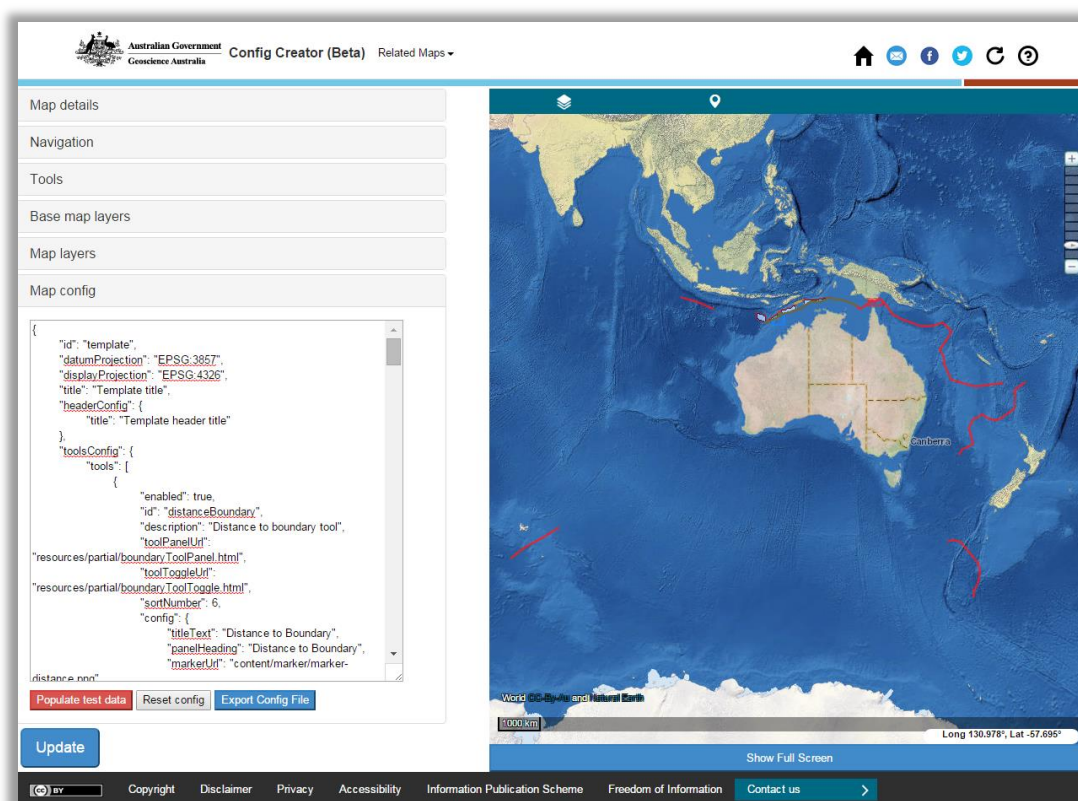


# Interactive Map configCreator

## Exercise Book



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This book teaches some basic configuration features of Interactive Maps (IM) using the configCreator. The exercises can be practiced at any time; they will enable the user to compile a simple configuration that can be submitted to the IM application. These exercises do not cover all of the features of IM, but enable users to understand how a configuration is put together.

### How to use the exercises

Each exercise is numbered; the steps in the exercises are alphabetized. When there is a reference to a button or text box on the web page; the feature name will be underlined and italicized, such as Config ID. The text notes in the grey boxes are for reference, they do not follow though the exercise. The text in the orange boxes needs to be entered into the configCreator.

#### 1) Exercise: Adding a layer, setting an extent and exporting the config

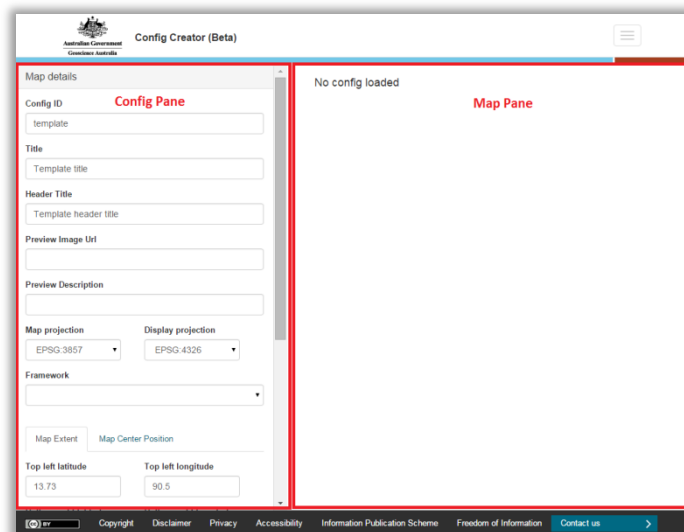
- a. Open the URL for the training template in configCreator

