

# WordMap

## **What is “WordMap”**

WordMap is an “add-on” to Microsoft Word that helps you to put simple maps into your Word documents. But WordMap does more than simply place images in your document. It allows you to rapidly colour up areas on simple base maps in order to display data. WordMap makes it practical for someone with no prior knowledge of map-making to include useful and professional looking maps in their presentations.

## **Before you start**

If you are not already familiar with the techniques for inserting pictures into Word documents (such as “clip art” or digital photos) we recommend that before going further you experiment with pictures in Word following the guidance in Word’s help files and the various books on using Word.

## **Installing**

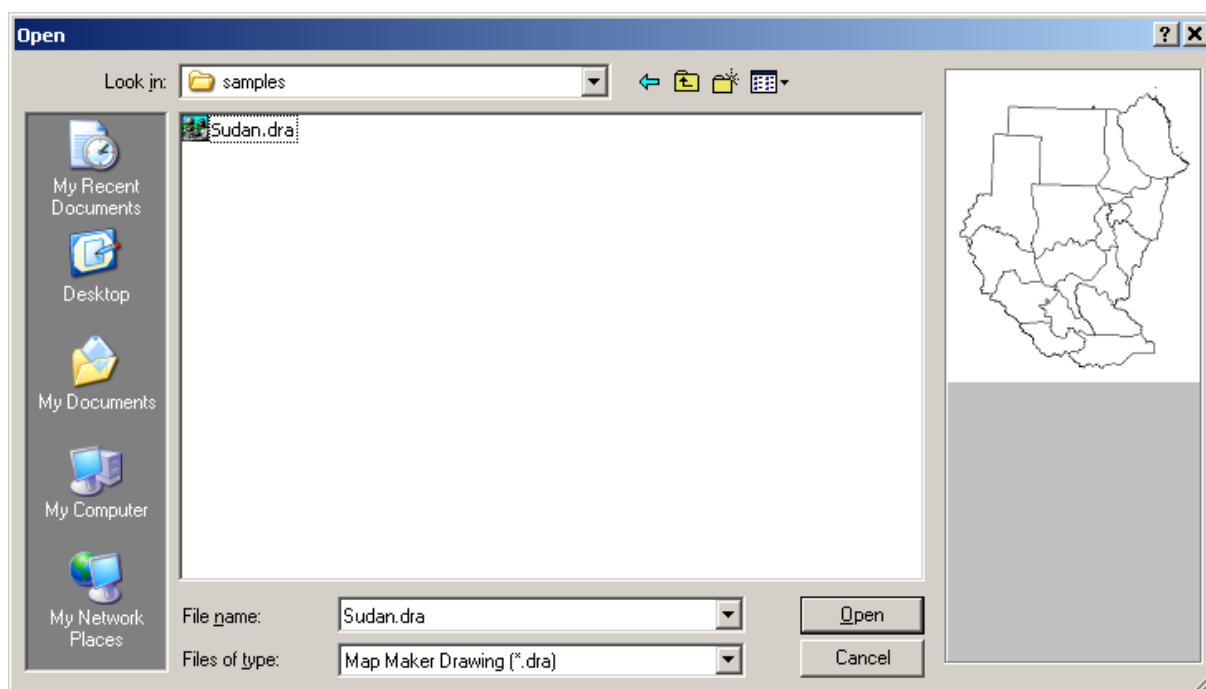
To install “WordMap” you must have *Microsoft Word* already installed on your computer. If Word is currently open on your computer, close it down before installing WordMap. Run “WordMapZip.exe” by double-clicking on it in Windows Explorer, then follow the instructions on the screen.

