Using Casweb to download and visualise 2001 Census aggregate data

Part 1: Downloading Aggregate Census data from Casweb

- Access the Casweb homepage from: [http://casweb.mimas.ac.uk/](http://casweb.mimas.ac.uk/)
- Click the Login to Casweb link
- Login to Casweb by selecting your institution and using your username and password
- If you have not registered previously, the registration process will be kickstarted

Ensure that you read and agree to all of the 2001 Special conditions. Once you have agreed to them a green tick will appear next to each special condition. When ready click on the Proceed to the 2001 Aggregate Statistics Datasets

Once you've logged into Casweb follow the link to 2001 Aggregate Statistics Datasets.

You are now in a 3-step process: Define study area, Select Data and Output Data and we will take each step one at a time.

![Casweb - Census Area Statistics on the Web](image.png)

**Figure 1: Casweb - Select Data**

1.1. Step 1 - Define Study Area

Follow these steps to define your study area:
1. First you need to select the country containing your study area. The area we want to extract data for is London, so you should select **England** and then click **Select lower geographies**.

2. Now you need to define the region of interest, which in this case is London. Select **London**.

3. We have no need to define the study area at lower zones because we wish to extract data for all CAS wards within London. So click **Select output level**.

4. As we are interested in CAS wards, click the CAS Ward radio button in **B Select Output geography** and then press the **Select data...** button.

To recap, you have started at the highest geographical level, worked your way down by refining your area as the Government Office Region of London, and chosen to output data for all CAS wards in London. Now let’s choose some data!

### 1.2. Step 2 - Select Data

Census data are held in tables, within datasets which are listed. By default, the Key Statistics dataset (the first in the list) is selected. Not all datasets are available at all geographical levels. If a dataset is not available it will be greyed out.

We will now choose a dataset

1. Click the **Census Area Statistics Univariate Tables** radio button
2. Click the **Select Dataset** button.

We will be selecting data from two tables
- Table UV008 – ‘Country of Birth’
• Table UV009 – ‘Ethnic Group’.

We can either select these straight from the scrollable list box of Tables or we can search for it. We are trying to find some variables concerning White ethnic groups and those with UK as their country of birth.

3. Click **UV008 Country of Birth**
4. Click **Display Table Layout**

![Select Data Table](image)

The following table layout should be displayed:
We are going to download 2 variables from this table:

5. Tick the All People and the United Kingdom checkboxes
6. Click Add variables to data selection
7. Notice how the variables you selected now appear in the right hand box, they are listed as codes, for example UV0080003. Note that the first characters refer to the table ID and the last digits refer to the cell ID you ticked. When you download the data this will be the unique ID attached to it (ie it’s not going to be labelled “Country of Birth: UK,” it will be labelled “UV0080003”). You can click Rename to give it a more meaningful name, or you can refer back to the table in Casweb to find out what it means.

We now need to add data from another table, we can go back to the table selector by clicking on the link Click here to select another table.
8. Click table UV009 Ethnic Group and click the Display Table Layout button.
9. Once the table layout for UV009 has loaded we will be adding the ‘All People’ variable (UV0090001) and the variable for ‘White’ ethnic group (UV0090002)
10. Now that we’ve selected the variables, you can now download the data. Click the Get Data button as shown below:
Casweb will now process your request.

### 1.3. Step 3 - Output Data

You are now in the final stage of data extraction.

Complete these remaining steps:

1. The data downloads option page will now appear. You can type a name into the filename box, let’s enter *example1*
2. You can choose to have the output as plain text or digital boundary data. Choose *Digital Boundary Data*
3. Ensure *ESRI Shape* is selected as the Format and click *Execute Query*

4. Now save the file, you will use this file in the next exercise
Part 2: Mapping and visualising census data

In this session you will map the Census dataset downloaded in the previous exercise from Casweb using ArcGIS.

1. Open ArcMap (Start > All Programs > ArcGIS > ArcMap. NB this may be different on your computer)
2. When prompted, choose ‘A new empty map’ and click OK. This will open a new ArcMap session with no data loaded.
3. If you are new to ArcMap, feel free to explore the interface to help you become familiar with the options available in the menus and toolbars.
4. Click on the File menu and Select Add Data.
5. Navigate to the folder containing your data downloaded from Casweb. N.B. you may have to click the Connect to Folder button to see your folder.
6. Click to select example1.shp dataset and click Add (NB if the data isn’t listed, ensure you have unzipped the example1.zip file downloaded from Casweb)

The data will be displayed in the main data view window and listed in the Table of Contents (TOC) on the left hand side. ArcMap will assign a random single colour to the whole dataset. This is fine if we just want to see the CAS Wards but it will be more useful and interesting to display by one of the CAS variables contained in our dataset.

6. Right-click example1.shp in the TOC on the left and select Properties.
7. Click the Symbology tab > select Quantities on the left and choose Graduated Colors.
8. We are going to display the data by the number of people born in the UK from the Country of Birth statistics. In the Value field select UV0080003 (you may have renamed the field so might be different, we want the Country of Birth stats Born in UK value)
9. Select a suitable Color Ramp from the drop down menu.
10. Click Apply then OK. The data will now be coloured to show the distribution of those people born in the UK across the London CAS Wards.

Visualising the data by the total count of people born in the UK only, may not be entirely useful on its own because it does not take into account the population of each ward. In order to provide a more useful visualisation, we can display the data as a ratio of the people born in the UK to the total number of people per ward.
11. Open up the Symbology options again (as in Step 7) For the Normalization field select UV0080001 – the total number of people from the Country of Birth table (again, you may have renamed this field)

12. Click Apply and then OK. The CAS Wards will now be visualised by a ratio of the number of people born in the UK to the total number of people.

13. Feel free to experiment with the classification options in the symbology tab to explore what the options do and how they change the display of the data.

14. In the main data view, use the (information) tool to click and query individual CAS Wards to view attribute information.

To create a map of your data:

1. Go to View > Layout View. In the Layout View there are various options for setting up a map layout to print or save.

2. Go to File > Page and Print Setup to change paper size and orientation.

3. Go to Insert to add various elements including North Arrow, Title, Legend and Scale.

4. To save your map: Go to File > Export Map > Select desired file type

5. To print your map: Go to File > Print.