<http://np.ga.gov.au/interactive-maps/#/configCreator/theme/samples/map/template>

As an example; to start from a blank (or empty) configuration, use the following URL.

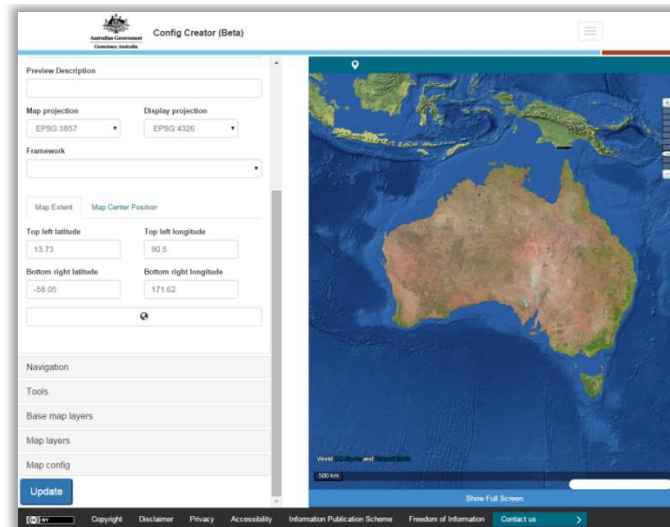
<http://np.ga.gov.au/interactive-maps/#/configCreator>

The template from the first URL will be used for training purposes; it will lay out the configuration so it is a little easier to read during the exercises. This template is also a good place to start in general.



The left pane is the Config Pane and contains the details that will be placed in the configuration; the right pane is the Map Pane and will show the configuration results. If needed, scroll the left Config Pane to the bottom of the page using the mouse wheel or use the scroll bar.

- b. Click the Preview button. Note that the Preview button switches to Update, this is because any changes from the first click of the button are updates to the configuration. Note that this button is always viewed even with all the tabs closed.



- c. Click the Map details tab and type the following

Config ID

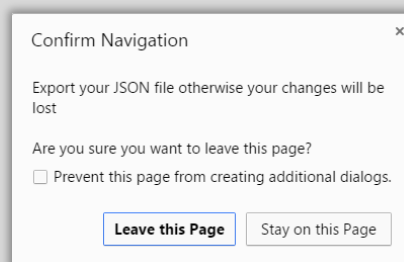
exercise1

This will become the name of the Javascript Object Notation (JSON) config file exported later.

- d. Click on the Map config tab.

Note the text in the box, it is the initial configuration template written in Javascript Object Notation (JSON). This config file is read by the application to generate the different map interfaces. The text box can be dragged bigger from the right corner. There will be more on the JSON format later.

If the browser window or tab is shut during an Update, the browser will confirm that changes have been made and the user should consider exporting the changes to a JSON file.



- e. Scroll the Config Pane back to the top of the page and click open the Map layers tab, this pane allows the user to add additional layers to the map.

The pane is divided into six sections, each collapsible in the pane. The six sections are Map Details, Navigation, Tools, Base map layers, Map layers and Map config.

- f. Type “Papua New Guinea” into the Search interface, note the variety layers that are listed during typing.

- g. Select the Papua New Guinea Torres Strait Protected Zone AMB 2014 layer.

The details of the layer are automatically added the form details. These layers have been already added to the Interactive Maps master-layer-list.