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## **Getting started...**

### **Making a simple map**

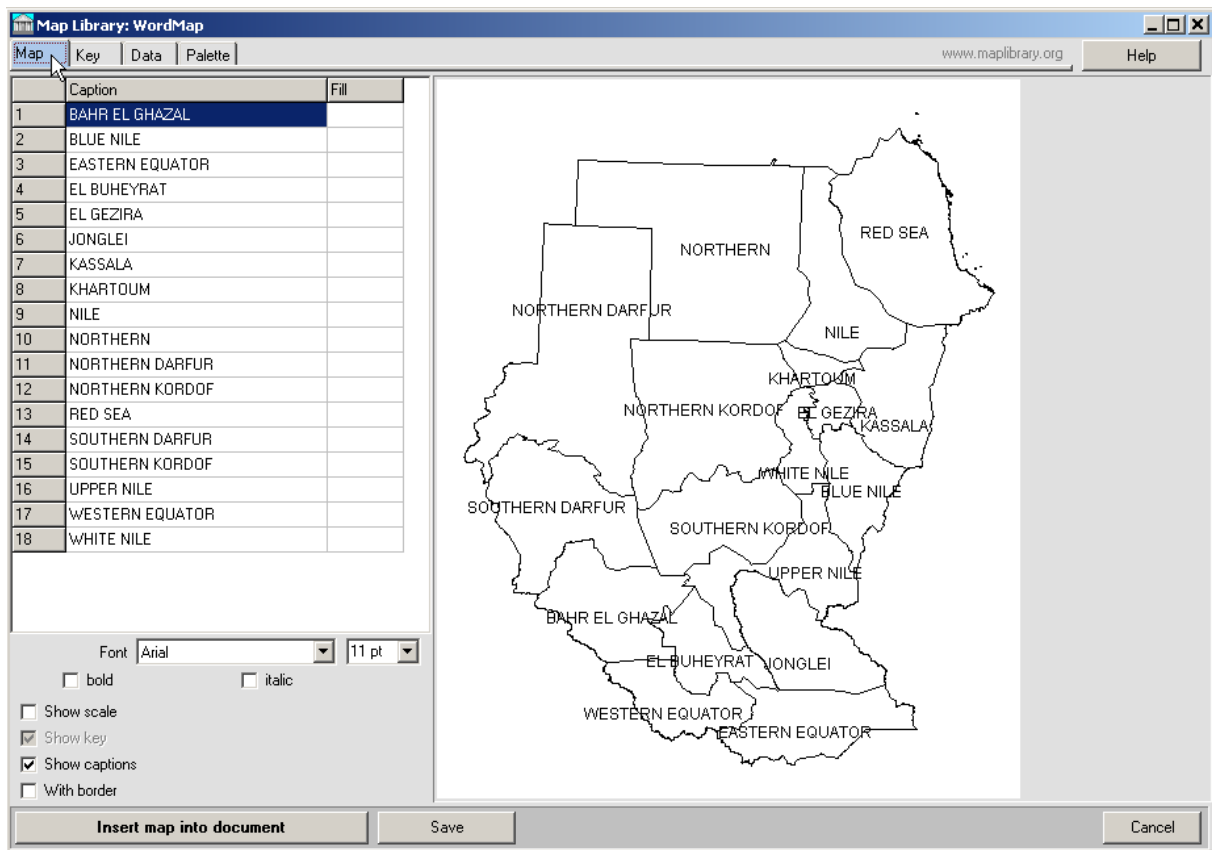
Open Microsoft Word and open the document in which you want to include a map. Place the cursor where you want the map to be. Click on “**Insert – Map Library - WordMap**”. A “file picker” dialogue box appears:



The drop-down list for “Files of type” at the bottom of the window gives a choice of file types:

