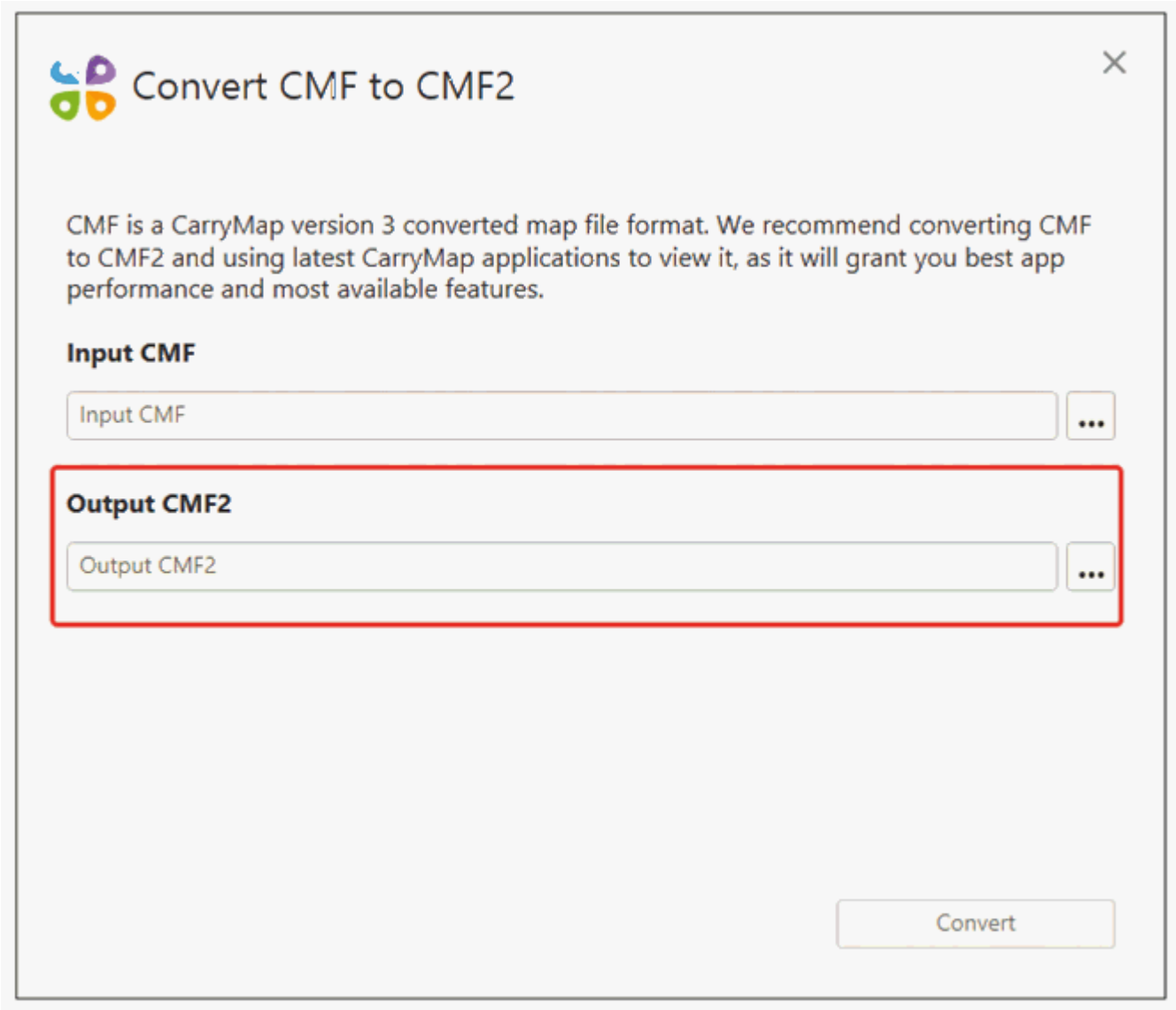
CarryMap Builder is the new generation of ArcGIS Desktop extension with enhanced functionality that replaced CarryMap 3.x. CarryMap Builder creates mobile maps in the new CMF2 format, though users having maps in the old CMF format created using the previous extension generation CarryMap 3.x, can convert them to the new format. For such conversion the CarryMap Builder **Convert CMF to CMF2 files** tool is used. Run the **Convert CMF to CMF2 files** tool on CarryMap Builder toolbar to start the conversion process.



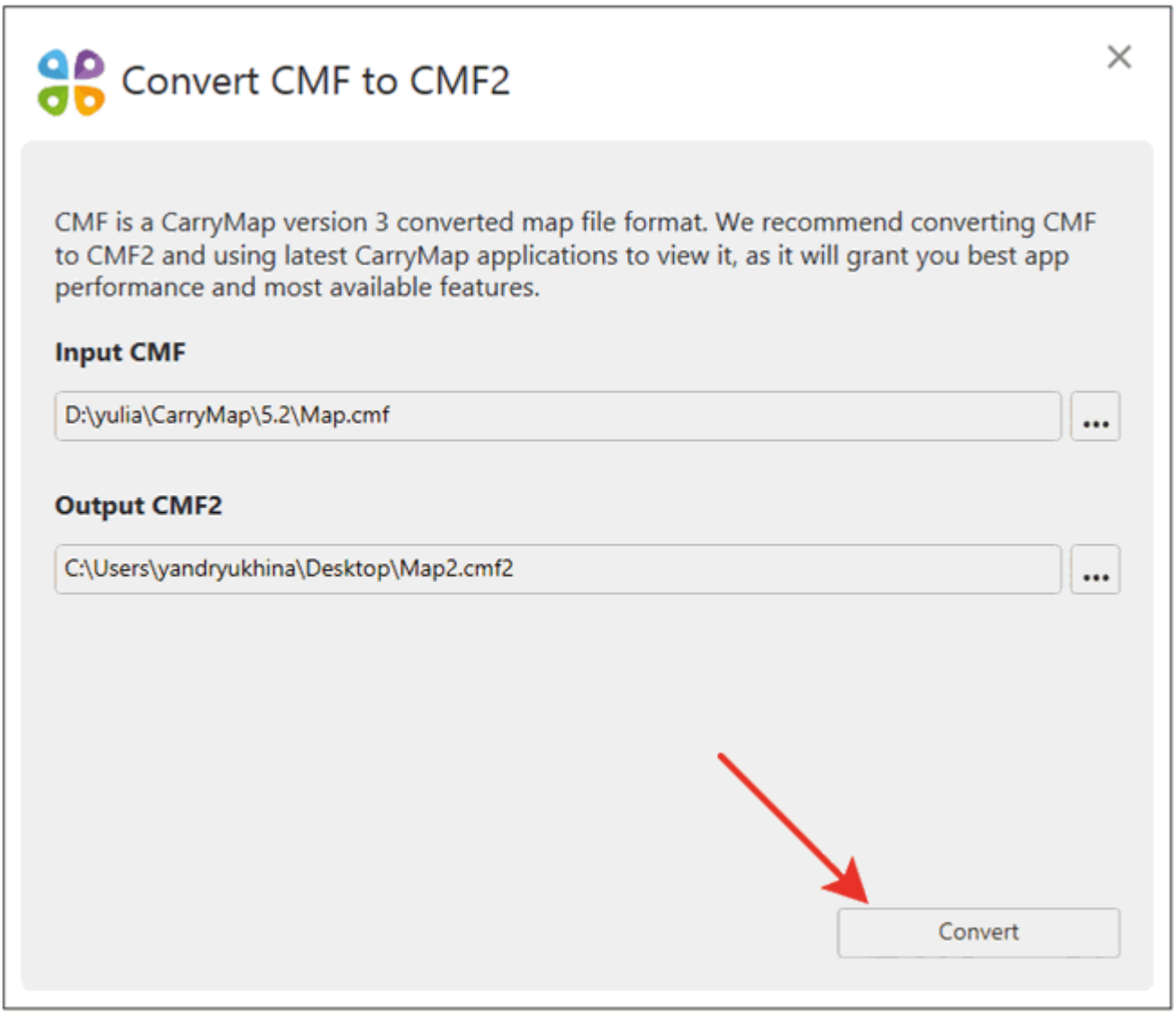
In the appeared dialog select CMF map that needs to be converted to new CMF2 format. To do so, press three dots button and select the needed file.



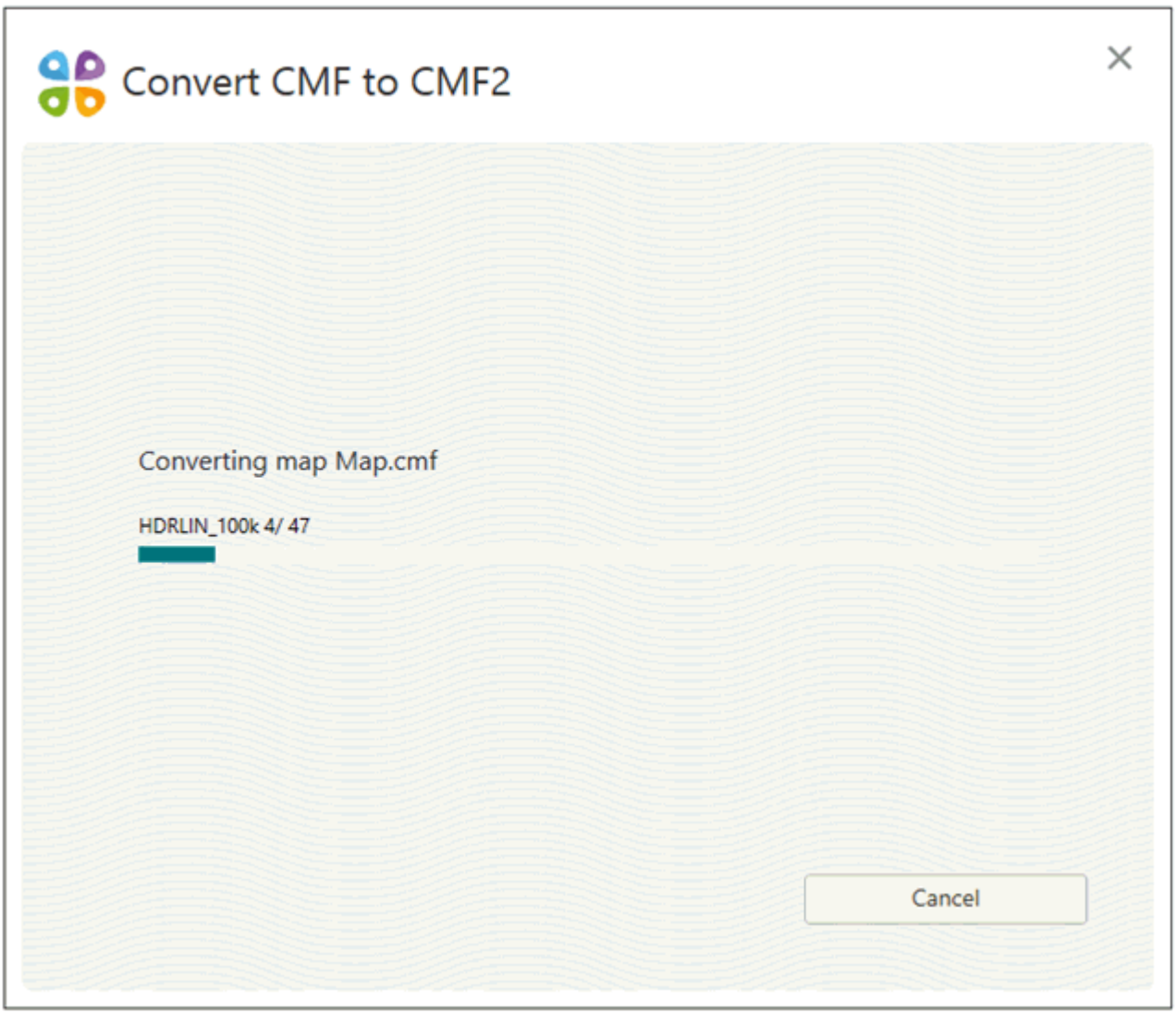
In the **Output CMF2** section press three dots button, enter the output CMF2 file name and location.



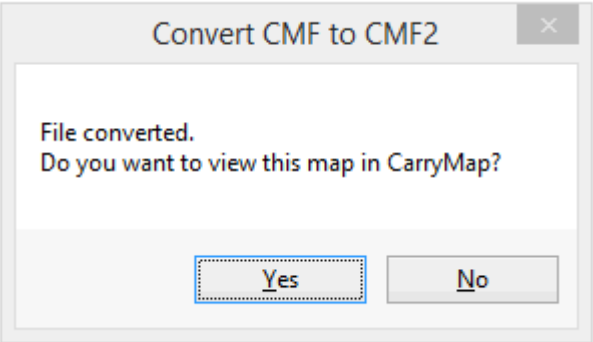
Press **Convert**.



The process of converting CMF to CMF2 will start.



Upon the process completion you will see the appropriate dialog. Press **OK** to view the output map.

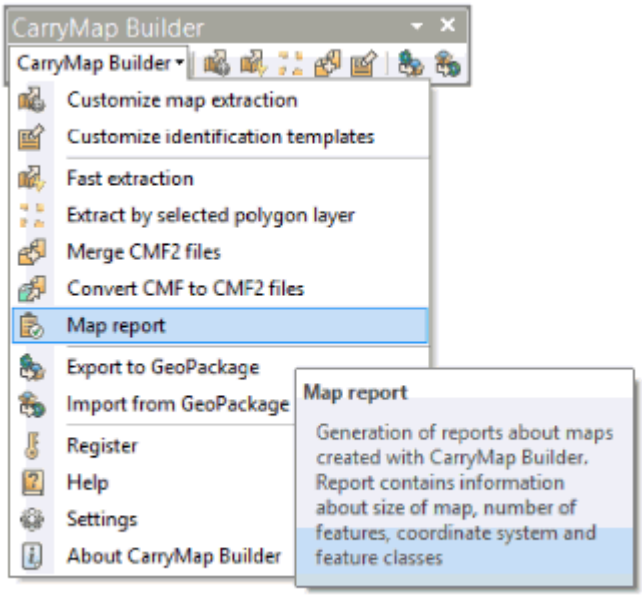


Generating map reports

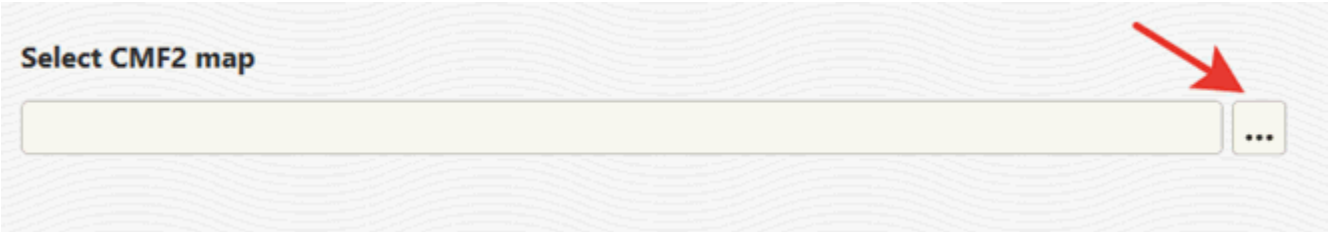
Map report tool is provided to get the following summary information about created mobile map:

- Name, size, coordinate system.
- Publisher, company name, e-mail, website.
- Map content: number of features, layers and their sizes.