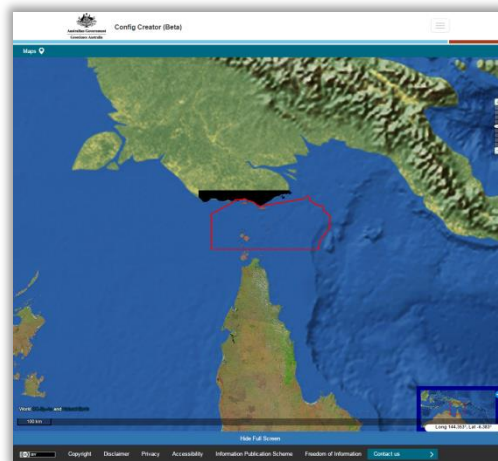
To see the full list as JSON, click on this URL.

<http://np.ga.gov.au/interactive-maps/api/config/master-layer-list.json>

- h. Click the *Add layer map* button. Notice the *Papua New Guinea Torres Strait Protected Zone AMB 2014* is automatically added to the map.

Also note that the layer is added under the Added map layers list.

- i. Click the *Show Full Screen* button in the *Map Pane*
- j. Zoom in to the treaties area (holding down the shift key will allow a box to be dragged over the area).



- k. Click the Hide Full screen button to bring back the *Config Pane*.
- l. Click open the *Map details* tab, click the globe button under the Map Extent tab. This will keep the map config centred on the treaty area.

- m. Click close the *Map details* tab.
- n. Click open the *Map config* tab. Examine the config generated in the text box. Note the text box can be dragged bigger from the right corner.
- o. Click the *Export Config File* button and open the downloads folder in to examine the JSON config text file.

Introducing JSON

<http://www.json.org/>

## 2) Exercise: Add a WMS manually

- a. Open Exercise 2 config (or continue from exercise 1)

<http://np.ga.gov.au/interactive-maps/#/configCreator/theme/samples/map/exercise2>

- b. Click the Map details tab and ensure the following.

Config ID

exercise2

A WMS request can be manually entered and added the configuration

- c. Type in (or click on) the GetCapabilities for the following URL

[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer?request=GetCapabilities&service=WMS](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer?request=GetCapabilities&service=WMS)

What is the **name** of the layer in this WMS, (hint, there is only one)?

What is a WMS?

“A Web Map Service (WMS) is a standard protocol for serving (over the Internet) georeferenced map images which a map server generates using data from a GIS database.”

[https://en.wikipedia.org/wiki/Web\\_Map\\_Service](https://en.wikipedia.org/wiki/Web_Map_Service)

<http://docs.geoserver.org/stable/en/user/services/wms/reference.html>

### Basic WMS Get Capabilities

Returns the capabilities of the service, not all services have all the same capabilities by default.

[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer?request=GetCapabilities&service=WMS](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer?request=GetCapabilities&service=WMS)

**<URL>**[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer)**<URL>**

**<Request Type>**request=GetCapabilities**<Request Type>**

**<Service Request>**service=WMS**<Service Request>**

## Basic WMS Get Map

Returns a basic map picture

[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer?LAYERS=World\\_Heritage\\_Areas\\_Australia&SERVICE=WMS&VERSION=1.1.1&REQUEST=GetMap&STYLES=&FORMAT=image/jpeg&SRS=EPSG:4326&BBOX=88,-47.5,178,-2.5&WIDTH=512&HEIGHT=256](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer?LAYERS=World_Heritage_Areas_Australia&SERVICE=WMS&VERSION=1.1.1&REQUEST=GetMap&STYLES=&FORMAT=image/jpeg&SRS=EPSG:4326&BBOX=88,-47.5,178,-2.5&WIDTH=512&HEIGHT=256)

Note, case sensitivity and order should not matter (besides the URL must be first) Named attributes follow with single “?” and subsequent “&”.

**<URL>**[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer)**</URL>**

**<Layers list=comma delimited >**layers=World\_Heritage\_Areas\_Australia**</Layers>**

**<Service Request>**service=WMS**</Service Request>**

**<Version Number>**version=1.1.1**</Version Number>**

**<Request Type>**request=GetMap**</Request Type>**

**<Map Style>**style=**</Map Style>**

**<Image Format>**format=image/jpeg**</Image Format>**

**<Spatial Reference System>**srs=epsg:4326**</Spatial Reference System>**

**<Bounding Box list=comma delimited >**bbox=88,-47.5,178,-2.5**</Bounding Box>**

**<Width>**width=512**</Width>**

**<Height>**height=256**</Height>**

- d. Open the Map layers tab
- e. Type in the following details.