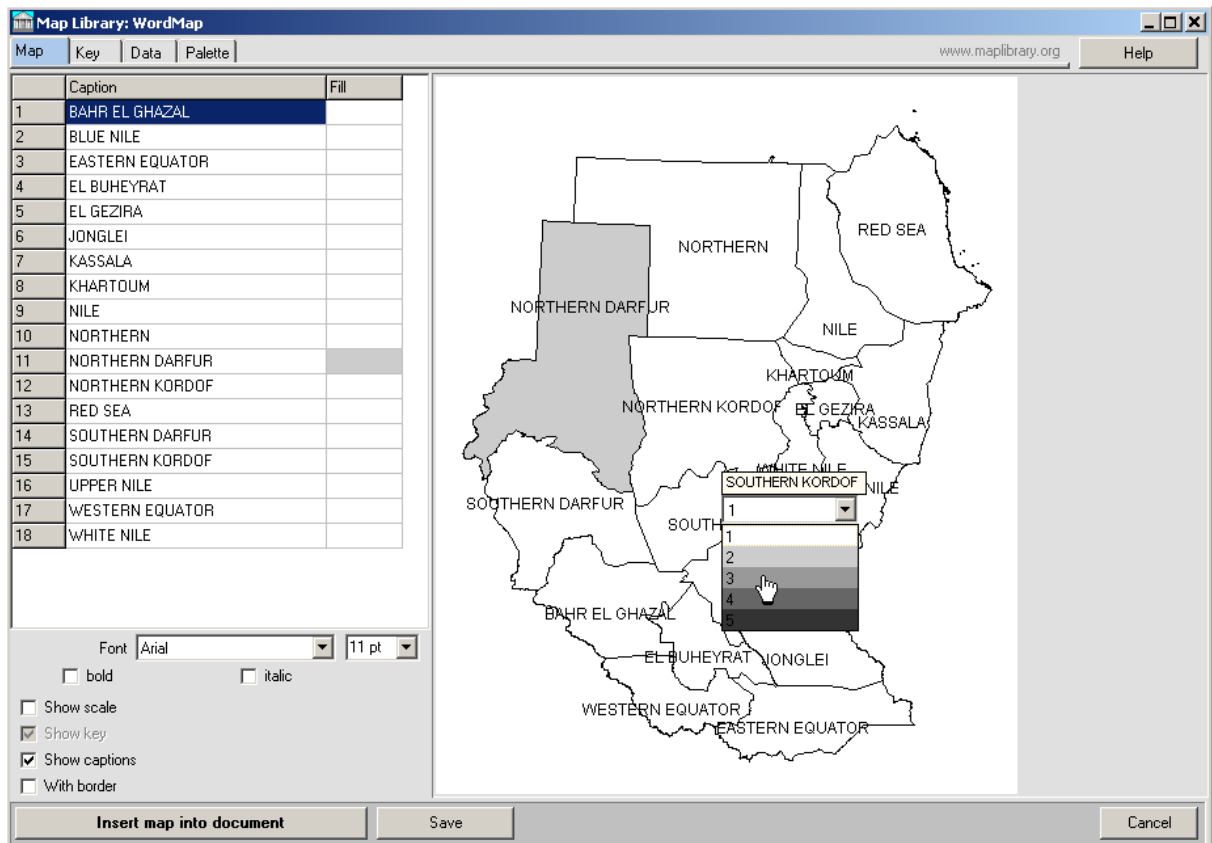
- **Office Map (\*.omp)**. The “Office Map” format is unique to the WordMap program and is a file type that saves complete map presentations in one file so that they can be saved for later editing and reuse.
- **Map Library files (\*.mlb)**. Map Library files contain maps from the Map Maker Trust’s map library (www.maplibrary.org).
- **ArcView shape files (\*.shp)**. Shape files are used by ESRI’s ArcView program to store maps. Any shape file can only contain one object type – lines, points, or polygons; not a mixture of types. To be usefully used in WordMap the shape file should contain polygons (www.esri.com).
- **MapInfo export files (\*.mif)**. MIF files are used by the MapInfo program to export data to other programs (www.mapinfo.com).
- **Map Maker drawings (\*.dra)**. DRA files are used by Map Maker Pro and Map Maker Gratis (www.mapmaker.com)

You can use any of these file types for your base map. When you select a file by clicking on it a small preview image of the map appears on the right-hand side. Once that you have the map that you want, click on “Open”.