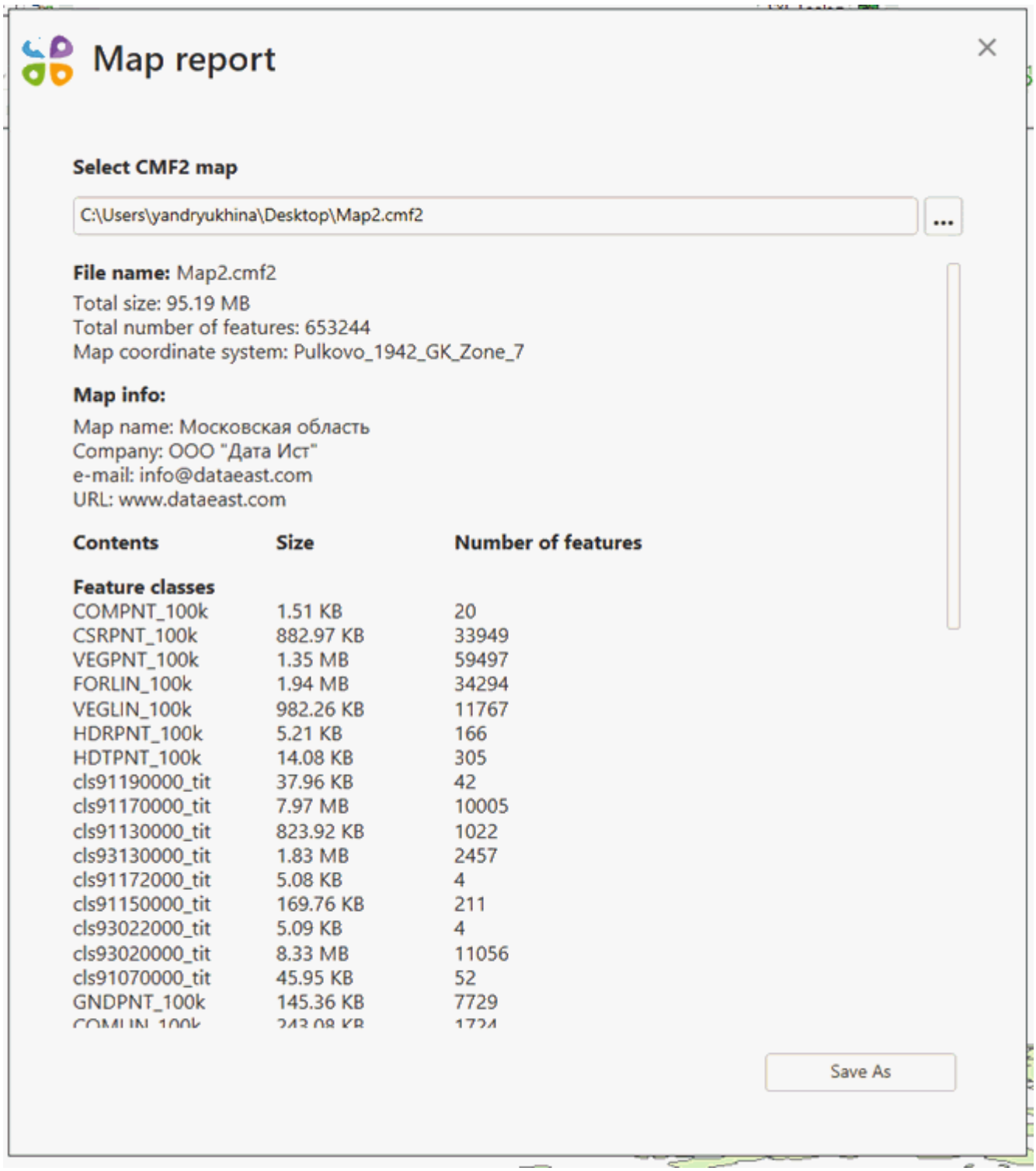
To get report about the map, go to CarryMap Builder menu and select **Map report** tool.



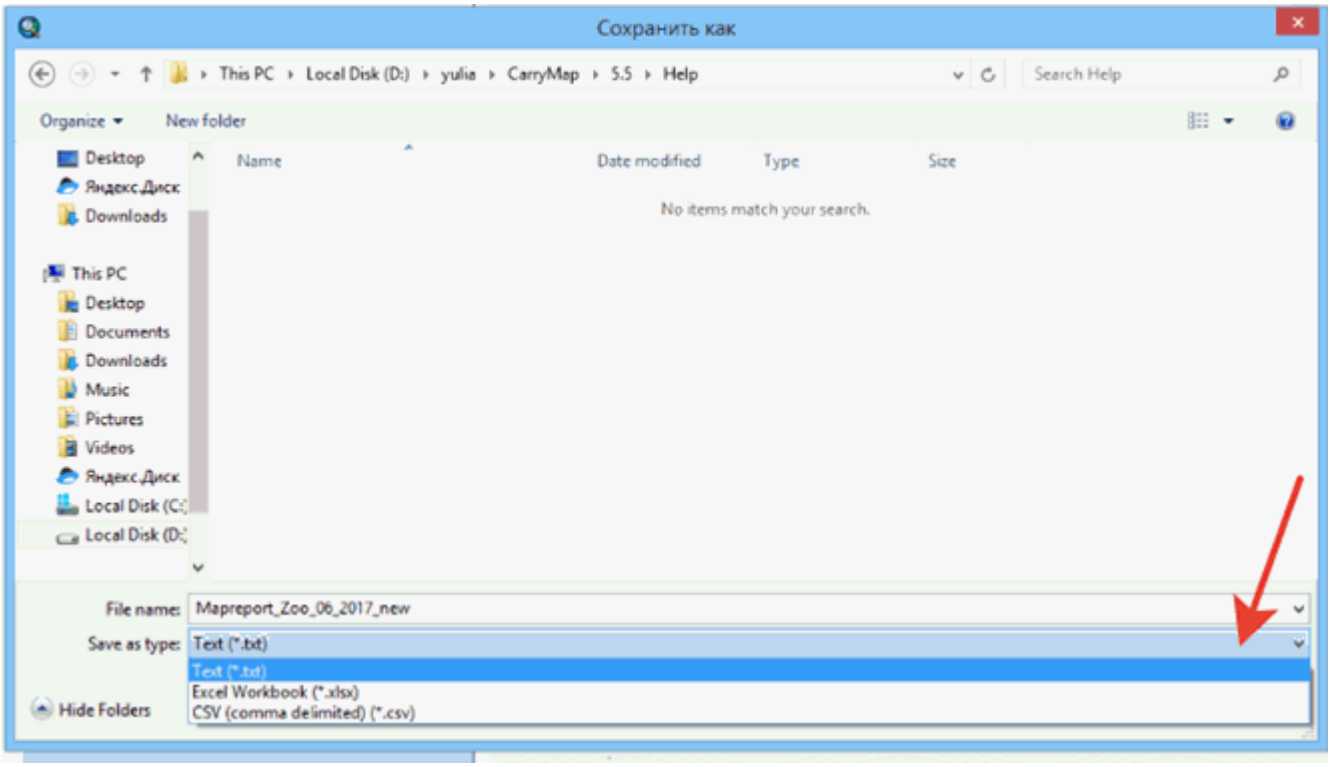
In the appeared dialog select the required map pressing the three dots button.



The dialog with summary report about selected map will appear.



To save this report as .txt, .xlsx, or .csv file, press **Save as**, select the required format from the list and specify its location.

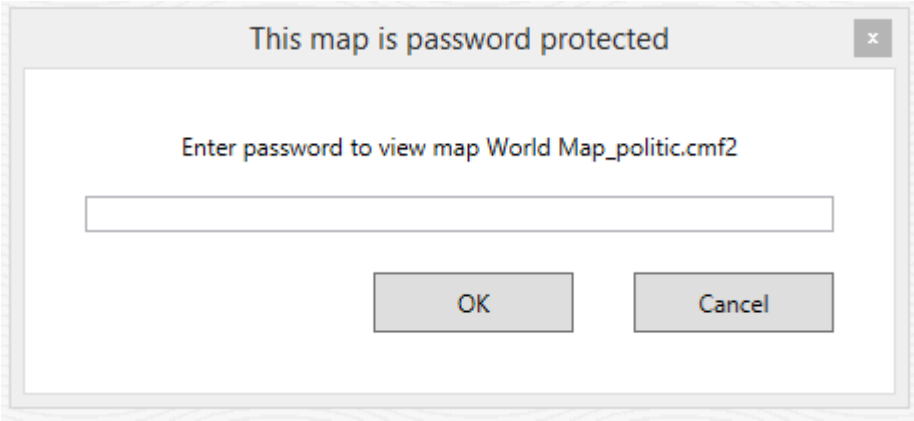


Press **Save**.

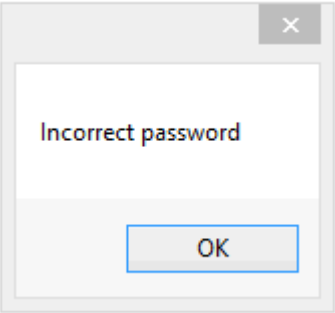
If selected map has been protected, the use of **Map report** tool will be limited as follows:

- **Map availability protection** – if map availability period has not been started yet or already finished, the tool will not work and you will see the dialog saying that this map cannot be opened due to set protection by date of use.

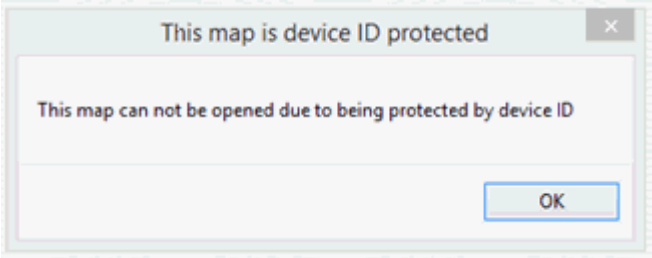
- **Password protection** – if map has been protected with password, you will see the dialog where to the password needs to be entered.



Enter the password and press OK. If the password is correct, the map report window will appear, otherwise you will see the following dialog:

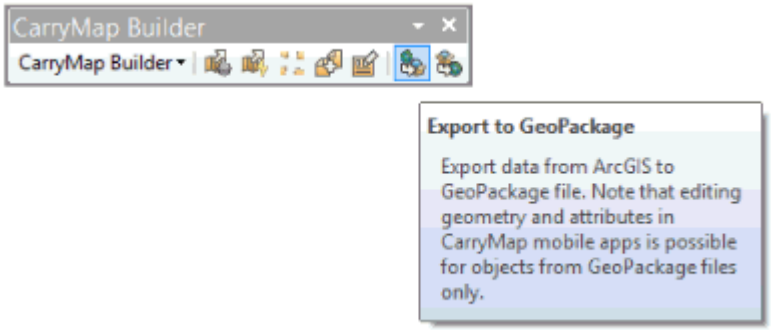


- **Protection by device ID** – if your device has not been found in the list of authorized devices to open this map, the tool will not work and you will see the appropriate message:

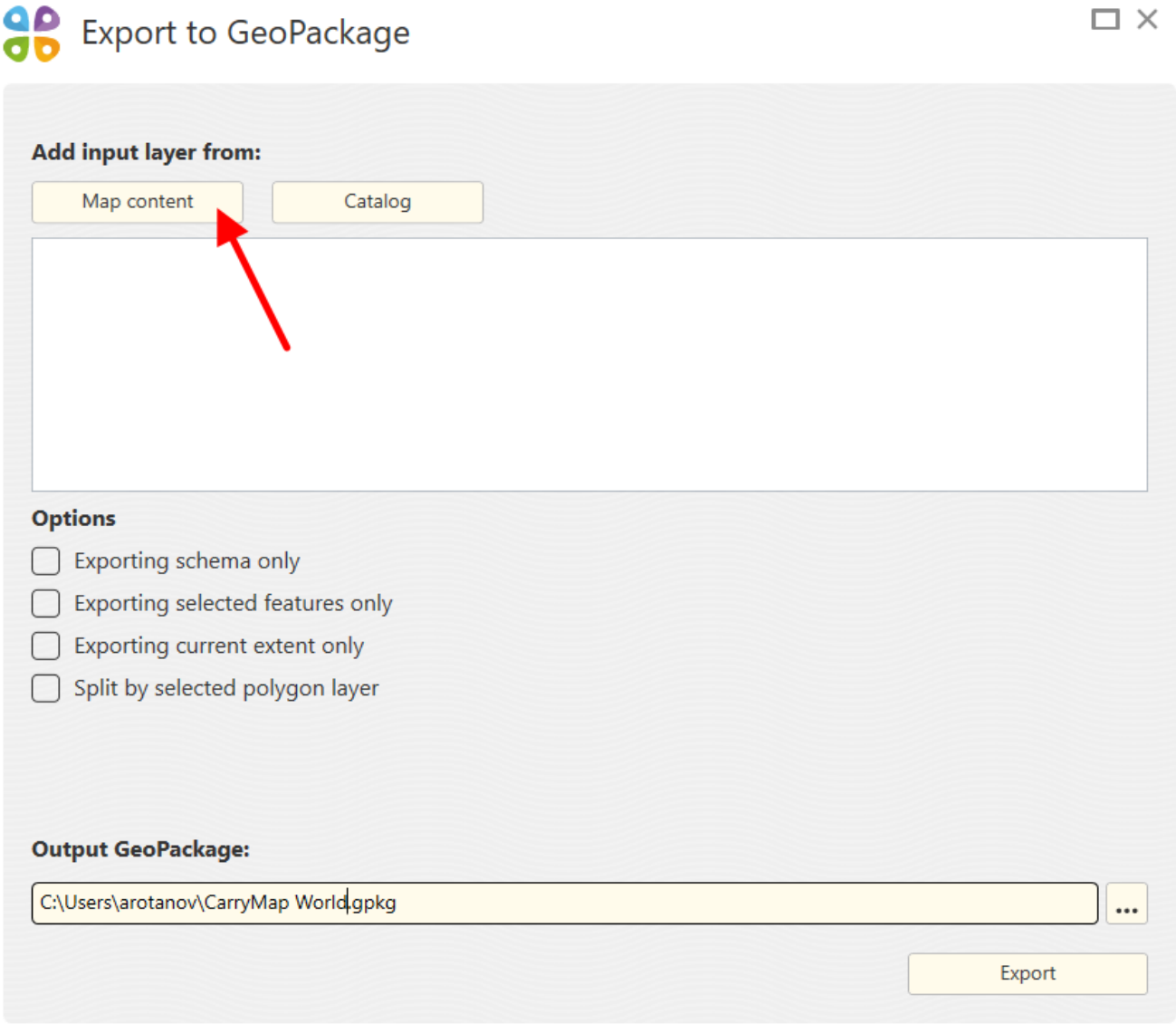


Exporting from ArcMap to GeoPackage

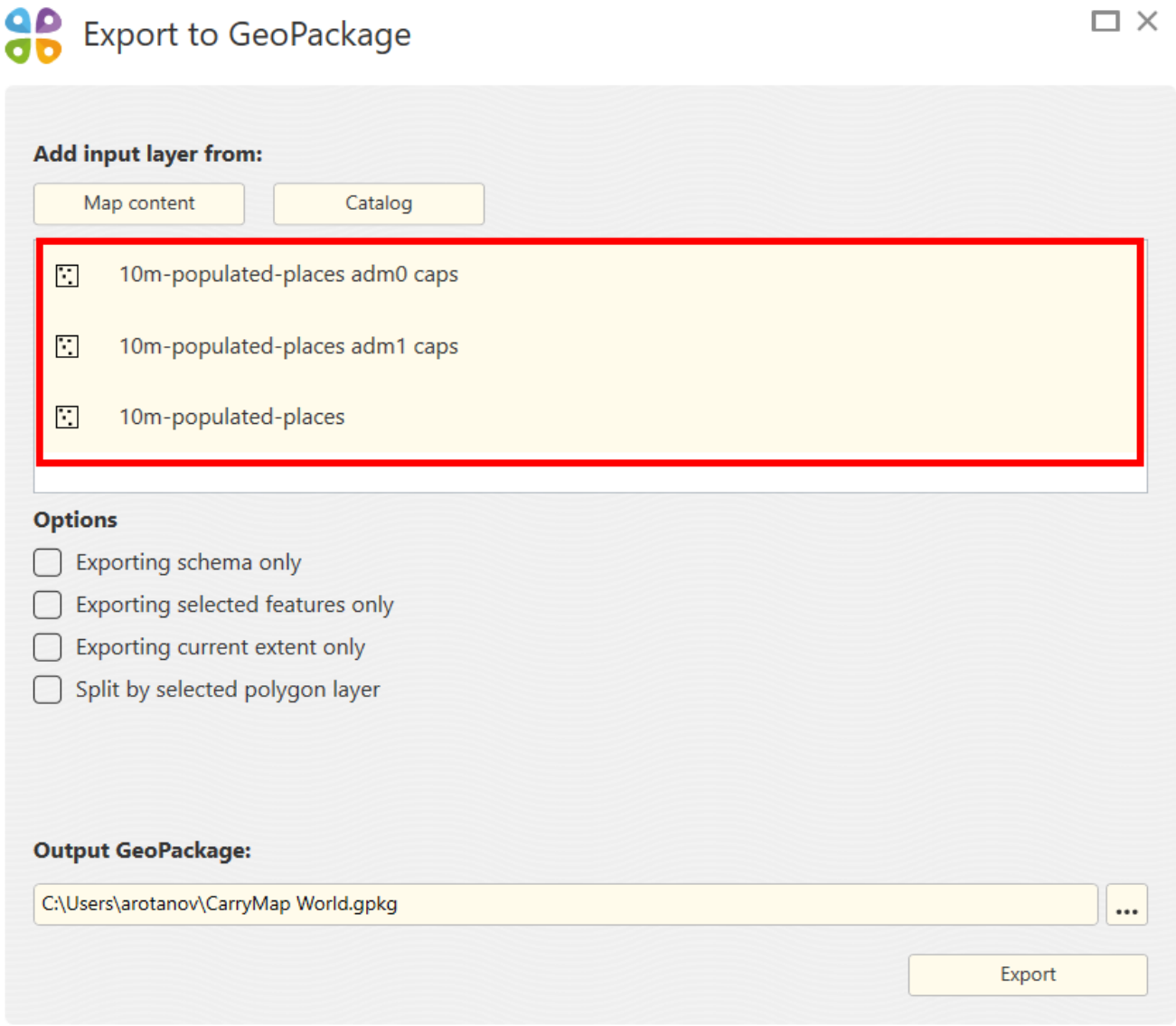
To export layers from your ArcMap project to GeoPackage format, press **Export to GeoPackage** on CarryMap Builder toolbar.



