

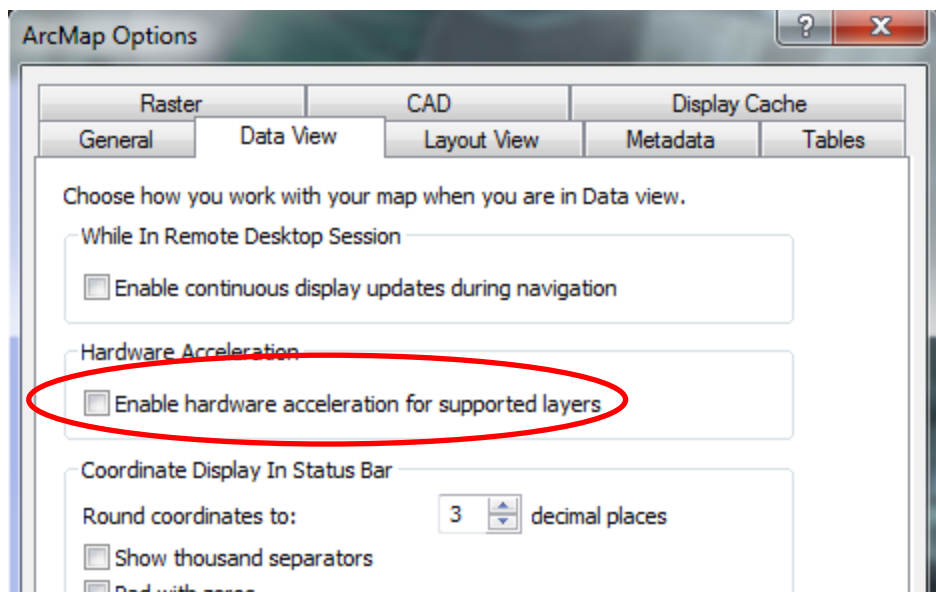
Exploring Environmental Data within an Online Repository

In this practical, we will briefly explore the environmental data that can be streamed to your ArcView desktop from the online ArcGIS Resource Centre. You will need a copy of ArcGIS version 10.0 or higher in order to complete this practical, and a good Internet connection because data will be streamed from a web service. Note that if you lack either of these, you **DO NOT NEED TO COMPLETE THIS PRACTICAL AS IT IS OPTIONAL**.

Instructions:

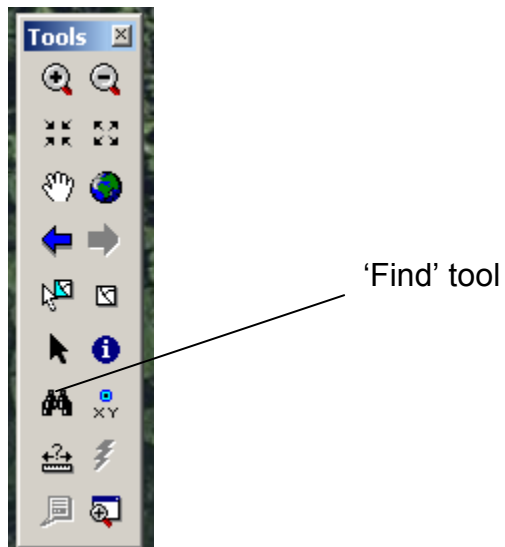
Load up a basemap.

Click on *Customise* then *arcmap options* then uncheck the option *enable hardware acceleration for supported layers*. If you do not uncheck this option, you may find that ArcMap crashes.



From the **File** menu, select **add data** then **add basemap**. You will be taken to a screen where you can choose from a variety of different basemaps. Choose '*imagery*' and *add*. If you are asked whether you would like to use hardware acceleration, select *No* – you may find this will cause the software to crash. You should now find that the imagery layer that you clicked on loads up automatically.