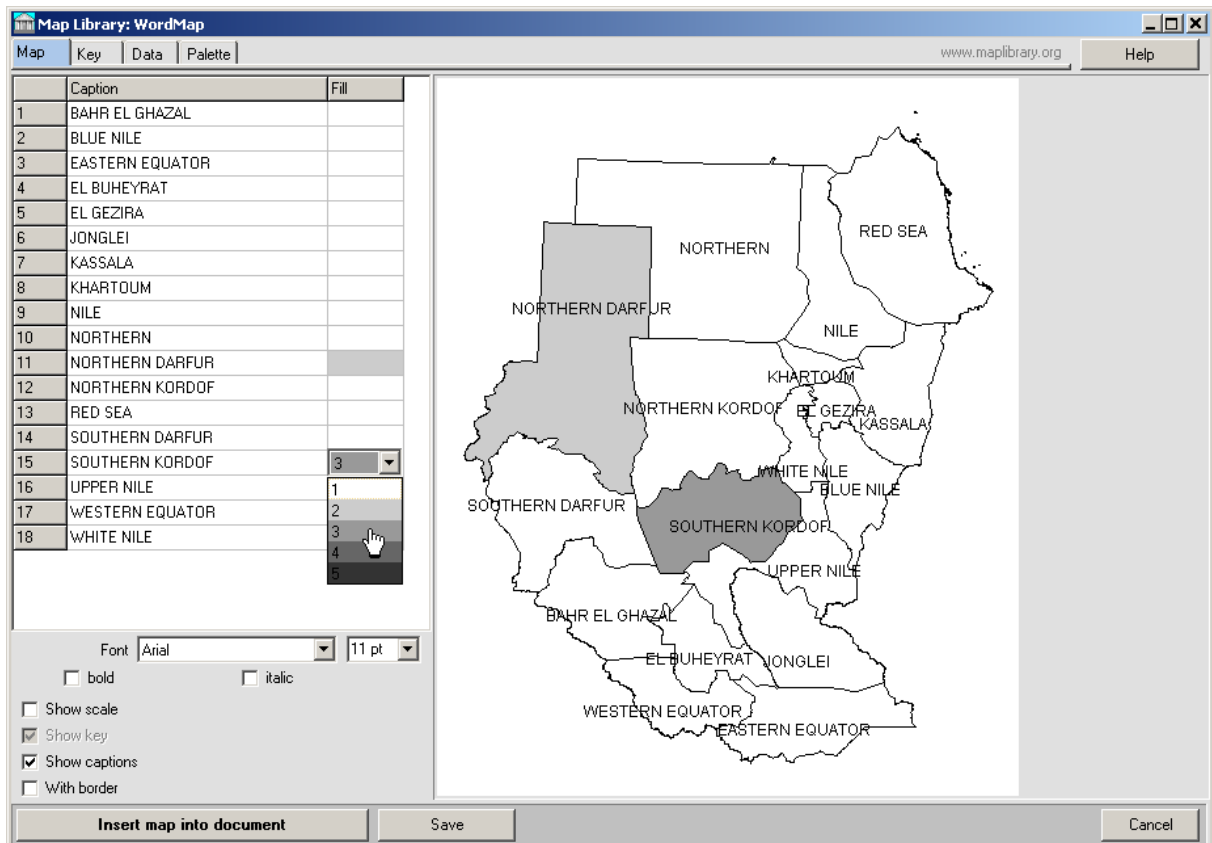


In this example we have a simple map of the second-level administrative area of Sudan.

As you move the cursor over the polygons that make up the map, the cursor changes to a pointing hand, meaning that it is over something that it can usefully click. Click on a polygon and a drop-down list appears showing several options for filling the polygon. Click on an option and the drop-down list disappears and the polygon is redrawn with the new fill. These fill options are known as the “palette”



As you choose fills on the map, the same fill is displayed in the table on the left hand side which lists all the polygons on the map. Alternatively, you can click on the table and change the fill there. Changes in the table are reflected in the map.



By dragging the boundaries of the WordMap window you can change the size of the map. If you have Word set so that it shows the document at its true size (“**View – Zoom – 100%**”) then the map will appear in the map at the size that it appears in WordMap.

Using the options in the bottom left you can add a scale bar and a border, or change the font used for the captions, or hide the captions. Once you have the map looking as you want it click on “**Insert map into document**” and the window will close and the map is in your document.