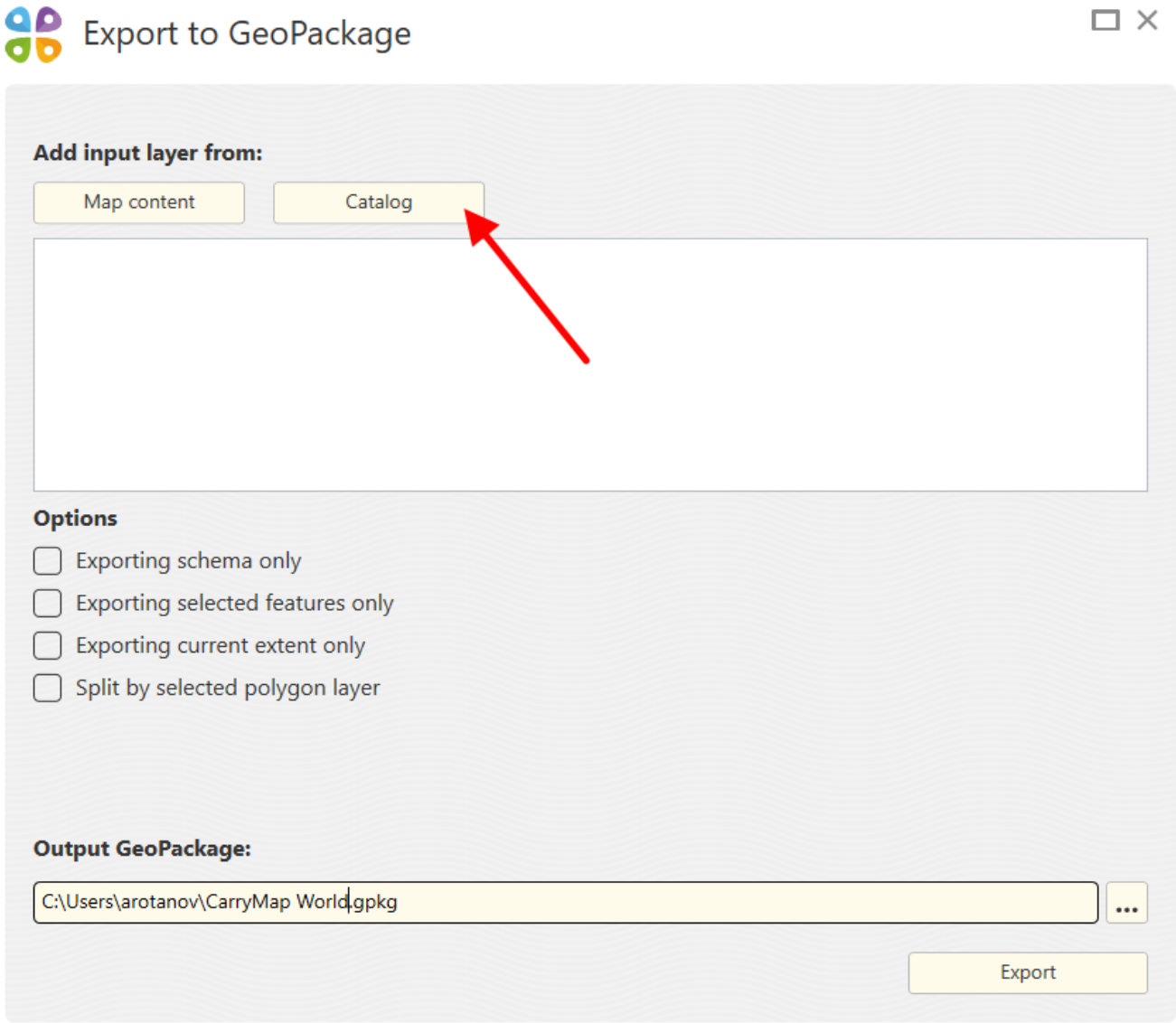
In the appeared tool dialog select layers that need to be exported. To select data from your current ArcMap project, press **Map content**.



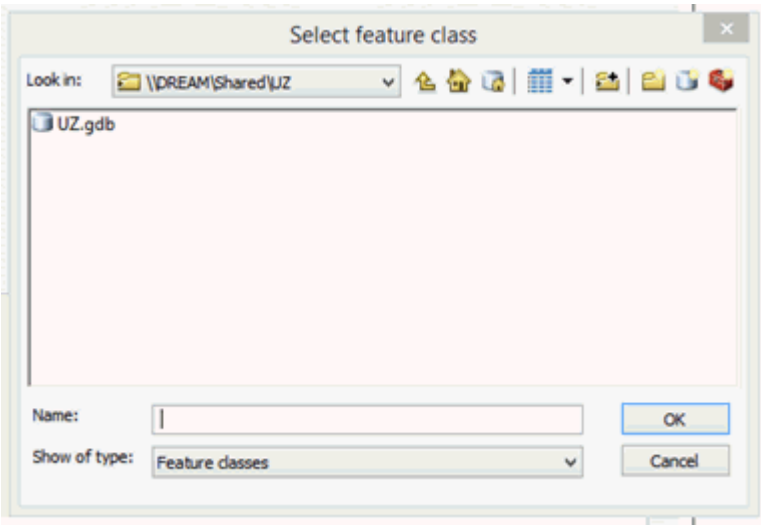
From the list of ArcMap layers select those you want to export. Selected layers will be shown in the dialog.



To add layer from ArcMap catalog, press **Catalog**.



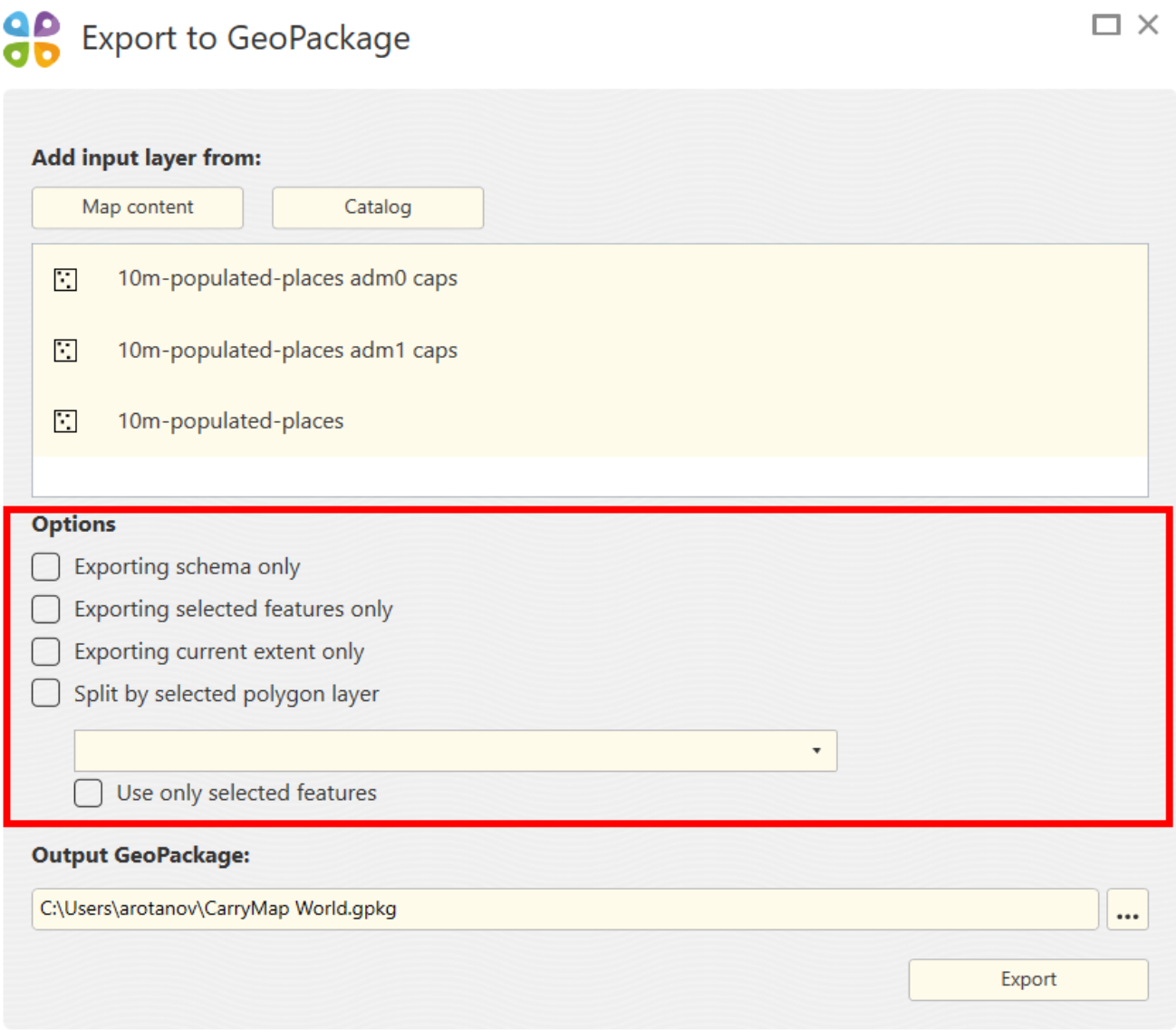
In the appeared dialog select layers for export.



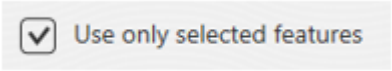
Note that you can apply both export options at a time, i.e. to select export from current map and from catalog.

By default, all features of selected layer will be exported, but you can specify the following options if needed:

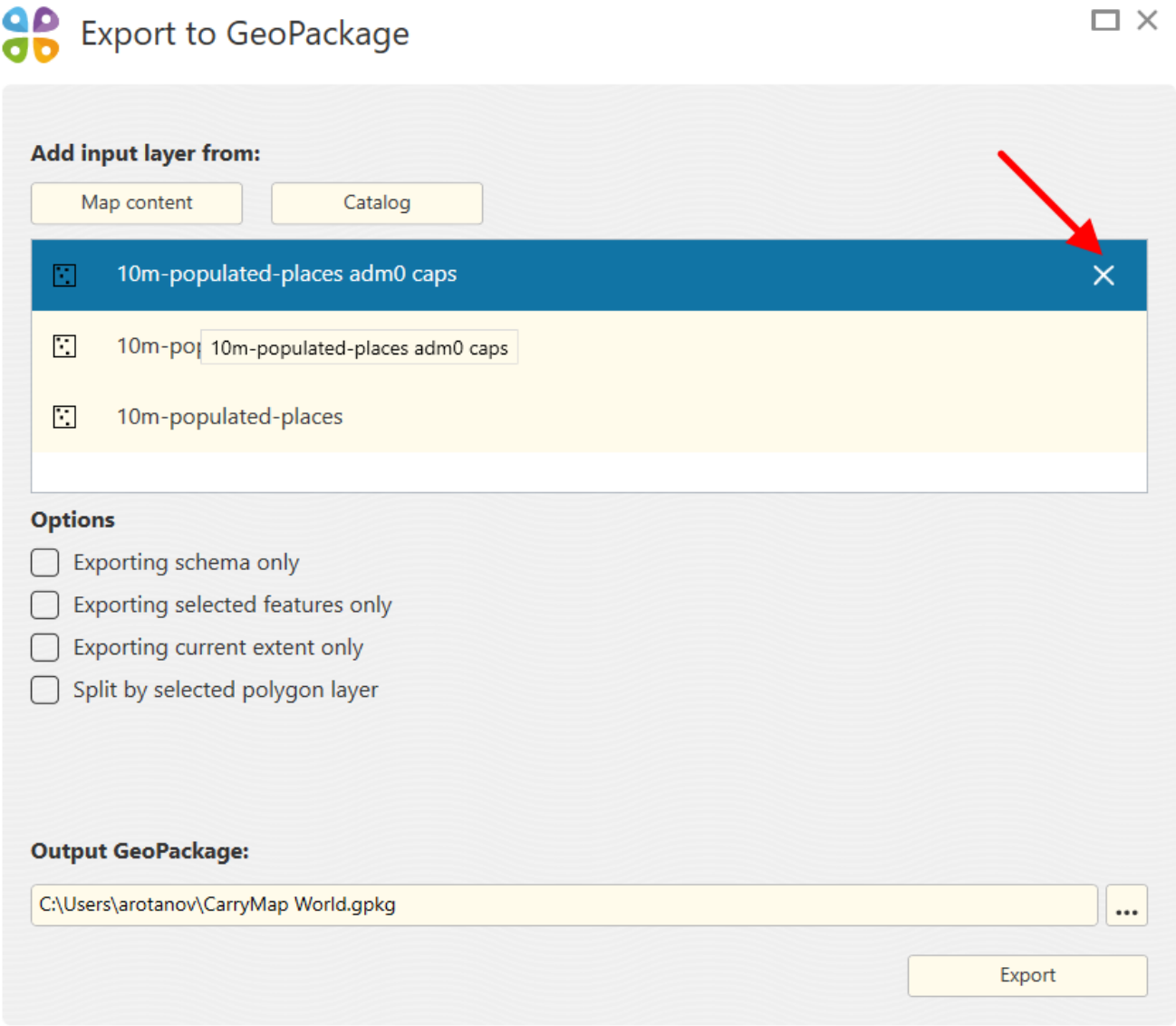
– *Exporting schema only* – only fields from attribute table will be exported to output GeoPackage file.
– *Exporting current extent only* – only features and fields with attributes will be exported to output GeoPackage file.
– *Exporting selected features only* - only features selected on map and fields with attributes will be exported to output GeoPackage file.
– *Split by selected polygon layer* **-** multiple GeoPackage files will be created along the boundaries of the features of the selected polygon layer.



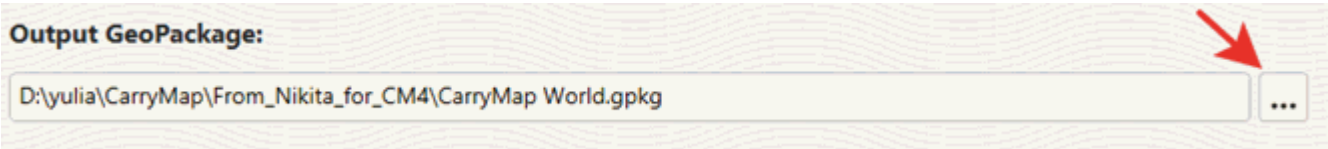
To perform export by specific polygon features only, you need to preliminary select these features on your map with the **Select features** tool in ArcMap. Select the separation layer where you selected features and check the **Use only selected features** option.



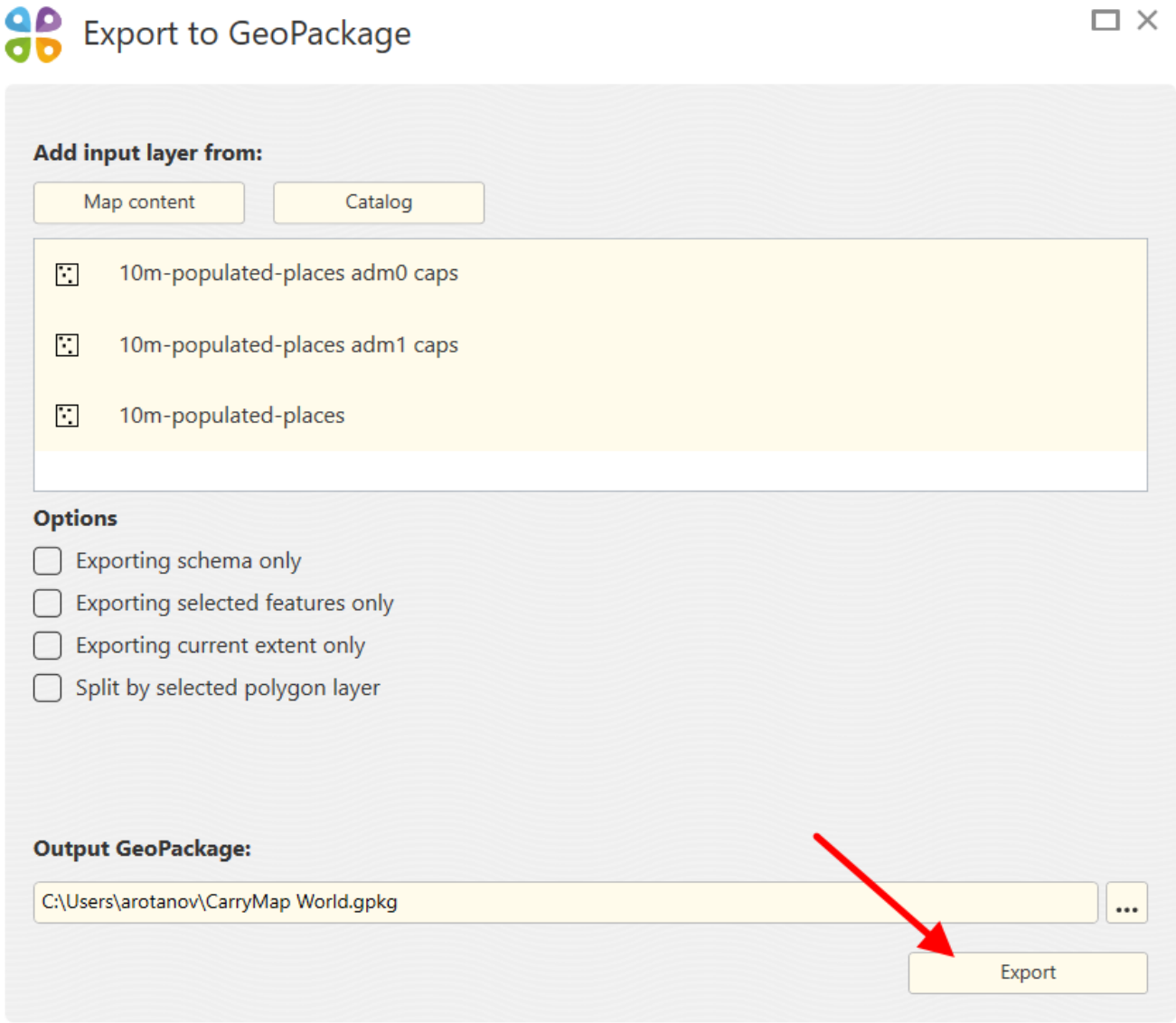
To delete layer from the list of layers selected for export, press the cross icon near the required layer and it will be deleted.