To find Saint Lucia, click on the 'find' tool (note: it may be a horizontal rather than vertical toolbar on your computer):



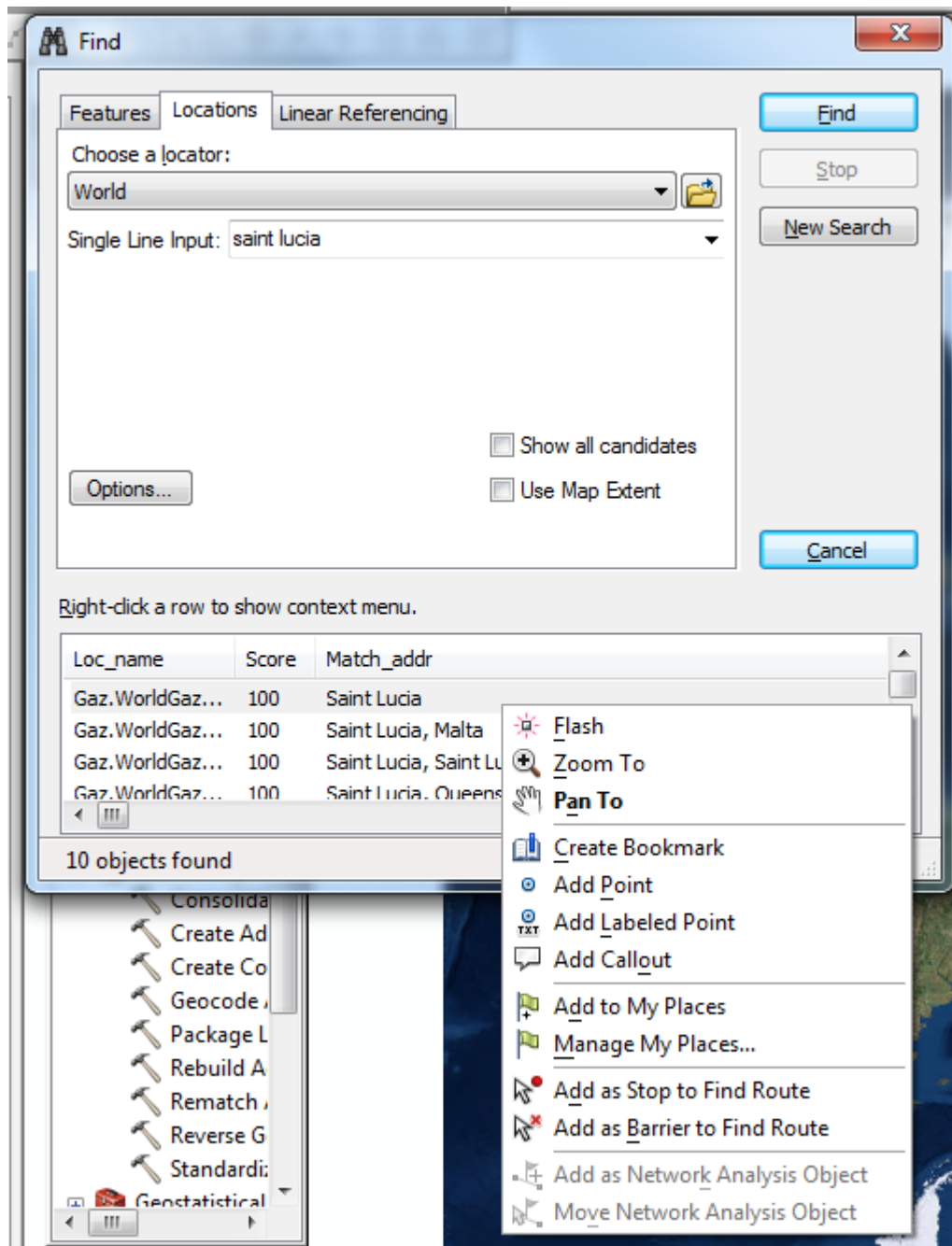
Note: This is one area of ArcGIS functionality that has changed a lot, particularly between version 10.0 and 10. The tool here relies on a 'locator', a service for geocoding placenames hosted at ArcGIS Online. However, these services have changed a lot over the past year.