***For simple applications this is all that you need to know to use WordMap.***

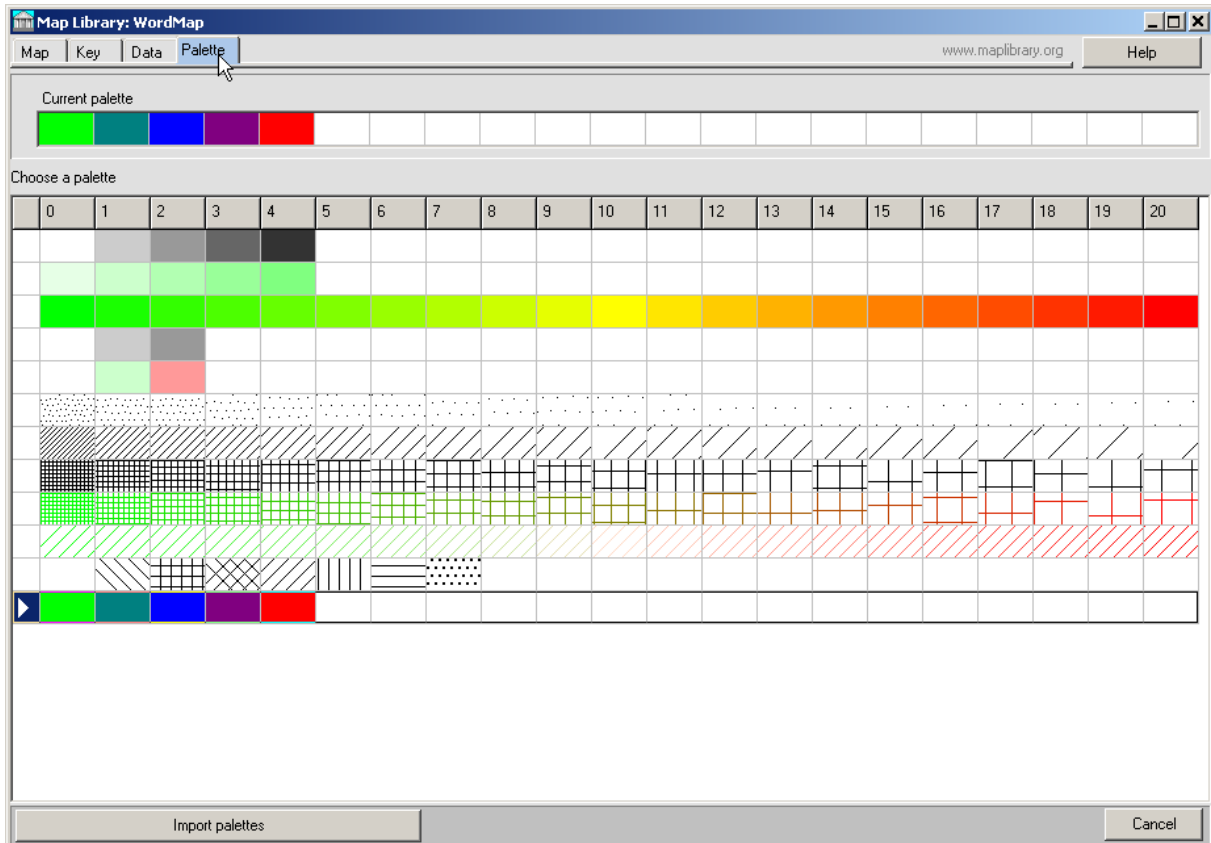
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## ***Getting more advanced...***

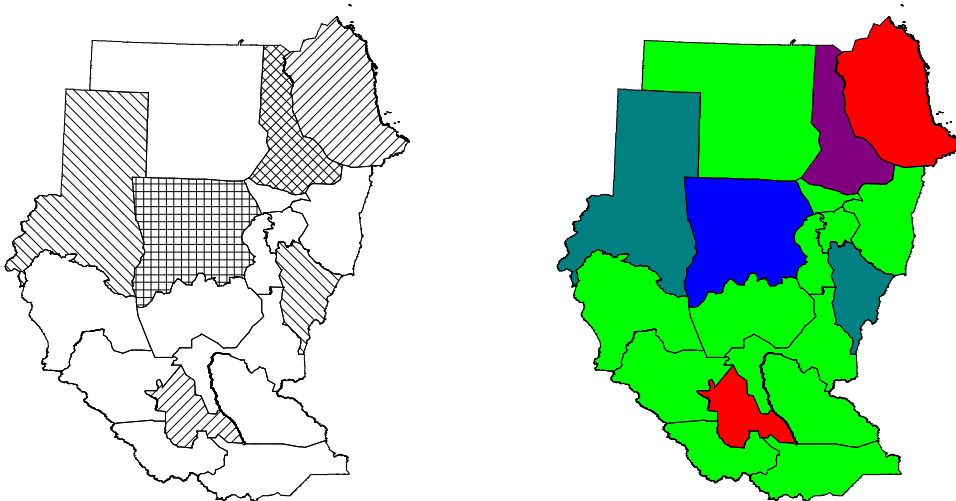
### ***Palettes***

In the above example the palette simply consists of black, white, and three intermediate grays. The palette that you use depends on how many different types of fill you need for your data and also on the type of printer you use. There is no point in having a palette of colours if you will eventually print the document on a black and white printer. Some black and white printers are not good at printing solid tones so it is useful to have fills which are black and white patterns rather than gray.