Map Type:

WMS

Default layer map visibility

Check on ☒ Default layer map visibility

Layer Name:

World Heritage Areas

URL:

[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer?service=WMS](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer?service=WMS)

Layers:

World\_Heritage\_Areas\_Australia

Opacity default:

1

- f. Click the Add map layer button. Note the layer is added under the Added map layers section.

Layer details

Map type

WMS

☒ Default layer map visibility

Layer name

World Heritage Areas

URL

http://www.environment.gov.au/mapping/services/ogc\_services/World\_Heritage\_Areas/M...

Browse...

Layers

World\_Heritage\_Areas\_Australia

Opacity default

1

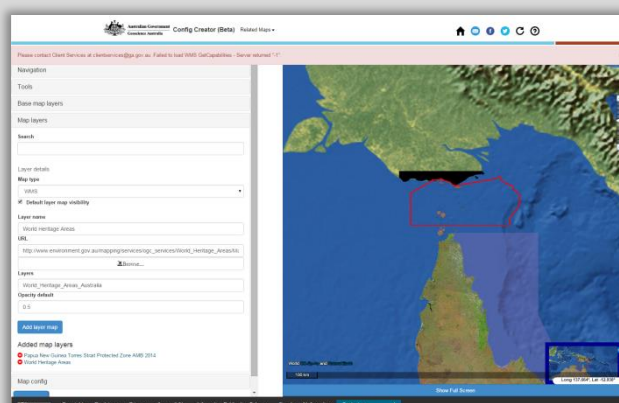
Add layer map

Added map layers

- Papua New Guinea Torres Strait Protected Zone AMB 2014
- World Heritage Areas

When the environment URL is in the box, a click on the browse button will generate an error. This sometimes happens when trying to access a GetCapabilities document. This exercise will give examples how to add WMS services manually even though the application cannot read the GetCapabilities. The WMS will work as a simple request, the GetCapabilities is just a machine readable reference document.

Don't forget to check off the error message (see the end of the pink bar) as they will stack up.



- g. Now click on the  button next to the World Heritage Area layer to remove the layer.



h. Change the following value.

Opacity

0.5

Click the Add layer map again to re-add it the to map layer list.

i. Click the Papua New Guinea Torres Strait Protected Zone AMB 2014 in the Added map layers list.

Note that the Map layers clicked is temporarily underlined and the form fills with the layers details.

Layer details

Map type  
WMS

☒ Default layer map visibility

Layer name  
Treaties of Australia AMB 2014

URL  
http://www.ga.gov.au/gis/services/legislation/Tr  
Browse...

Layers  
East\_Timor\_Certain\_Maritime\_Arrangements\_I

Opacity default  
1

Add layer map

Added map layers

- Treaties of Australia AMB 2014
- World Heritage Areas

j. Click the Map config tab and select the Export Config File button to save the finished exercise.

### 3) Exercise: Add Navigation panels

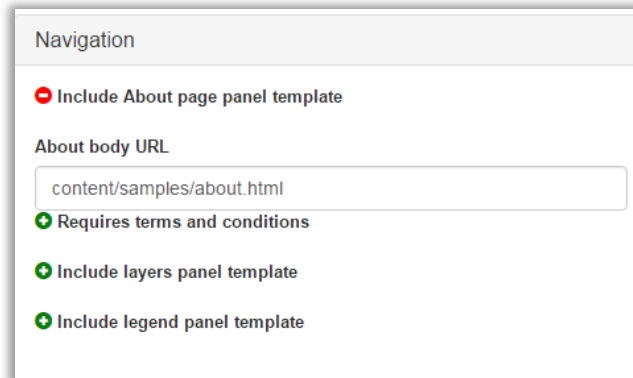
a. Open Exercise 3 config (or continue from exercise 2)

<http://np.ga.gov.au/interactive-maps/#/configCreator/theme/samples/map/exercise3>

b. Click open the Navigation in the Config Pane. Select the  Include About page panel template.