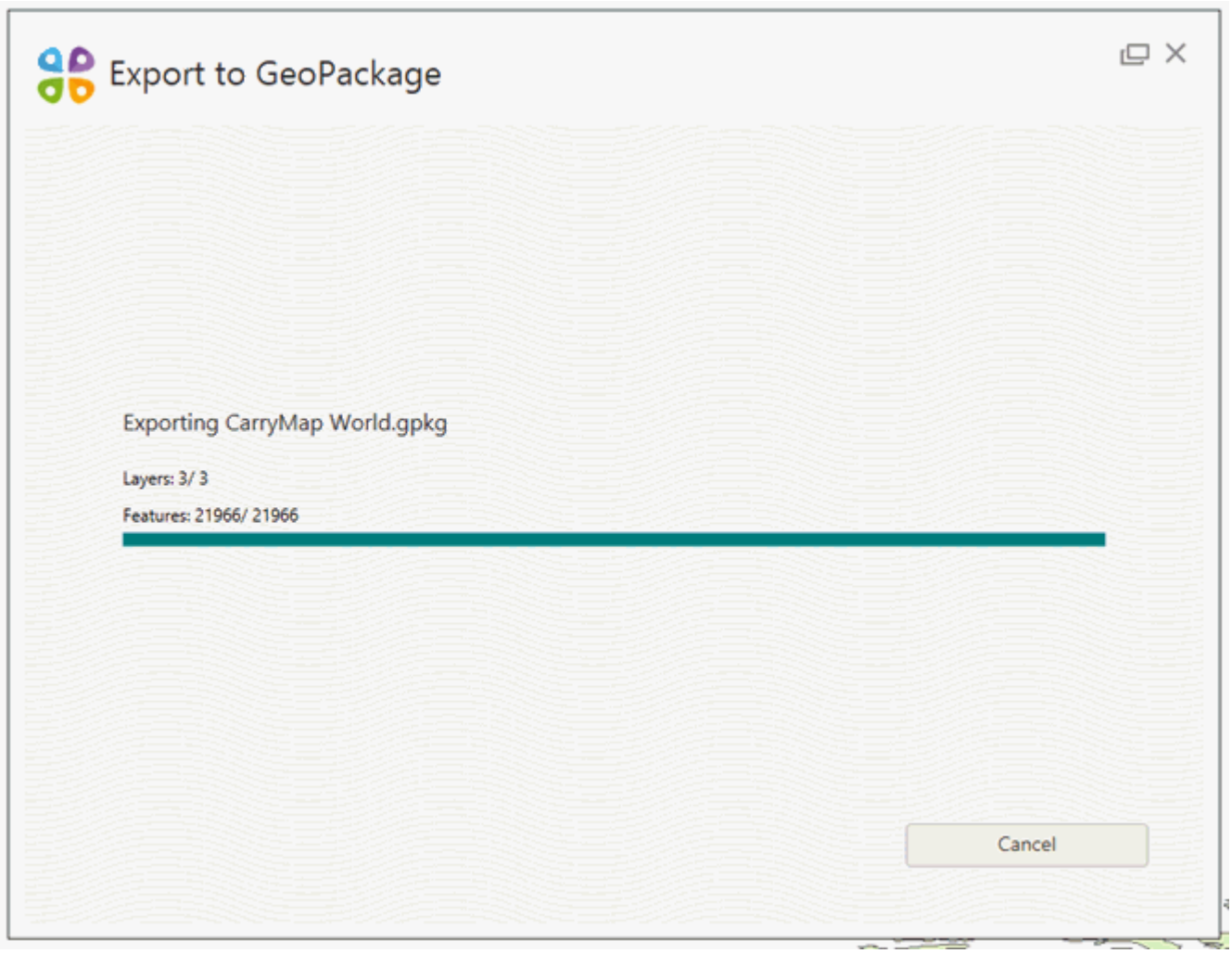
To specify name and location of the output GeoPackage file, press three dots button in the **Output GeoPackage** section.



To start export to GeoPackage process, press **Export**.

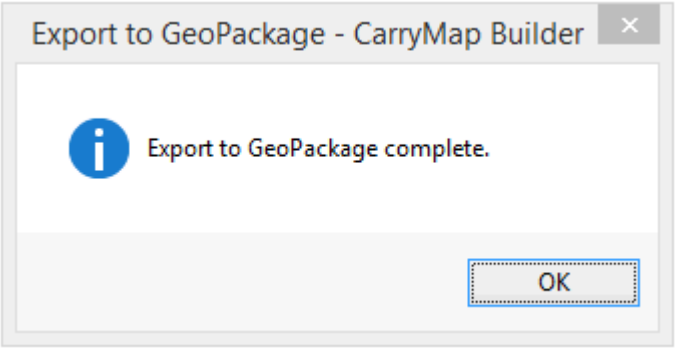


The dialog showing the progress bar of export to GeoPackage process will appear.



To cancel exporting process, press **Cancel**.

Upon the process completion you will see the appropriate dialog.



General information

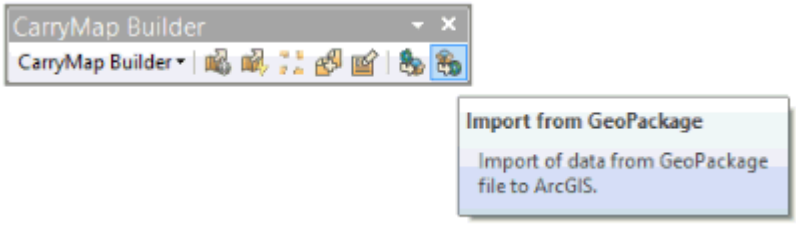
CarryMap Builder allows importing of GeoPackage files to ArcMap, as well as exporting data from ArcMap to GeoPackage format. GeoPackage is the open, non-proprietary, platform-independent and standards-based data format for geographic information system implemented as SQLite database container.

Owing to this GeoPackage export/import functionality of CarryMap Builder, the field data collected using CarryMap app can be transferred back to ArcMap.

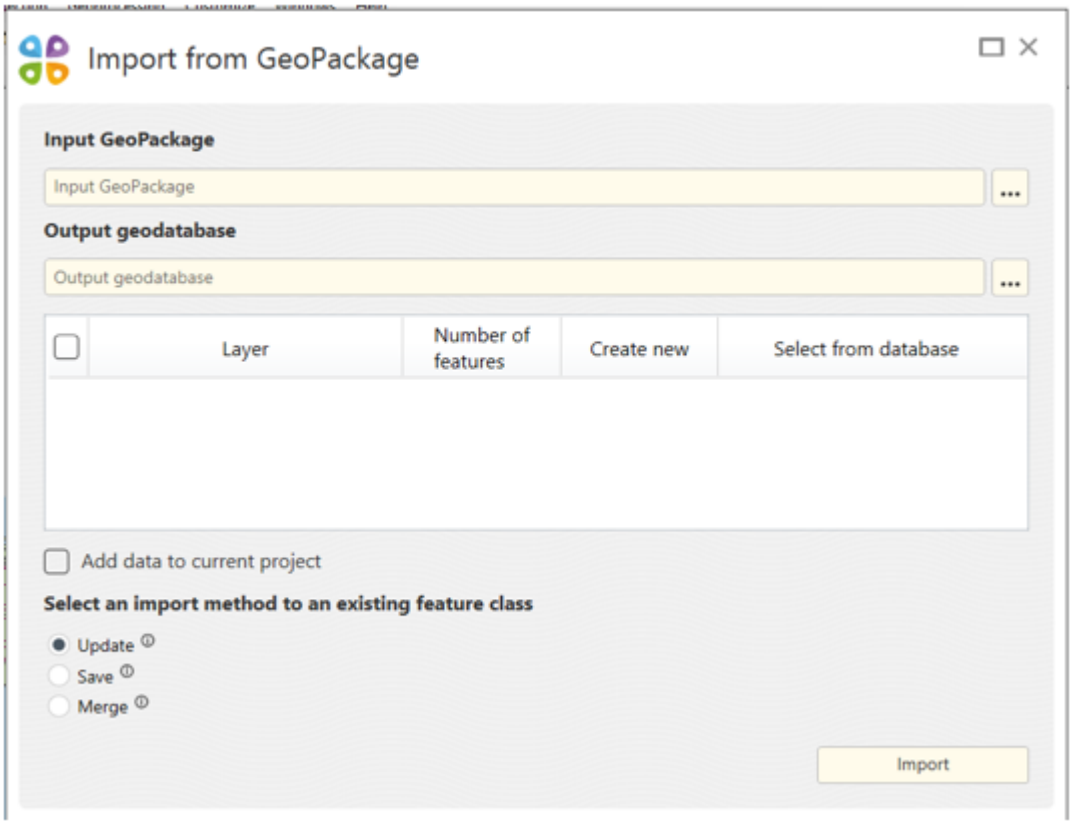
Dear users, please note that work with attachments and feature classes which options are required by importing GeoPackage files to CarryMap Builder, is available for ArcGIS Standard or Advanced users only!

Importing GeoPackage layers to ArcMap

To import GeoPackage file to ArcMap, press **Import from GeoPackage** button on the CarryMap Builder toolbar.

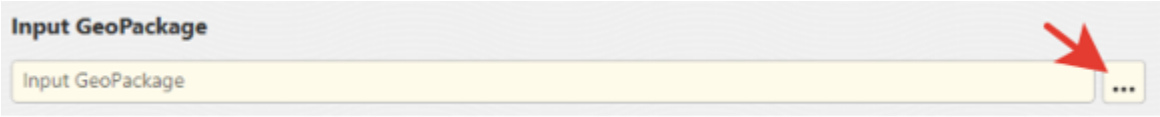


The **Import from GeoPackage** tool window will appear.

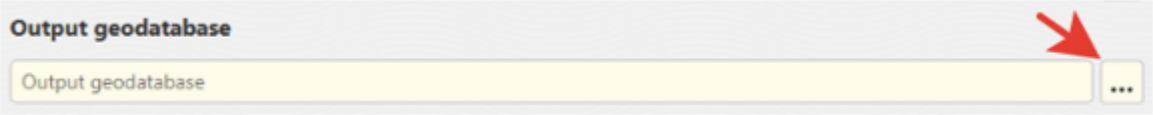


You can import GeoPackage files both to existent geodatabase with set of feature classes, or to the newly created geodatabase.

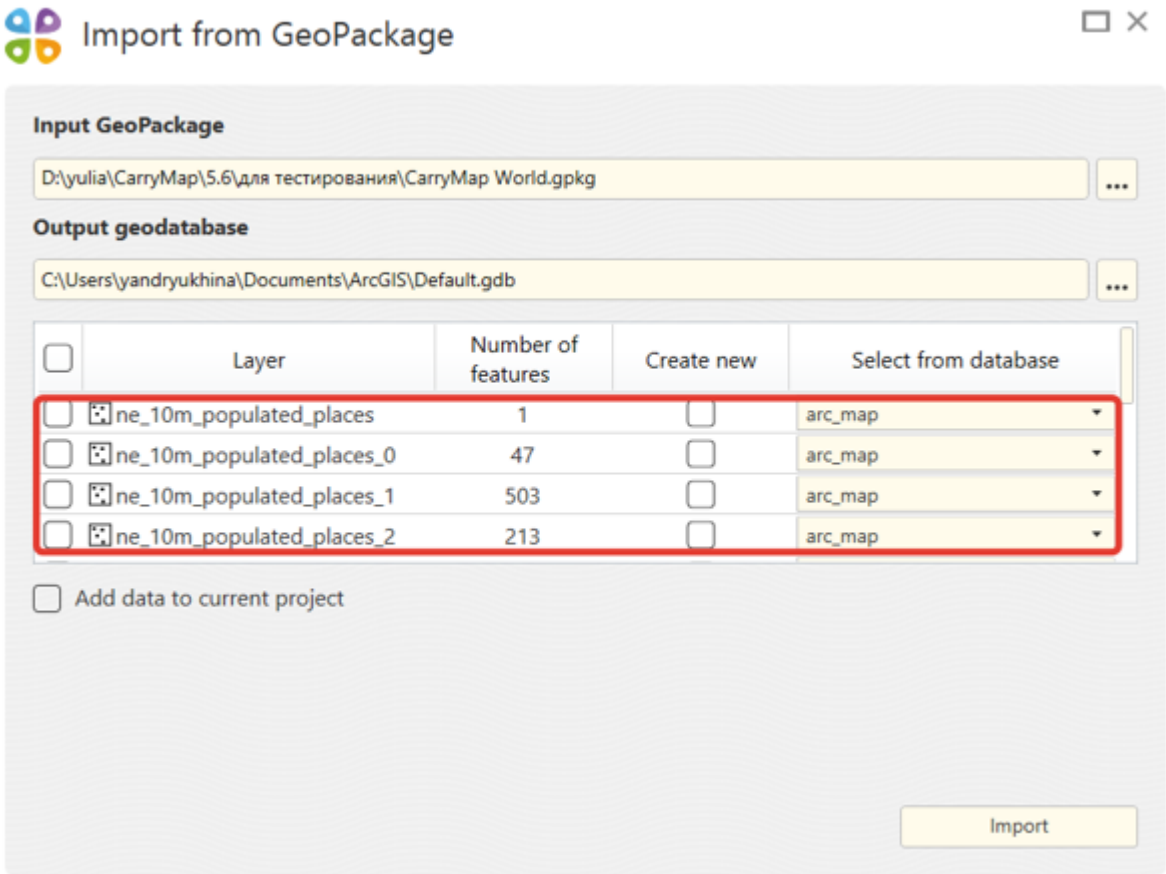
To import GeoPackage file to ArcMap, select the required GeoPackage file by pressing **Browse** button in the **Input GeoPackage** section of the tool.



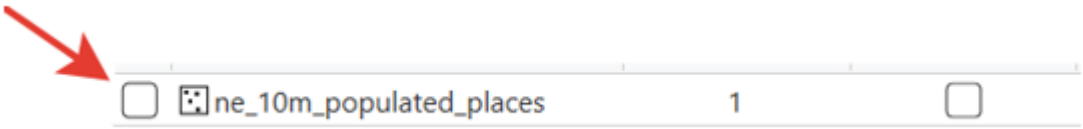
Now select the output geodatabase. To do so, in the **Output geodatabase** section press **Browse** button and select the needed database.



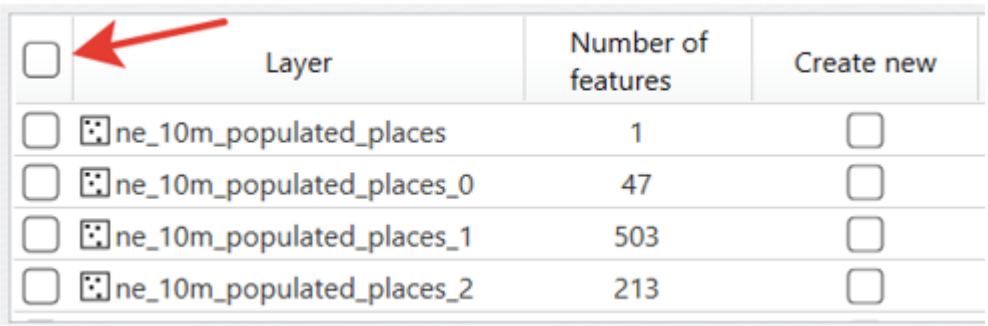
Now you need to select layers for import from the input geodatabase. The selected layers will be displayed in the window.



Check the boxes near the layers that need to be selected.