If you find that your version of ArcGIS generates an error message when you use the 'find' tool (e.g. about repairing an address locator), then we recommend that you follow the instructions here under 'referencing the services from ArcGIS for Desktop':

<http://communityhub.esriuk.com/journal/2014/1/20/using-the-esri-geocoding-and-routing-services-from-arcgis-fo.html>

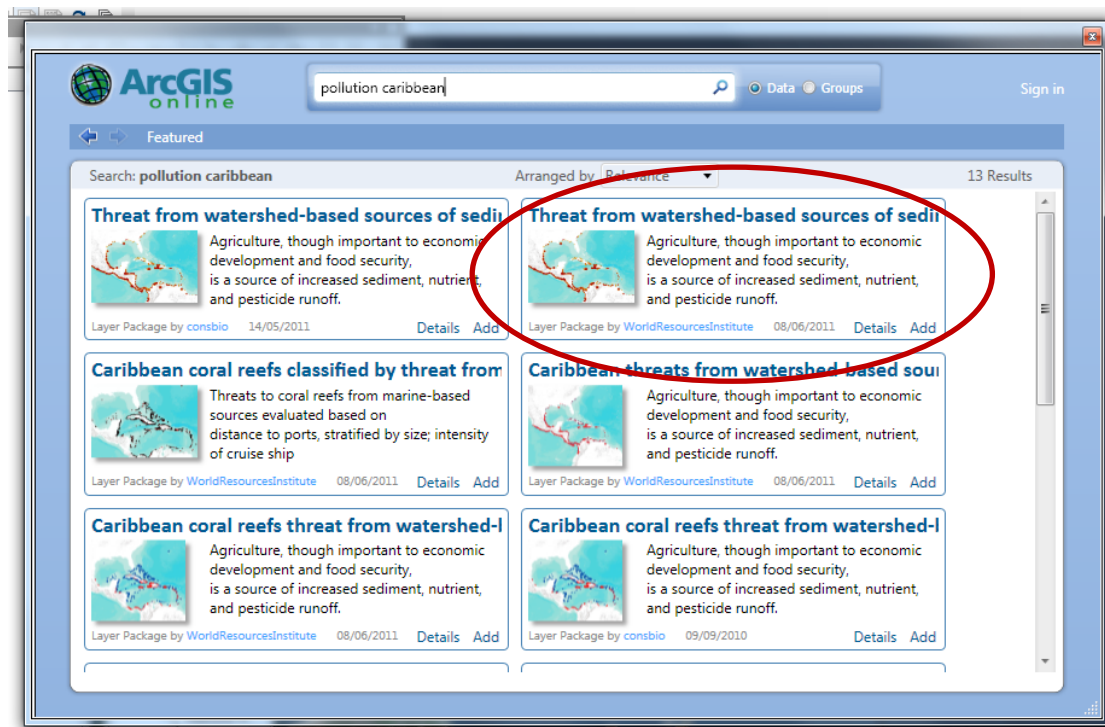
The instructions here will step you through using the 'address locator manager' to add in a link to ESRI's World Geocoding Service.

Click on the *location* tab and select 'World', then type in **Saint Lucia** as the place name to search for under *single line input*. Click on 'New Search' and when the list of places named Saint Lucia or similar comes up, choose the first place called 'Saint Lucia' that is found. Right-clicking on this place and select *zoom to*:



Go to the *file* menu and select *add data* then *add data from ArcGIS Online...*

In the window that comes up, search for 'pollution Caribbean' via the search box at the top. Click on one of the map layers for the Caribbean – in the example below I have chosen a data set relating to coral reefs at risk of agricultural pollution:



Click on the *details* link to see a brief *description* of the data set, some basic *properties* and any *comments* that have been posted up about it online.