About body URL:

<http://np.ga.gov.au/interactive-maps/content/samples/about.html>



- c. Click Update button
- d. Note the map now will have an about page called Template title. Click the About tab in the Map Pane and observe the title.
- e. Open the About URL, right click on page and select View page source.

<http://np.ga.gov.au/interactive-maps/content/samples/about.html>

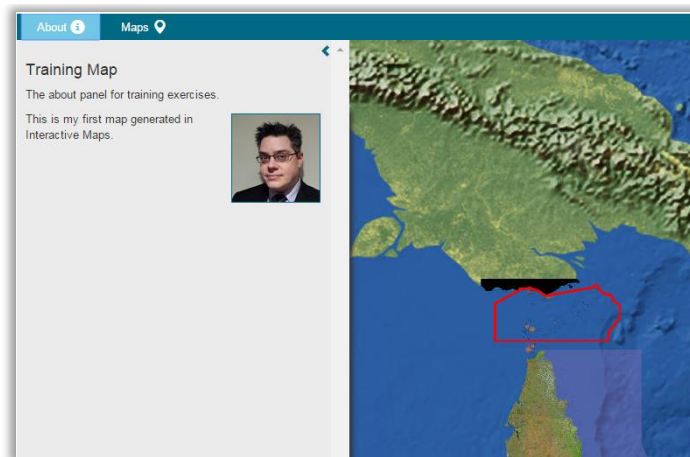
```
1 <html>
2 <head>
3 </head>
4 <body>
5 <div>
6
7 <p>
8   The about panel for training exercises.
9 </p>
10
11 <p>
12   
13   This is my first map generated in Interactive Maps.
14 </p>
15 </div>
16 </body>
```

- f. Click open the Map details pane, change the following and click Update.

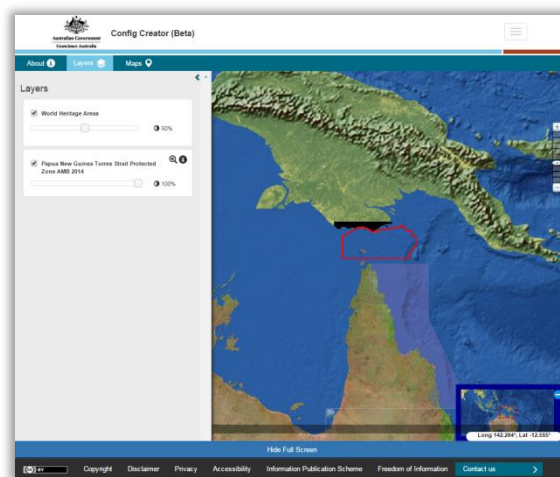
Title:

Training Map

- g. Open the About tab in the Map Pane, check that the title has changed.



- h. Click open the Navigation tab and select the Include layers panel template. Click Update and observe the map has a layers tab. Open the Layers tab in the Map Pane. Click Show Full Screen for effect.



- i. Click Hide Full Screen to return to the Config Pane.
- j. Select the Include legends panel template and click Update button.
- k. Note the Map Pane now has a Legend pane. This pane comes from a URL specified in the Map config panel.
- l. Open the Map config pane and scroll to the bottom of the config window. Change the following.


legendURL:

<http://np.ga.gov.au/interactive-maps/content/amsis/twsi/legend.html>

```
"legendConfig": {
  "enabled": true,
  "legendUrl": "content/amsis/twsi/legend.html"
}
```

- m. Open the Legend URL, right click on page and select View page source.

```
1 <div>
2   
3 </div>
4
```

- n. Click open the Navigation tab again and select the  Requires terms and conditions. Click Update.
- o. Open the Map config tab and scroll down to the bottom of the JSON config. Change the following, don't forget the quotes around the string.

"termsAndConditionsText":

"My terms and conditions."

"cookieExpirationInDays":

0

```
"requiresTermsAndConditions": true,
"termsAndConditionsText": "My terms and conditions",
"cookieExpirationInDays": 0
```

- p. Click Update, note the terms and conditions have changed. But configuring zero expiration days, the terms will come up every time. Days greater than zero means the user only needs to accept the terms that number of days. Normally these conditions would be between a week or two, but it was set zero for this exercise example. Set the expiration back to eight days. Click Update once changed.