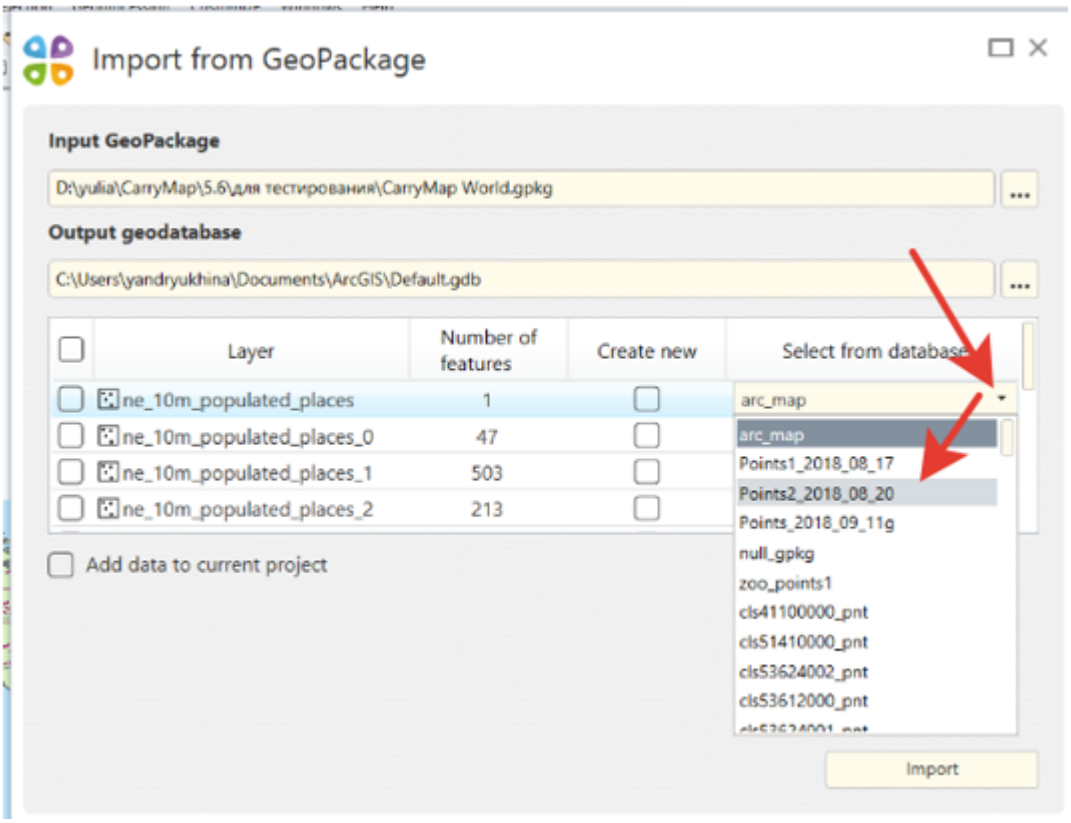


To select all layers at a time, check **Select all** option.

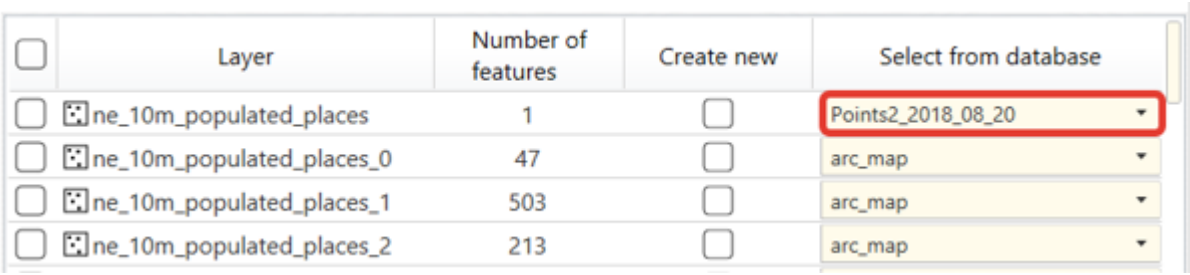


Now select feature classes for importing layers from the output geodatabase or create the new feature classes.

To import layer to the previously created feature class in the geodatabase, check the box near the layer and select the required feature class from the dropdown list.

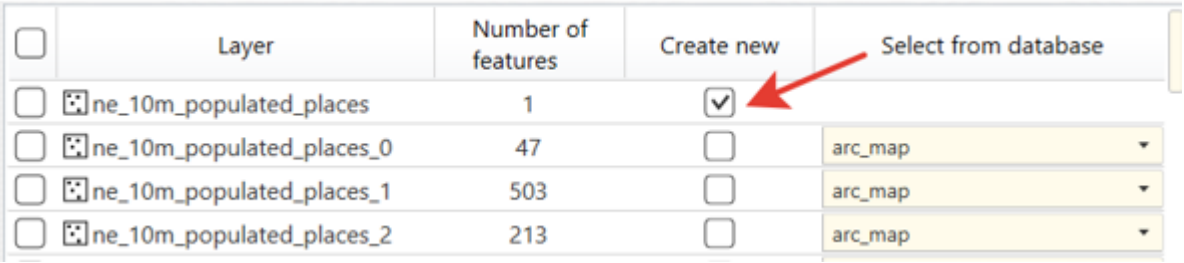


Selected feature class will be shown in the layer string.

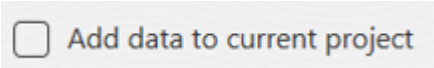


Dear users, please note that attribute table of the output feature classes, where to import will be done, will be changed according to the attribute table of the imported GeoPackage files.

To import GeoPackage layer to the new feature class, check the box near this layer.



Feature class with the name of the GeoPackage layer will be saved in the geodatabase.

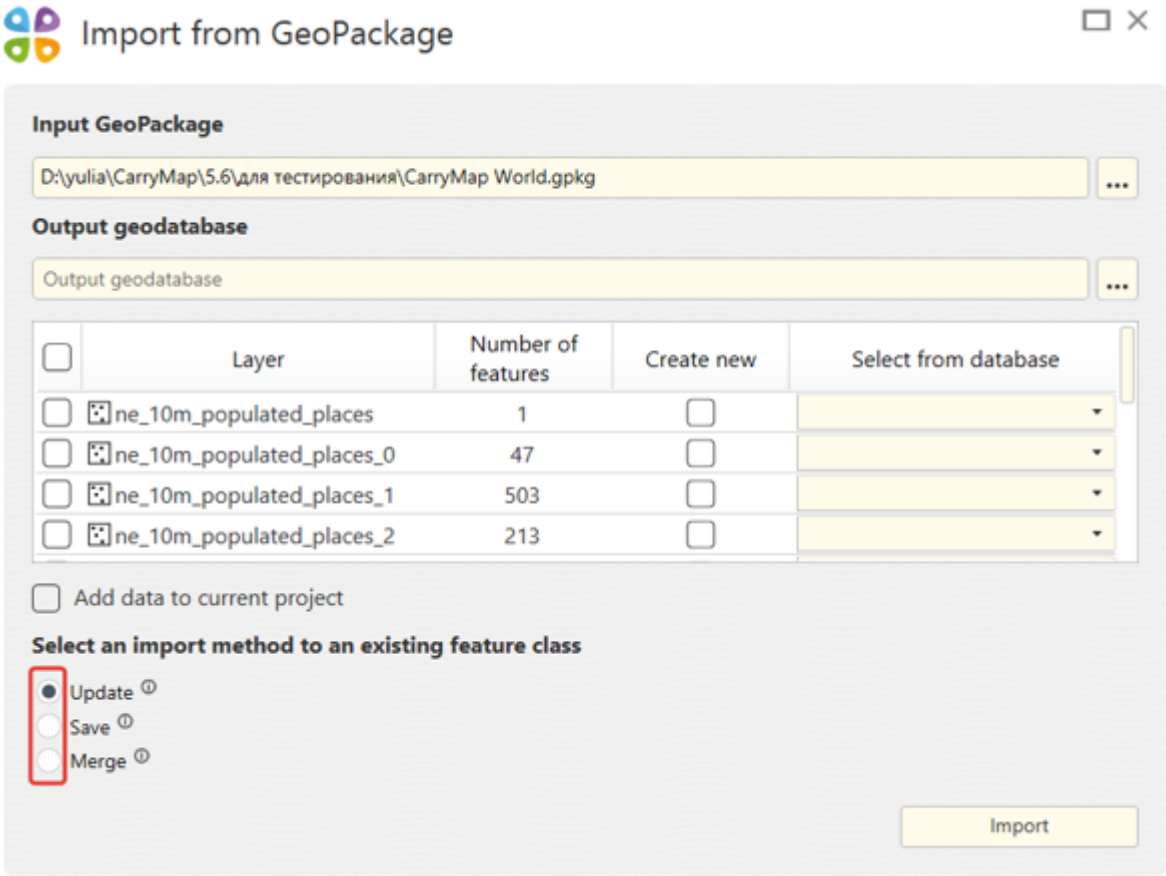
To add imported data to your current ArcMap document, check 

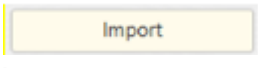
option.

By importing to the existent feature class, one the following importing methods can be used:
• **update** – only changed features are imported. By using this method the imported GeoPackage data must have completed GlobaliD field and enabled Editor Tracking mode for the Modification date field.
• **save** – all features are imported and source features in the output GeoPackage file are deleted.
• **merge** – all features are imported and source features in the output GeoPackage file are saved.

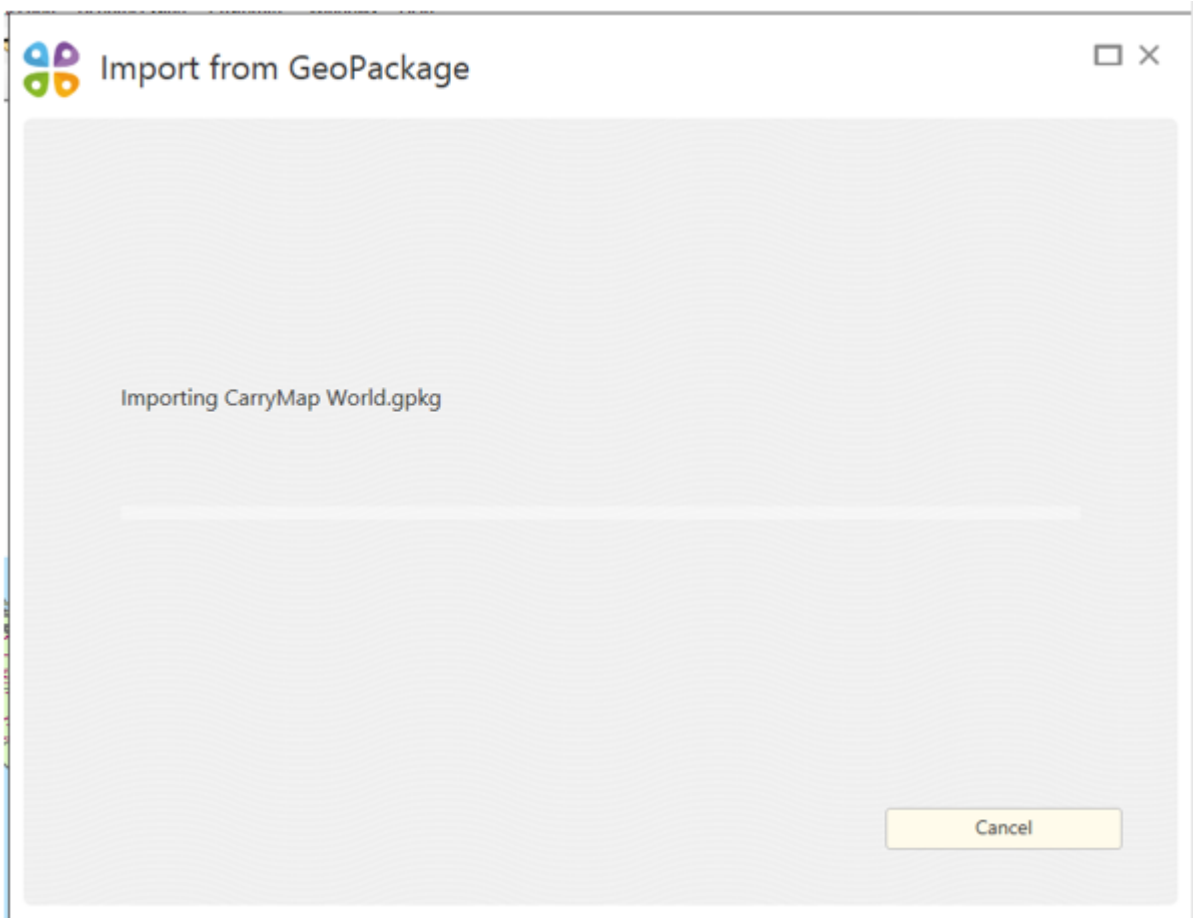
By default the **update** method is used for importing GeoPackage files.

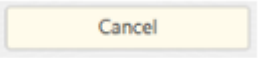
To change the importing method, check the box near the needed method.



After making all importing settings press 

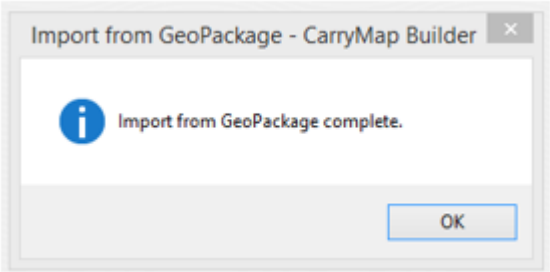
button.
The Import from GeoPackage window will appear.



To cancel importing process, press 

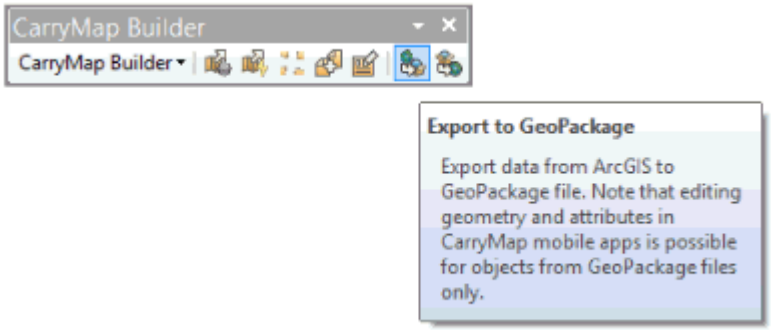
button.

Upon import completion, the following window will appear.