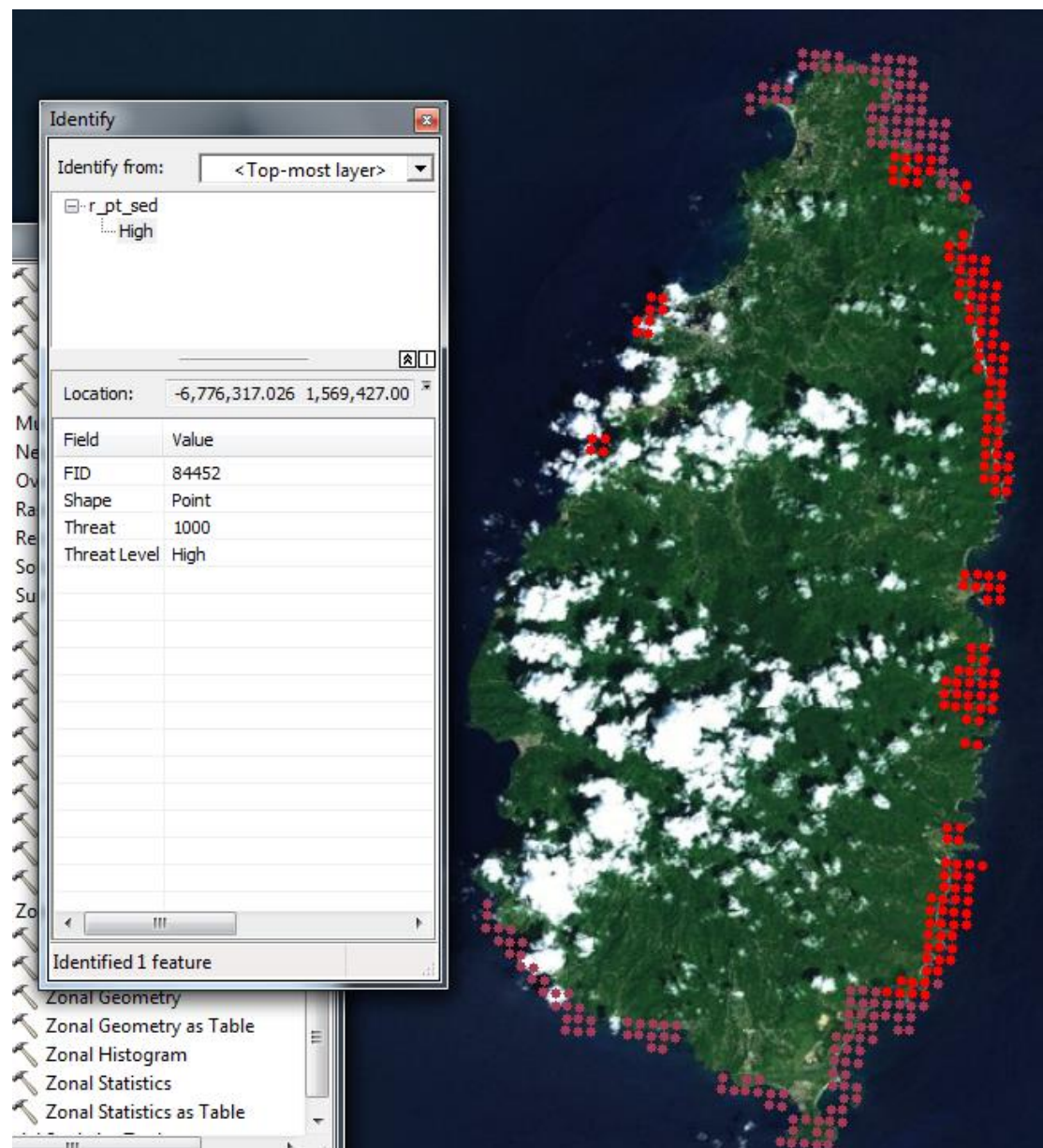
Click on the *add* link in the left-hand panel to add it to your map window.

When the file displays within ArcView, zoom in to a region of your choosing. Try querying the data using the query tool (shown below). How does the speed of redrawing and querying compare with data stored locally?



Depending on the data set that you choose, you may find that the functionality of the layer you are accessing is restricted. If you right-click on your ArcGIS Online layer and choose *properties*, you may see that there are fewer options here than you would see for a data set held on a local disk (e.g. it is not

normally possible to copy or edit such data). In the case of the data that I chose for the Caribbean, however, it is possible to make a local copy by right-clicking on the layer, selecting *data* and then choosing *export data...*



Note that this is just a very brief look at the ArcGIS Online functionality. By creating an account for yourself, it is also possible to:

- Share geospatial data within a group whose membership you control as well as with the general public (everyone)
- Share online map compositions with those who do not have access to GIS software
- Develop and share web mapping applications

Task:

- Try exploring other publicly available data sets that have been posted up in ArcGIS Online
- Based on this experience, what do you consider to be the relative advantages and disadvantages of data streamed from an online resource centre in this way? (see overleaf for suggestions)

Some suggested advantages:

- the most up-to-date version of a data set can be accessed and issues of maintenance are reduced
- some of the difficulty of downloading and importing data in an appropriate format is eliminated
- layers to be used as background imagery can quickly be acquired for mapping purposes (e.g. the World imagery map layers)
- Functionality can be restricted based on rules set by the data provider, preventing inappropriate use of data.

Some suggested disadvantages:

- The speed of querying, zooming and redrawing layers is reduced, relative to data stored locally on disk