"cookieExpirationInDays":


8

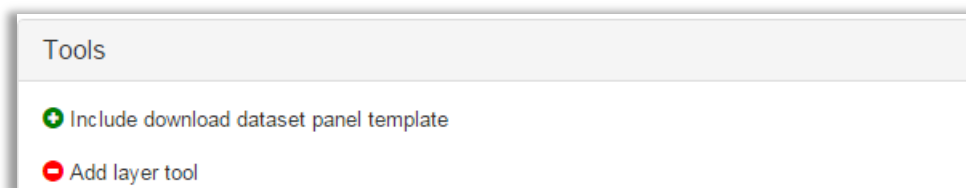
- q. Click the Map config tab and select the Export Config File button to save the finished exercise.

#### 4) Exercise: Add Tools and extra Base map

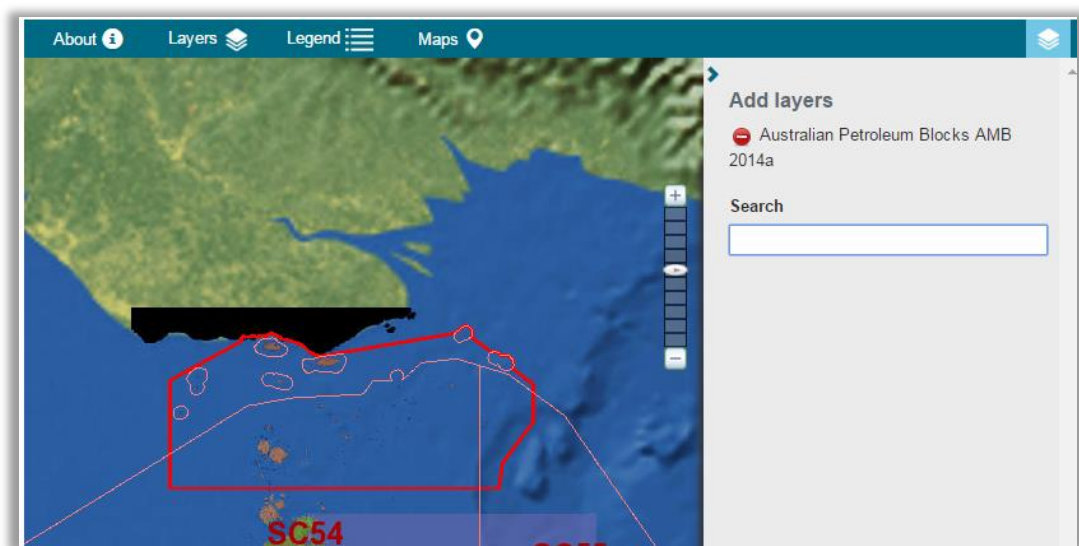
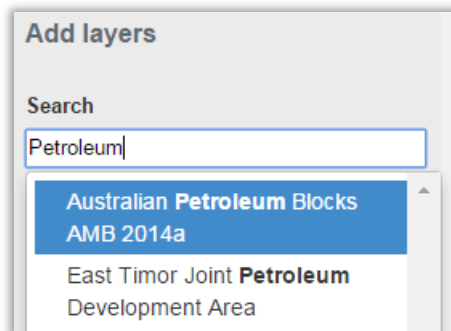
- a. Open Exercise 4 config (or continue from exercise 3)

<http://np.ga.gov.au/interactive-maps/#/configCreator/theme/samples/map/exercise4>

- b. Click open the Tools tab, select the  Add layer tool.



- c. The Add layers tool has been added in the Map Pane on the right side. Click the tool open and type Petroleum in the Search box. Select the Australian Petroleum Blocks AMB 2014a layer. It will be added to the map temporarily (ie, the layer will disappear after a refresh or update).