If you click on the “**Palette**” tab at the top of the WordMap window then the screen shows the currently selected palette and beneath it the options available. Each palette can have up to 21 entries



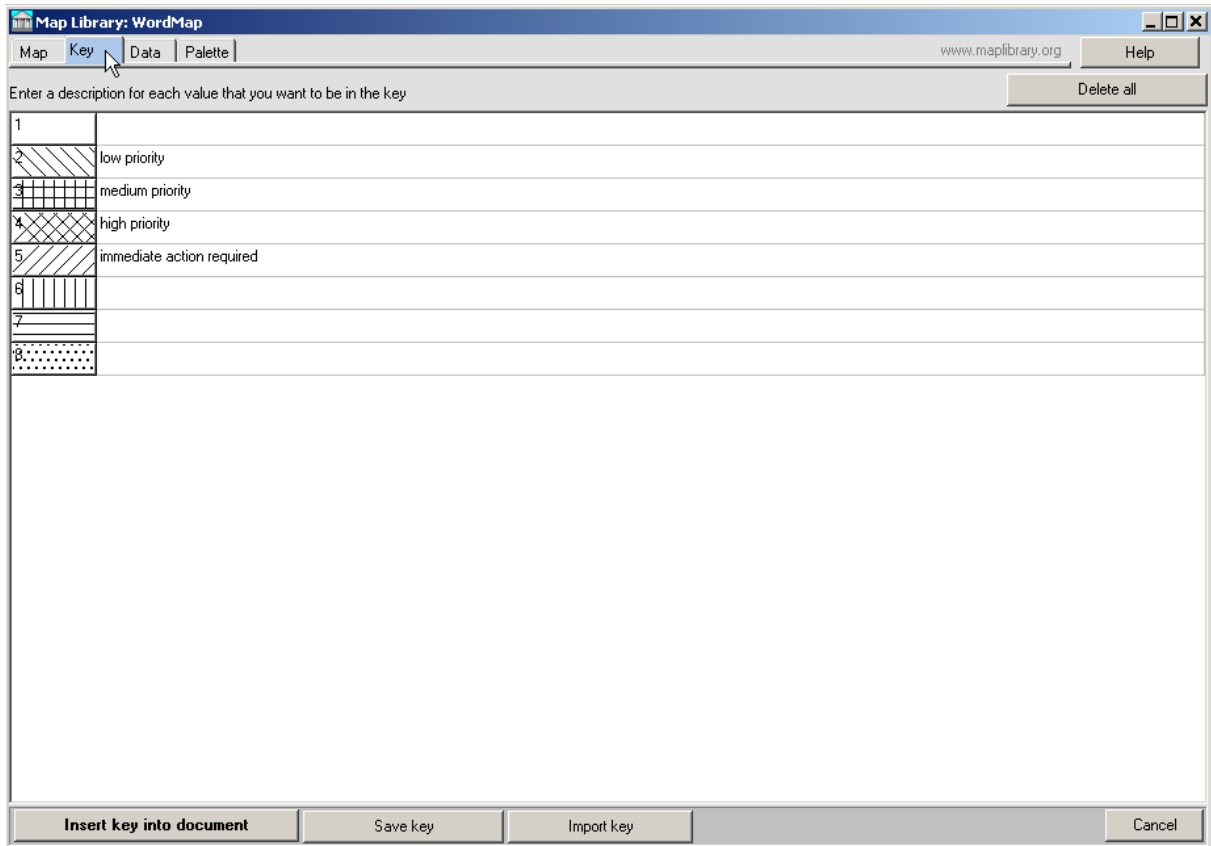
Choosing a different palette can display the same map in different ways:



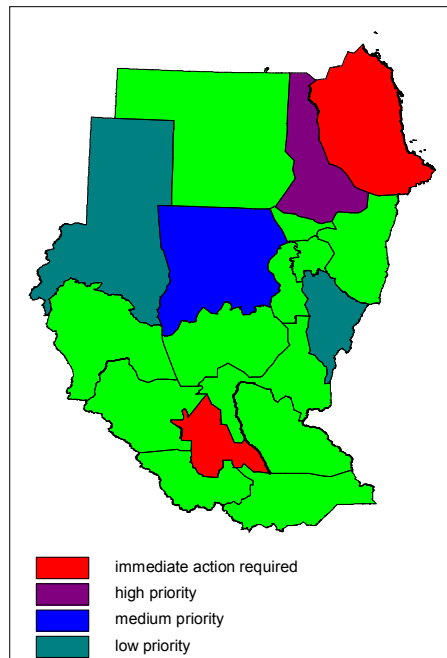
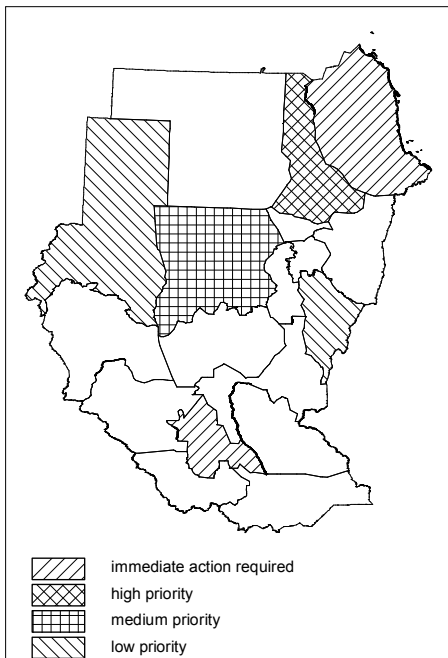
## Keys

In a simple map the colours may be explained in the text of the document, i.e. “red equals high population, green equals low population”. But more often you will want a key to explain the map.

Click on the “key” tab at the top of the window.







The current palette is displayed on the left. In the right hand column you can enter text for all or some of the palette entries. When you return to the map page, if the “show key” tick box is ticked, the key will be shown:



Note that the key will only show entries for palette items which have text on the key page and which appear on the map. In other words if the key includes an item for “agriculture” but none of the polygons on the map are categorized as agriculture then agriculture will not appear on the key on the map.

As an alternative to putting the key on the map you can put the key directly into the Word document as a table. Place your cursor where you want the key to appear in your document. Open WordMap and go to the “**Key**” page. Click on the “**Insert key into document**” button, and a table such as this one below will appear:

	immediate action required
	high priority
	medium priority
	low priority

The advantage of this technique is that the text in the table can be edited in the normal way using all the options available within Word.

The “**Key**” page in WordMap also has buttons for “**Save key**” and “**Import key**”. These are useful if you want to re-use a key across several maps.

### **Choice of formats**

WordMap can use four different kinds of base map data: ArcView SHP files, MapInfo MIF files, Map Maker DRA files, and Map Library MLB files. The first three simply store each polygon as a separate polygon. However, MLB files contain both the polygons and the boundaries between polygons. In a map of administrative areas where there is a hierarchy of areas (i.e. country – province – district – sub-district etc.) the boundaries between polygons can be drawn to reflect this hierarchy. The line around a country will be bolder than a line between two provinces which in turn is stronger than that between two sub-districts within the same district. So where this extra information would be useful it is better to choose the MLB file where available



Using an Map Library MLB file



Using a simple polygon file

## More advanced still...

### Data

As described above, you can use WordMap without any need to refer to external data – you can simply select colours for each polygon manually and, if need be, create a key. However, you may wish to use numerical data to govern the selection of fills from the palette. To do this go to the “Data” page.