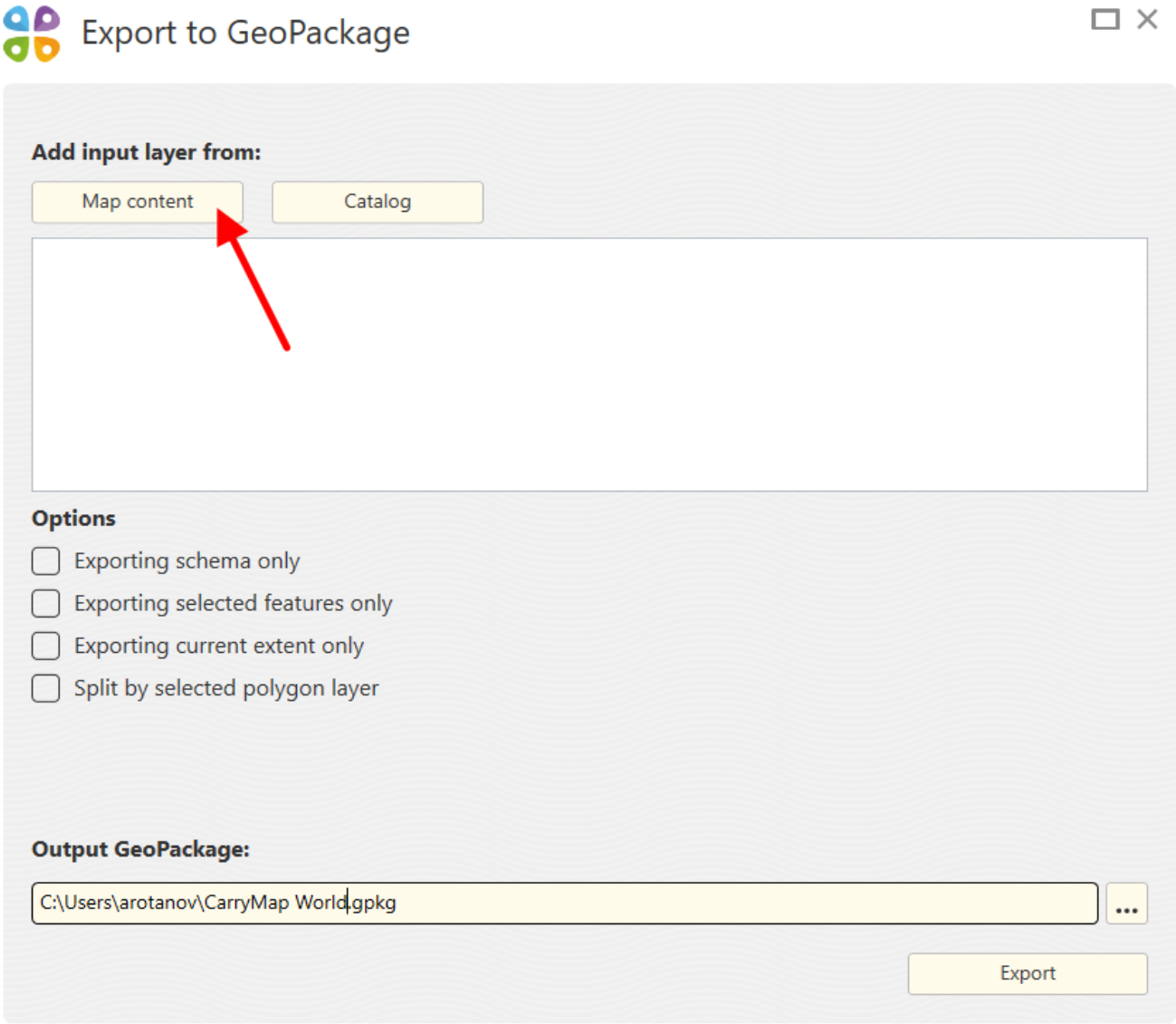


Exporting from ArcMap to GeoPackage

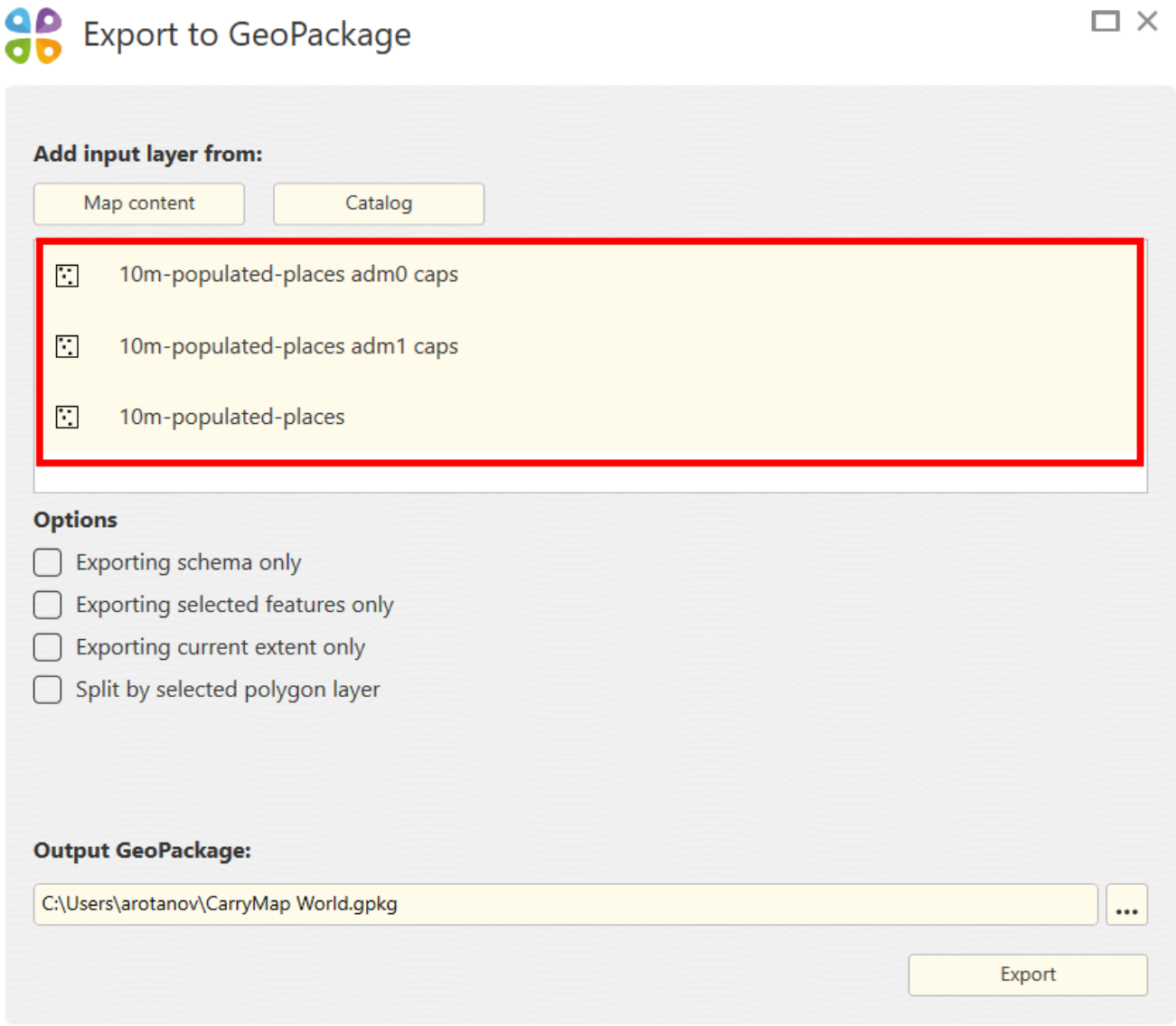
To export layers from your ArcMap project to GeoPackage format, press **Export to GeoPackage** on CarryMap Builder toolbar.



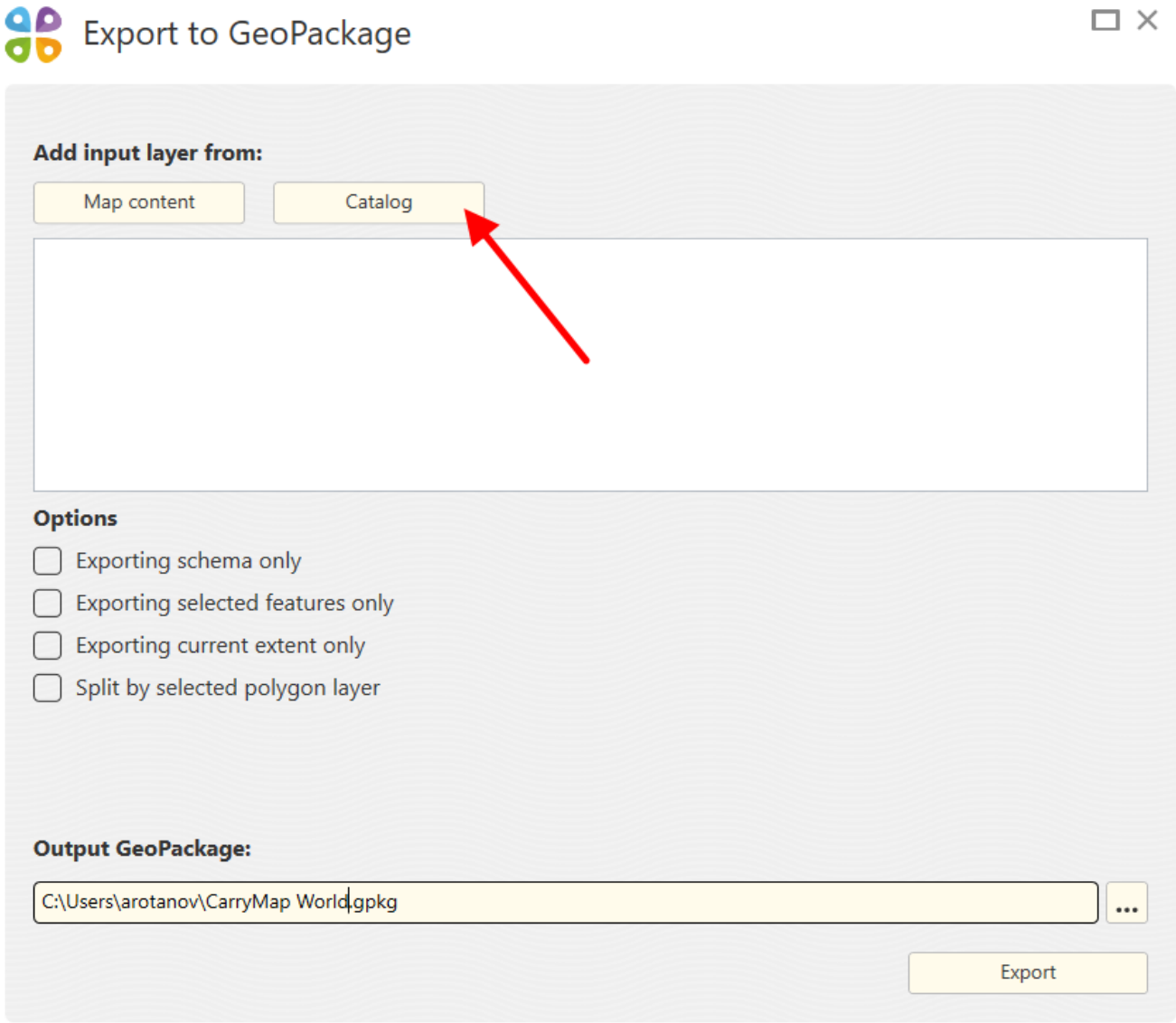
In the appeared tool dialog select layers that need to be exported. To select data from your current ArcMap project, press **Map content**.



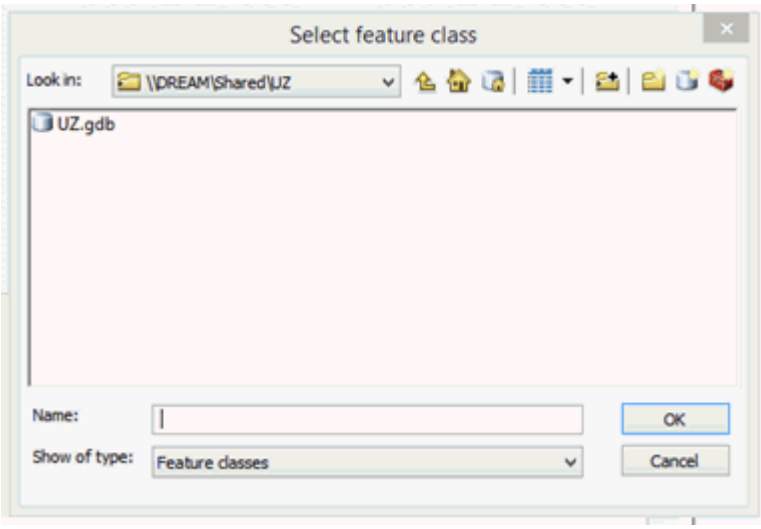
From the list of ArcMap layers select those you want to export. Selected layers will be shown in the dialog.



To add layer from ArcMap catalog, press **Catalog**.



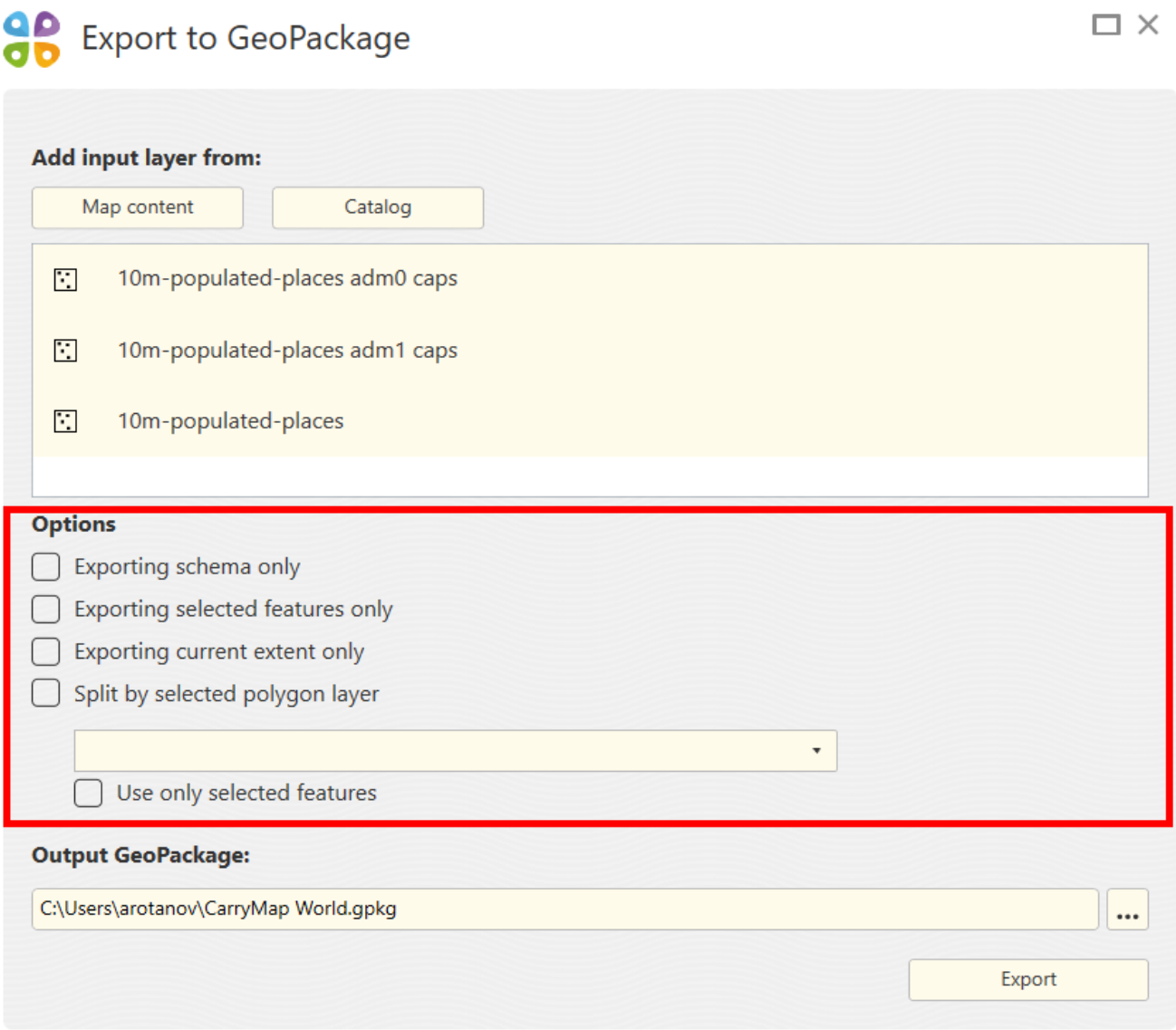
In the appeared dialog select layers for export.



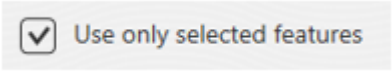
Note that you can apply both export options at a time, i.e. to select export from current map and from catalog.

By default, all features of selected layer will be exported, but you can specify the following options if needed:

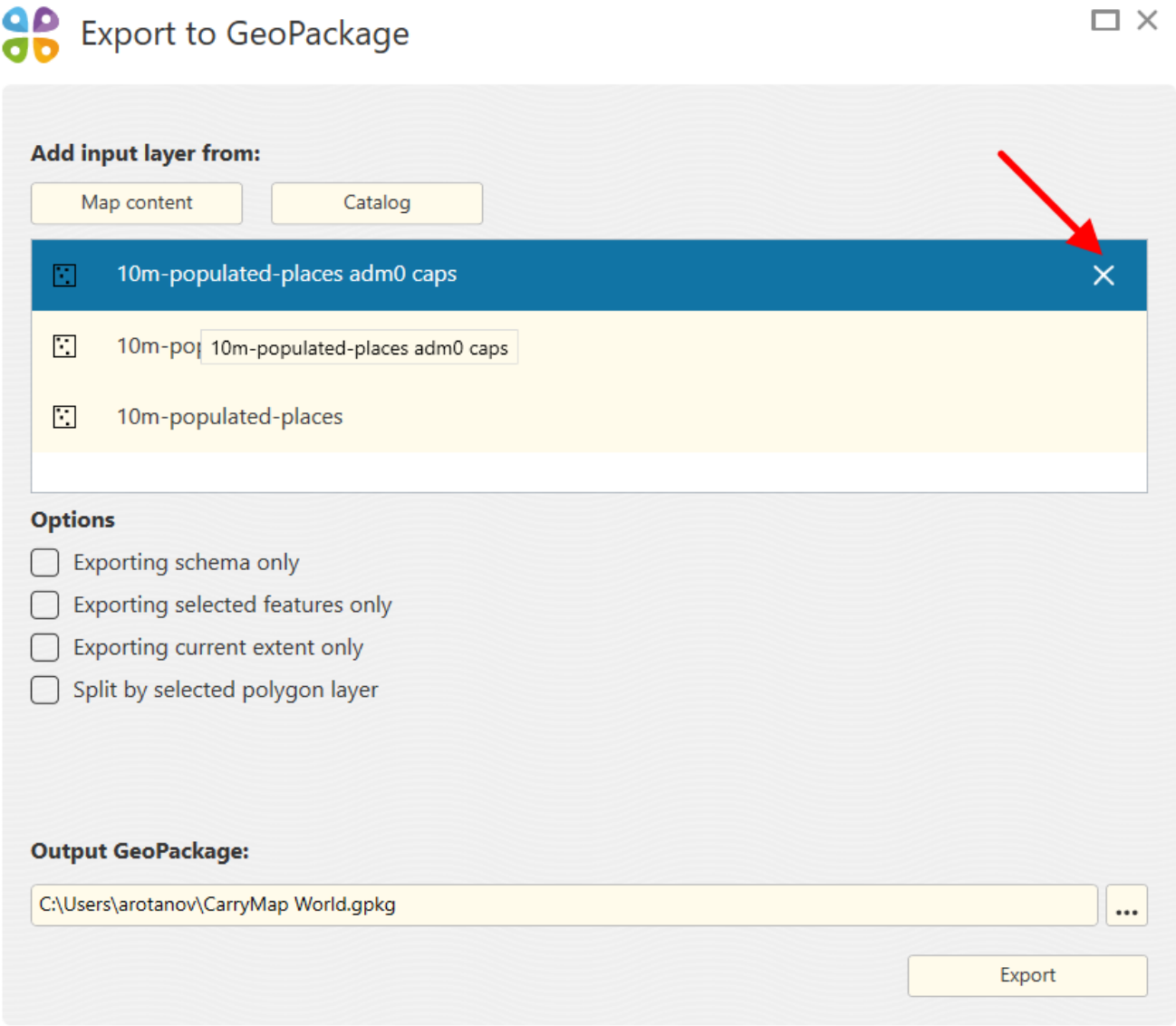
– *Exporting schema only* – only fields from attribute table will be exported to output GeoPackage file.
– *Exporting current extent only* – only features and fields with attributes will be exported to output GeoPackage file.
– *Exporting selected features only* - only features selected on map and fields with attributes will be exported to output GeoPackage file.
– *Split by selected polygon layer* **-** multiple GeoPackage files will be created along the boundaries of the features of the selected polygon layer.