- d. In the Tools tab, select the Distance between points tool and click Update.
- e. As before, note the Distance between points tool is added in the Map Pane.
- f. In the Tools tab, select the Distance between points tool and click Update.
- g. As before, note the Distance between points tool is added in the Map Pane.
- h. Add the Include download dataset panel template, click Update.
- i. Open the Map config tab and scroll the config text box to the “toolsConfig” section.
- j. Find the “id”: “info” and the “infoList” attributes. Change the following attributes (don't forget the quotes and commas, care in copying the quotes from this book as they may not work in JSON).

```

"infoList": [
  {
    "id": "Download Treaties - Australian Maritime Boundaries 2014a (AMB2014a)",
    "url": "http://www.ga.gov.au/metadata-gateway/metadata/record/gcat_83161"
  },
  {
    "id": "Australian Ocean Governance and Relevant Legislation",
    "url": "http://www.ga.gov.au/scientific-topics/marine/jurisdiction/amsis/australian-ocean-governance-and-relevant-legislation"
  }
]

```

```

{
  "enabled": true,
  "id": "info",
  "description": "Include download dataset panel template",
  "toolPanelUrl": "resources/partial/infoPanel.html",
  "toolToggleUrl": "resources/partial/infoToggle.html",
  "sortNumber": 1,
  "config": {
    "titleText": "Download Dataset",
    "panelHeading": "Download Dataset",
    "infoList": [
      {
        "id": "Treaties - Australian Maritime Boundaries 2014a (AMB2014a)",
        "url": "http://www.ga.gov.au/metadata-gateway/metadata/record/gcat_83161"
      }
    ]
  }
},

```

- k. Note that tools can be re-configured for different tasks, this tool could be used for any links, not just downloads. Change the following.

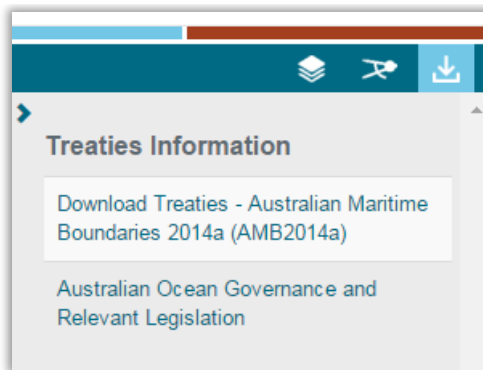
```

"titleText":
  "Treaties Information"

"panelHeading":
  "Treaties Information"

```

- l. Click Update and now click the Treaties Information button.



- m. Click the Map config tab and select the Export Config File button to save the finished exercise.

## 5) Exercise: Examine existing configured maps

- a. Open another tab in the browser and enter the following URL (or just click on this document).

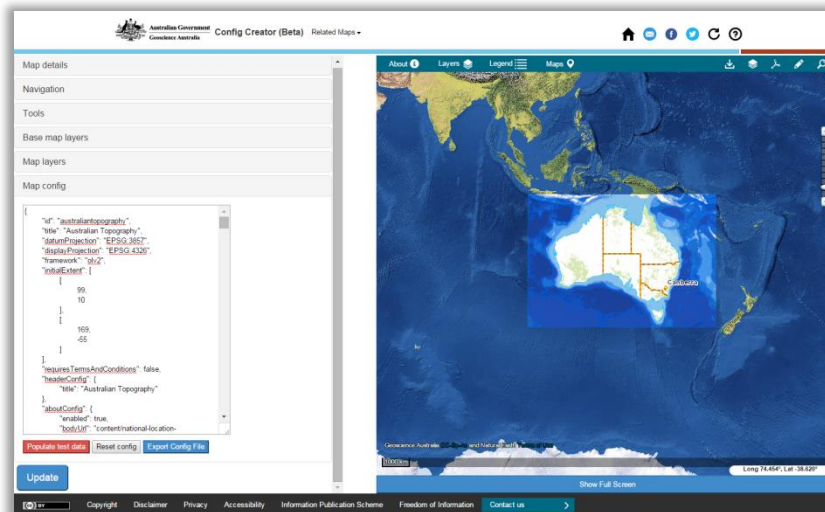
<http://np.ga.gov.au/interactive-maps>

Navigate to the National Location and Information theme, then the Australian Topography map.

- b. Change the URL to add the configCreator.

<http://np.ga.gov.au/interactive-maps/index.html#/configCreator/theme/national-location-information/map/australiatopography>

- c. Click Preview button.



- d. Click on the Map config and examine the config of this map. This technique may be applied to any in interactive maps configurations. These configurations could be used to begin another map.