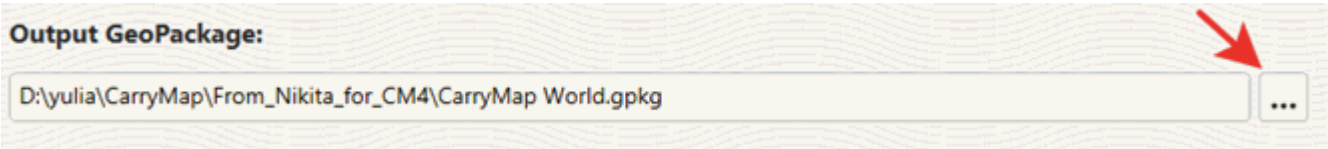
To perform export by specific polygon features only, you need to preliminary select these features on your map with the **Select features** tool in ArcMap. Select the separation layer where you selected features and check the **Use only selected features** option.



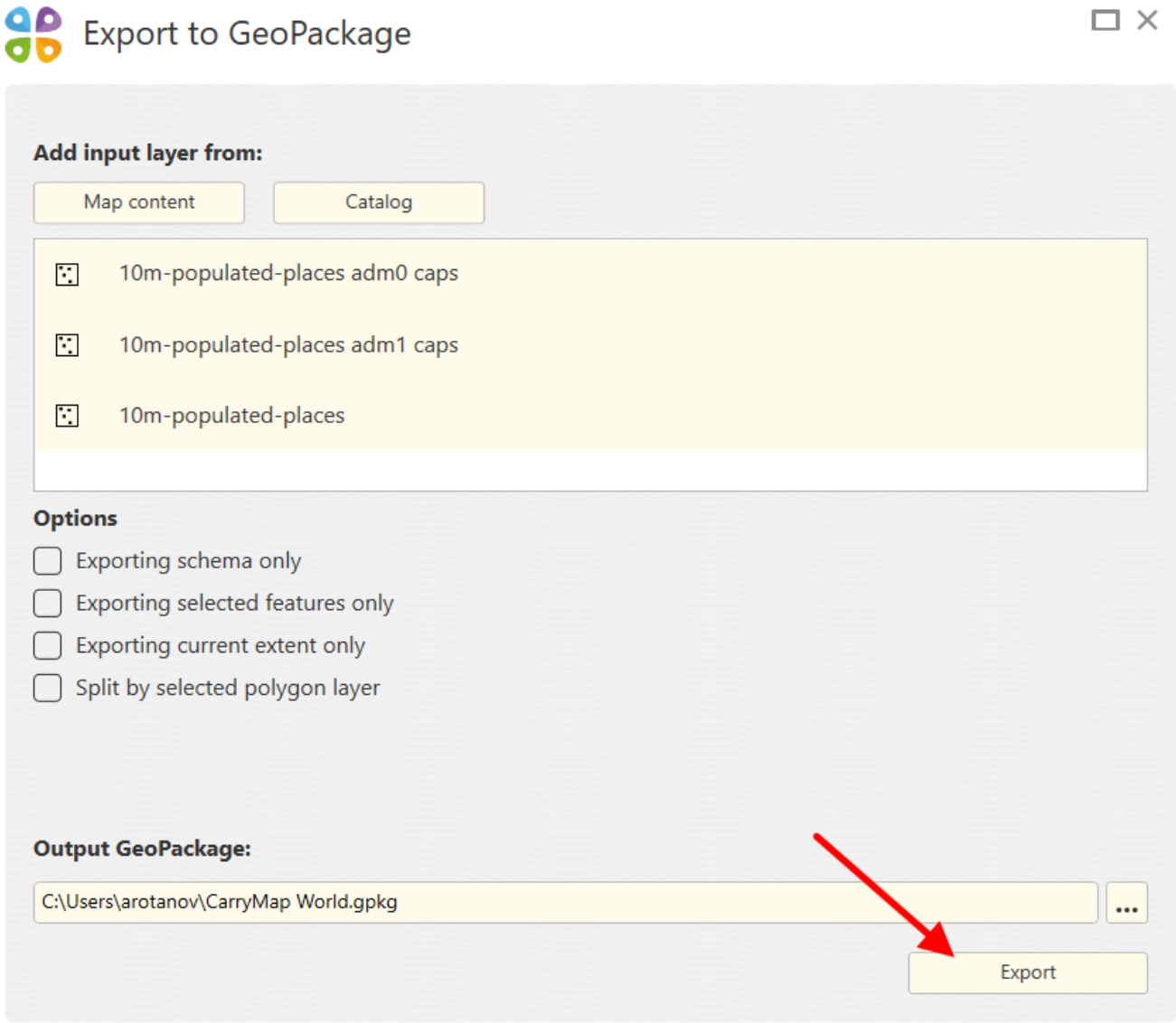
To delete layer from the list of layers selected for export, press the cross icon near the required layer and it will be deleted.



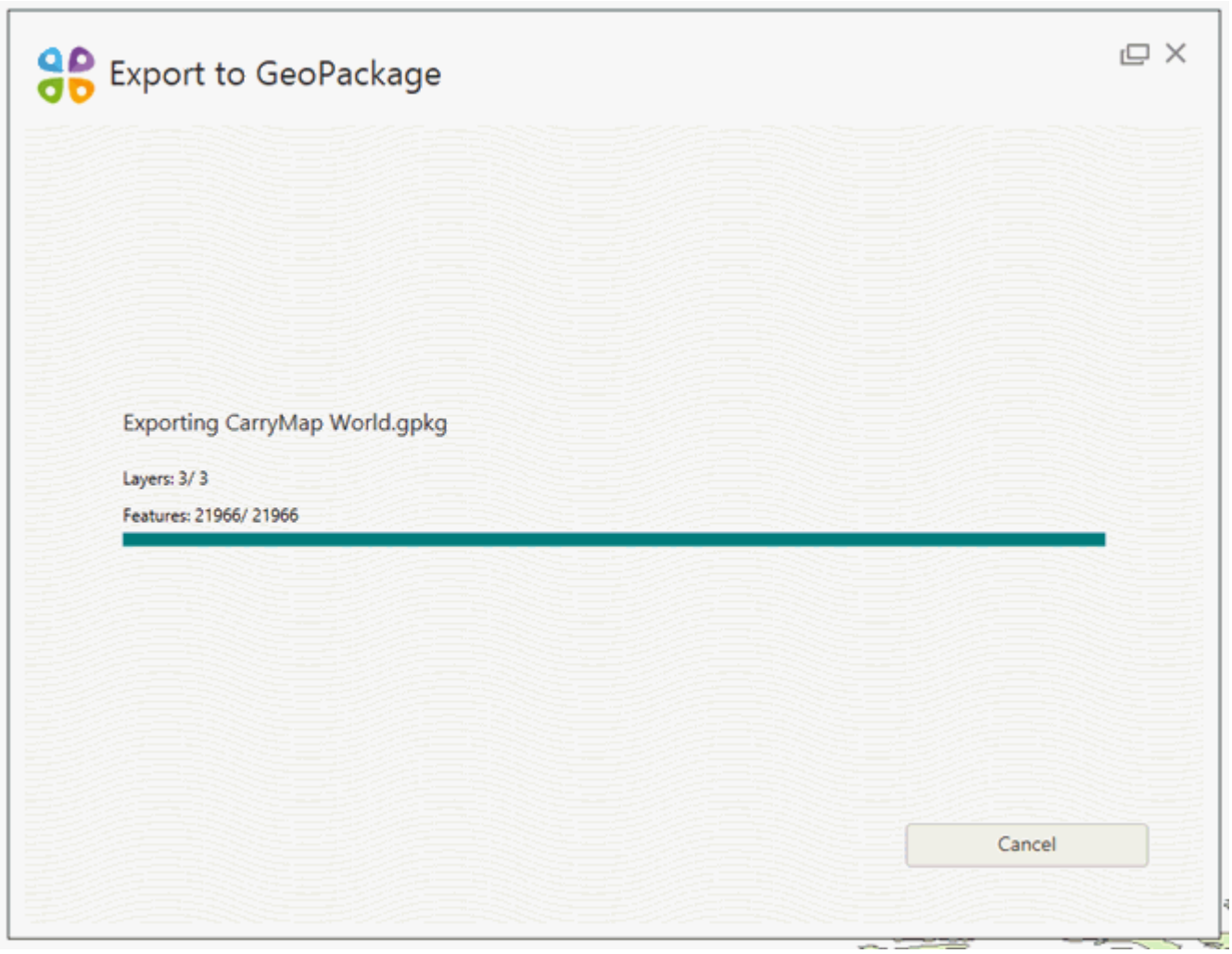
To specify name and location of the output GeoPackage file, press three dots button in the **Output GeoPackage** section.



To start export to GeoPackage process, press **Export**.

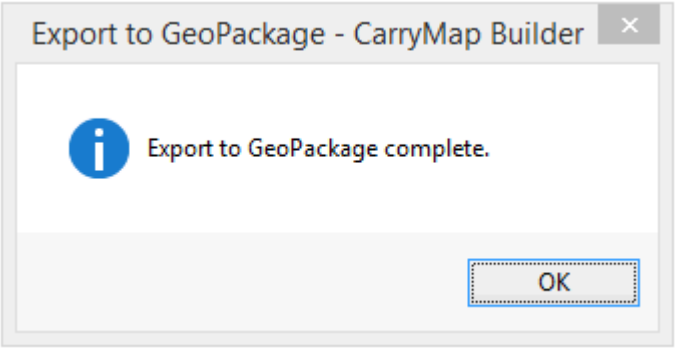


The dialog showing the progress bar of export to GeoPackage process will appear.



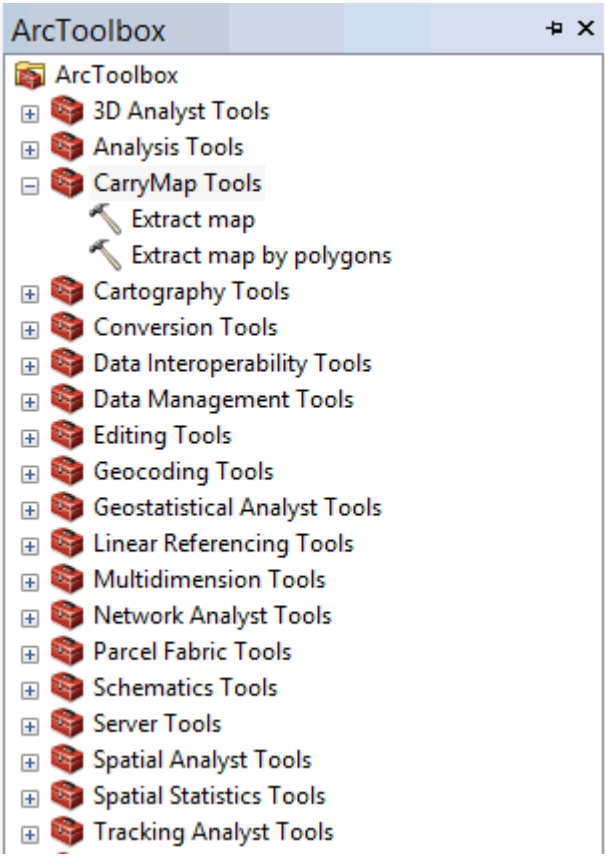
To cancel exporting process, press **Cancel**.

Upon the process completion you will see the appropriate dialog.



About geoprocessing tools

Geoprocessing tools in CarryMap Builder are used same as standard ArcToolbox tools starting from ArcGIS Desktop 10.0. Geoprocessing tools are provided for batch extraction of map documents to CMF2 format.



The current CarryMap Builder version provides the following geoprocessing tools:

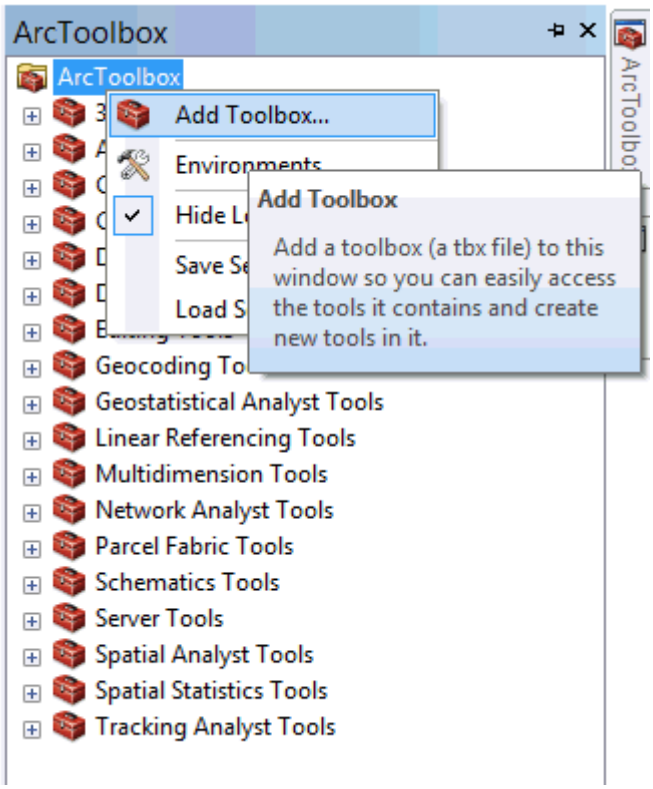
- extract map
- extract map by selected polygons

Note that geoprocessing tools are available for users with Corporate or Global CarryMap Builder license only.

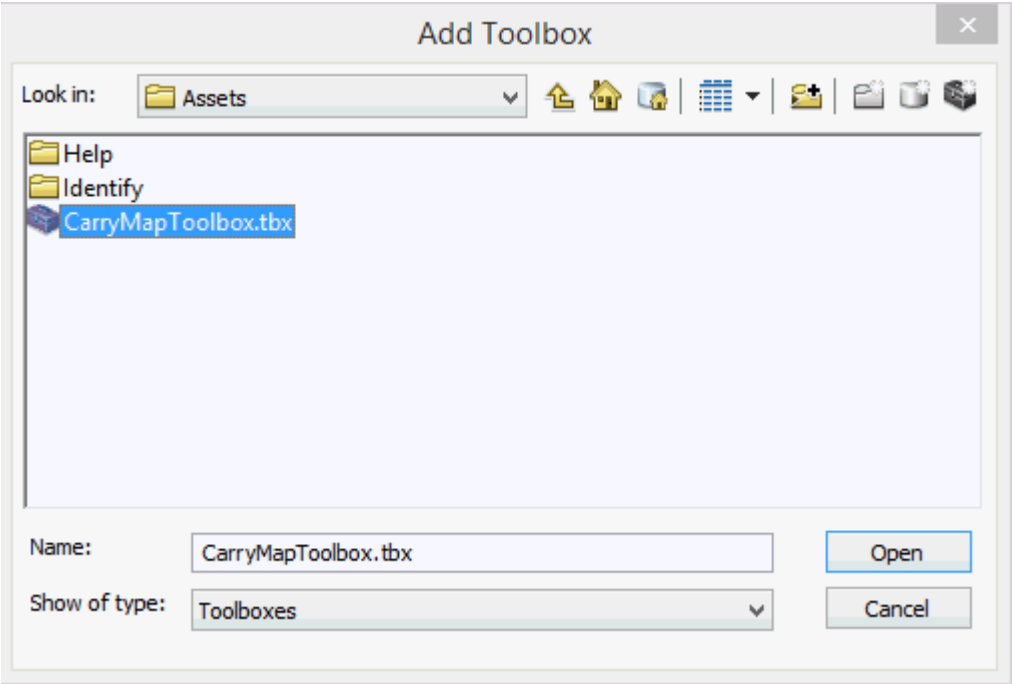
Adding CarryMap geoprocessing tools

To install the CarryMap geoprocessing tools you should create a new toolbox.
Add the ArcToolbox window to the ArcMap or ArcCatalog interface by pressing the ArcToolbox window button on the ArcMap or ArcCatalog toolbar.

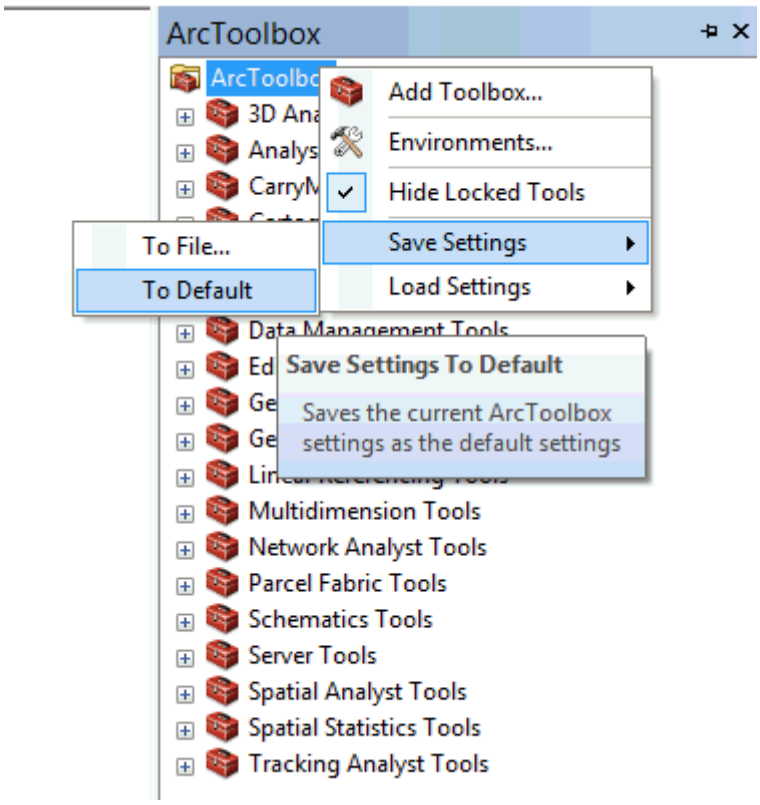
Right-click ArcToolbox and select Add Toolbox option.



The CarryMap Geoprocessing toolbox is in the installation folder (**C:\Program Files (x86)\DataEast\CarryMap Builder\Assets)**.



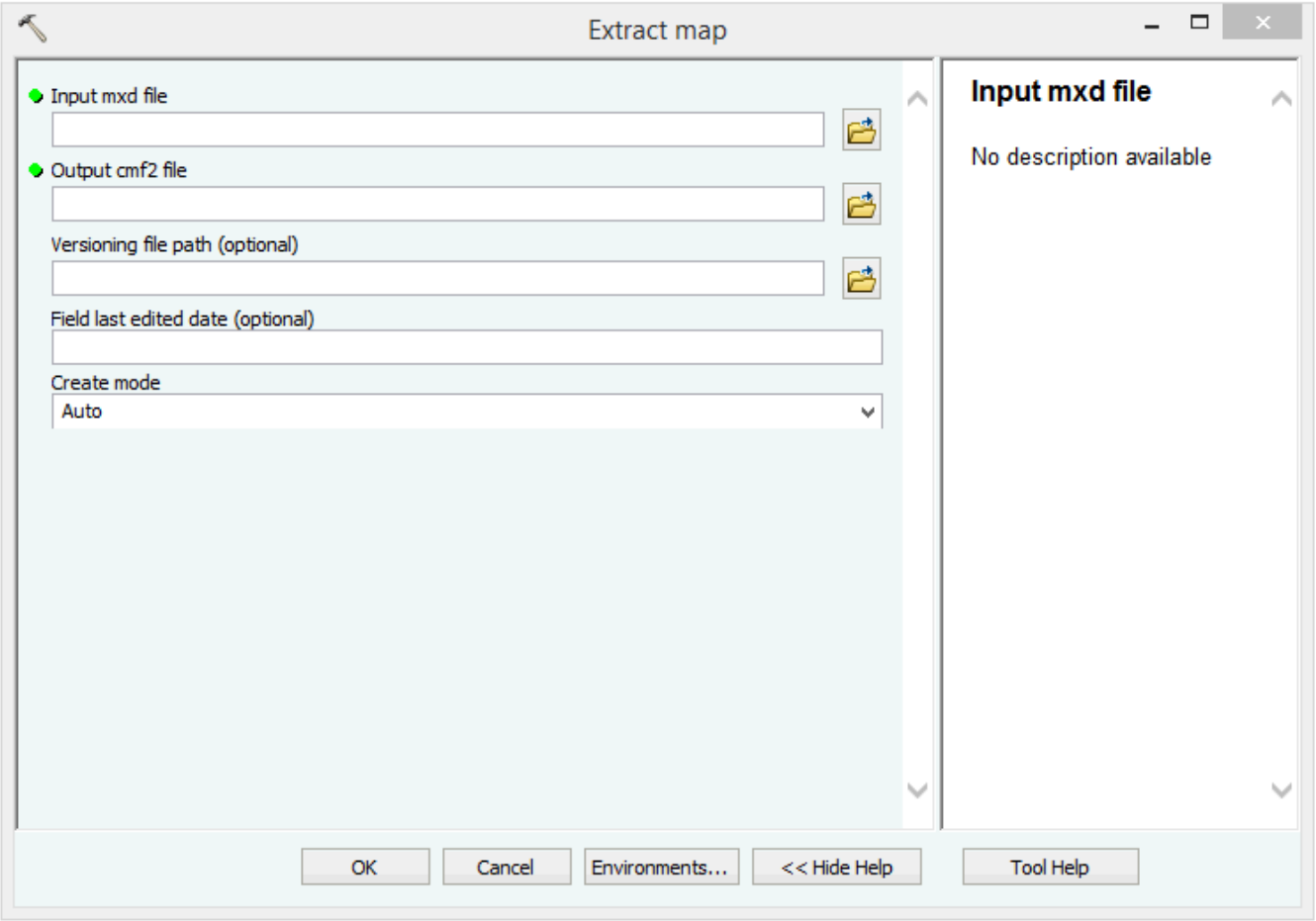
A new CarryMap tools toolbox will be added to the ArcToolbox list. Save ArcToolbox settings either to file or to default (Save Settings -> To Default).



Note that geoprocessing tools are available for users with Corporate or Global CarryMap Builder license only.

Extract map

The Extract map geoprocessing tool is provided to extract ArcMap map documents to CMF2 format.



To start extraction, specify the following parameters:

- **Input mxd file** – name of the input mxd file.
- **Output CMF2 file** – name and location of the output CMF2 file.
- **Versioning file path** - name and location of the output json file.

```
{
  "input": {
    "cmProjectVersion": "00748F46AE1051F525F9A234258126E7",
    "data": {
      "featureCount": 1380,
      "lastChangeDate": "23.04.2018 7:03:58"
    },
    "mxdFileModifiedData": "18.06.2018 18:58:07",
    "mxdFilePath": "D:\\Documents\\ArcGIS\\CM_GP_TOOL\\RL_Public_test.mxd",
    "split": null
  },
  "output": {
    "fileModifiedDate": "29.08.2018 12:12:22",
    "filePath": "D:\\Documents\\ArcGIS\\CM_GP_TOOL\\OutCMF\\1.cmf.cmf2",
    "fileSize": 3262577
  }
}
```


Total count features

Last change date

Location json file

Total json file size

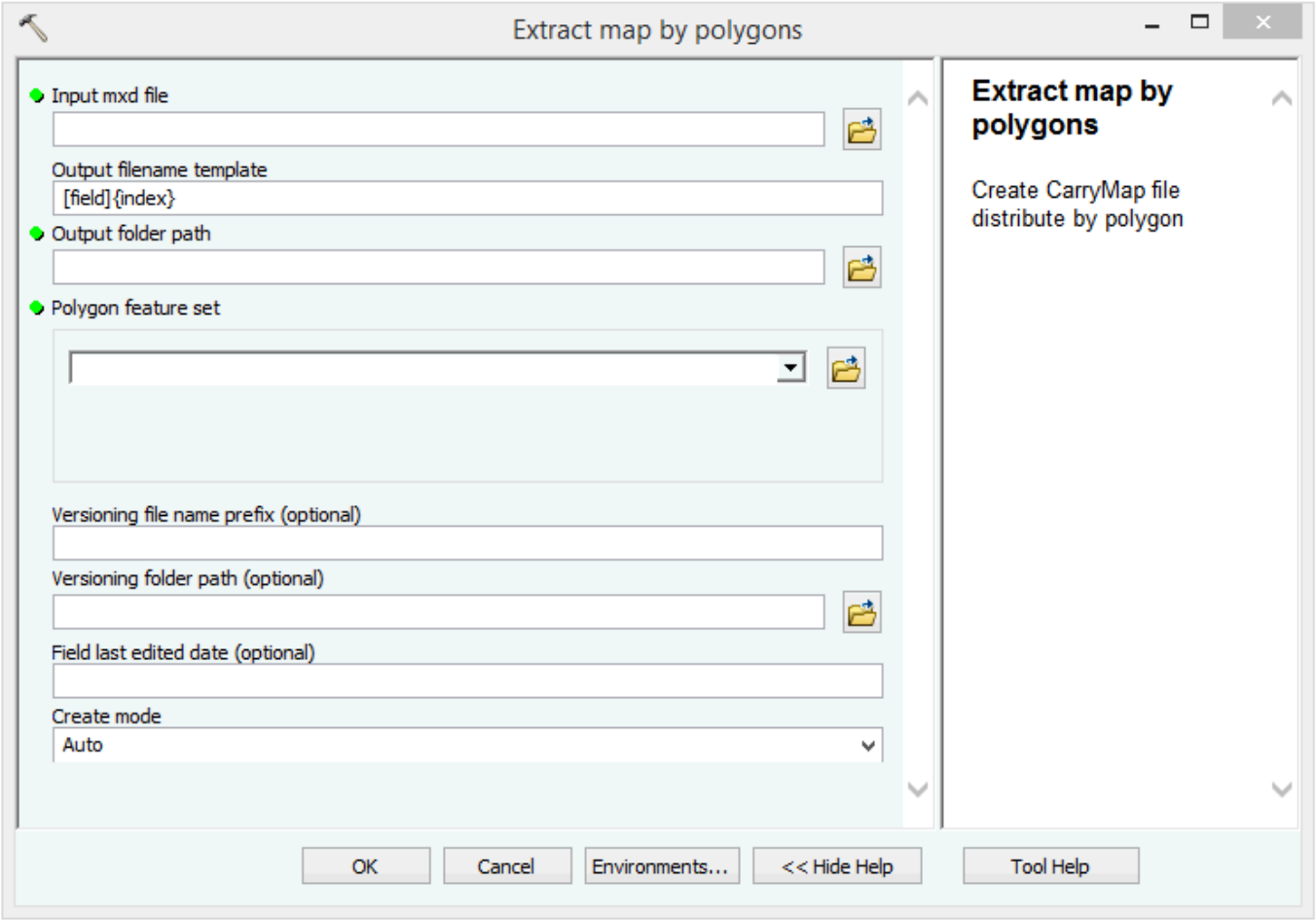
- **Field last editing** – name of the field to record the change date of the output CMF2 file (the default name is Edit tracking).
- **Create mode** – mode of the CMF2 files creation.

After specifying all parameters press OK.

Note that geoprocessing tools are available for users with Corporate or Global CarryMap Builder license only.

Extract map by selected polygons

The Extract map by polygons geoprocessing tool is provided to extract ArcMap map documents to CMF2 format by selected polygons.



To start extraction, specify the following parameters:

- **Input mxd file** – name of the input mxd file.
- **Output file name template** – template to create names of the output CMF2 files.
- **Output folder path** - name and location of the folder with output CMF2 files.
- **Polygon feature set** – name of the polygon layer used to divide the project to separate CMF2 maps.
- **Versioning file name prefix** – prefix for the json file name for all output CMF2 maps.
- **Output CMF2 file** - name and location of the output CMF2 file.
- **Versioning file path** - name and location of the output json file.

```
{
  "input": {
    "cmProjectVersion": "93B885ADFE0DA089CDF634904FD59F71",
    "data": {
      "featureCount": 6,
      "lastChangeDate": "26.06.2018 10:20:38"
    },
    "mxdFileModifiedData": "26.06.2018 16:45:10",
    "mxdFilePath": "D:\\Documents\\ArcGIS\\CM_GP_TOOL\\Change.mxd",
    "split": {
      "featureClass": "split",
      "name": "Заельцовское1",
      "objectId": 4
    }
  },
  "output": {
    "fileModifiedDate": "13.09.2018 12:34:32",
    "filePath": "D:\\Documents\\ArcGIS\\CM_GP_TOOL\\OutCMF\\Заельцовское1.cmf2",
    "fileSize": 469606
  }
}
```


Total count features

Last change date

Location json file

Name tool

Total json file size

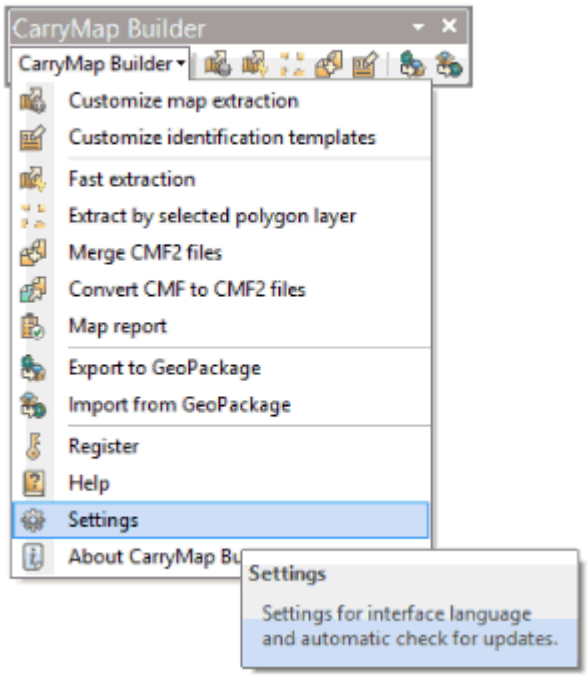
- **Field last editing** - name of the field to record the change date of the output CMF2 file (the default name is Edit tracking).
- **Create mode** - mode of the CMF2 files creation.

After specifying all parameters press OK.

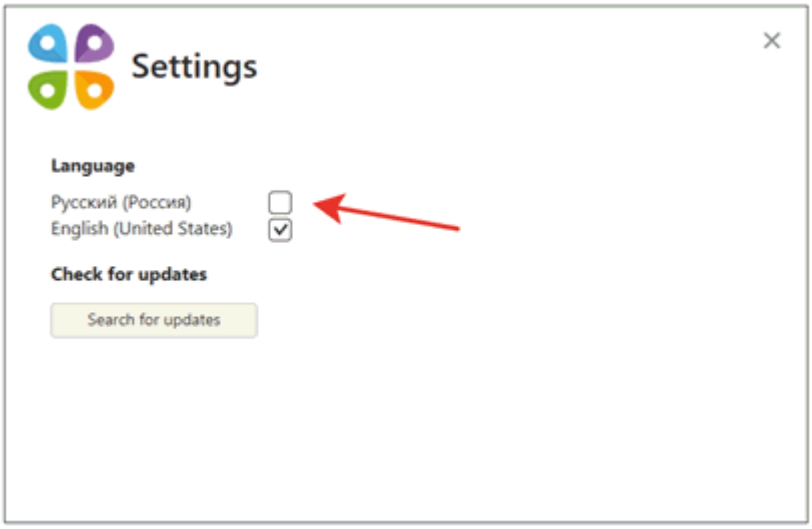
Note that geoprocessing tools are available for users with Corporate or Global CarryMap Builder license only.

Setting CarryMap Builder

You can change language settings for CarryMap Builder interface, as well as check for availability of recently released CarryMap Builder updates. To do so, select **Settings** item on CarryMap Builder toolbar.

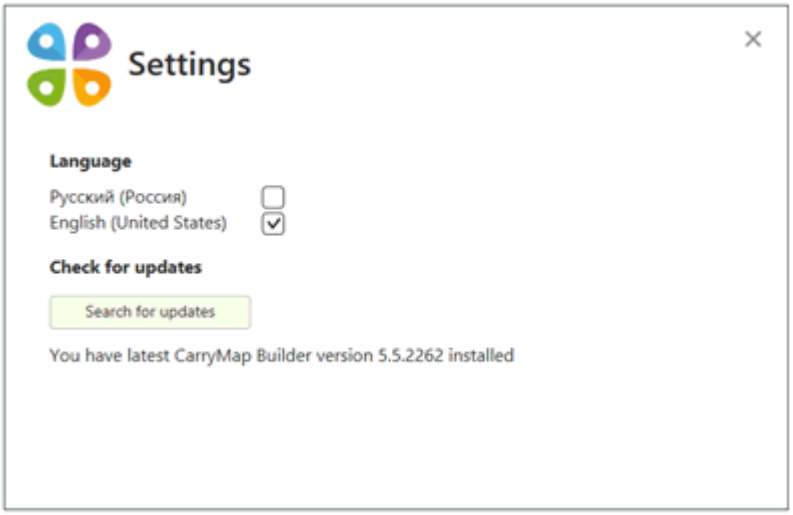


To change interface language settings, check the appropriate language as shown below.



The interface language will be changed accordingly.

To check for availability of CarryMap Builder updates, press **Search for updates**. If you have the most recent CarryMap Builder version installed, you will see the following dialog:



If you have one of the previous CarryMap Builder versions installed, you will see the appropriate dialog, where you can press **Download update** to install the most recent version.

Support

Learn more about CarryMap at builder.carrymap.com
If you have any questions or comments regarding the CarryMap Builder use, contact us at support@dataeast.com.