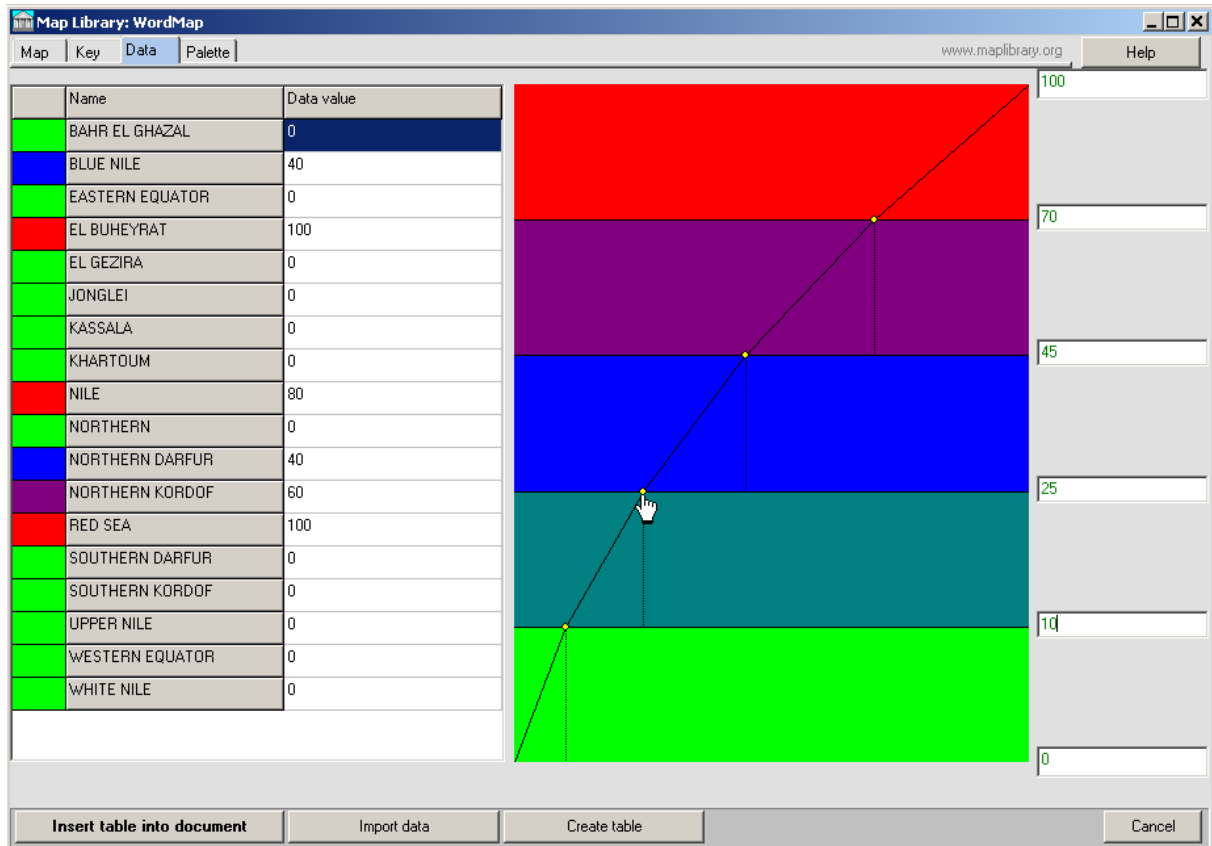
Name	Data value
BAHR EL GHAZAL	0
BLUE NILE	40
EASTERN EQUATOR	0
EL BUHEYRAT	100
EL GEZIRA	0
JONGLEI	0
KASSALA	0
KHARTOUM	0
NILE	80
NORTHERN	0
NORTHERN DARFUR	40
NORTHERN KORDOF	60
RED SEA	100
SOUTHERN DARFUR	0
SOUTHERN KORDOF	0
UPPER NILE	0
WESTERN EQUATOR	0
WHITE NILE	0

The right-hand side of the interface shows a vertical stack of input fields with values: 100, 80, 60, 40, 20, 0. The central map area displays a color gradient from light green at the bottom to red at the top, with a diagonal line and a vertical dashed line indicating a specific data value.

The data fields on the right-hand side show how each fill from the palette is assigned to a range of values. By default the values are assumed to range from zero to 100 and that range is divided evenly by the number of entries in the palette – in this case five. So in this example the first palette entry (light green) represents values less than 20, the second band is for values of 20 or more but less than 40.

By editing the numerical values in the “Data value” column of the left-hand table the fills from the palette are automatically assigned and displayed in the left-most column.









By editing the values in the right-hand column of fields you can alter the overall range of values and alter the range covered by each band in the palette, as shown below.













You might want to do this if, for instance, you have a lot of closely grouped values near the bottom of the overall range and few values higher up. As the scope of each band is changed so the assigned fills displayed in the left-most column are modified.

The values covered by each band can also be altered by dragging the small circles left or right.

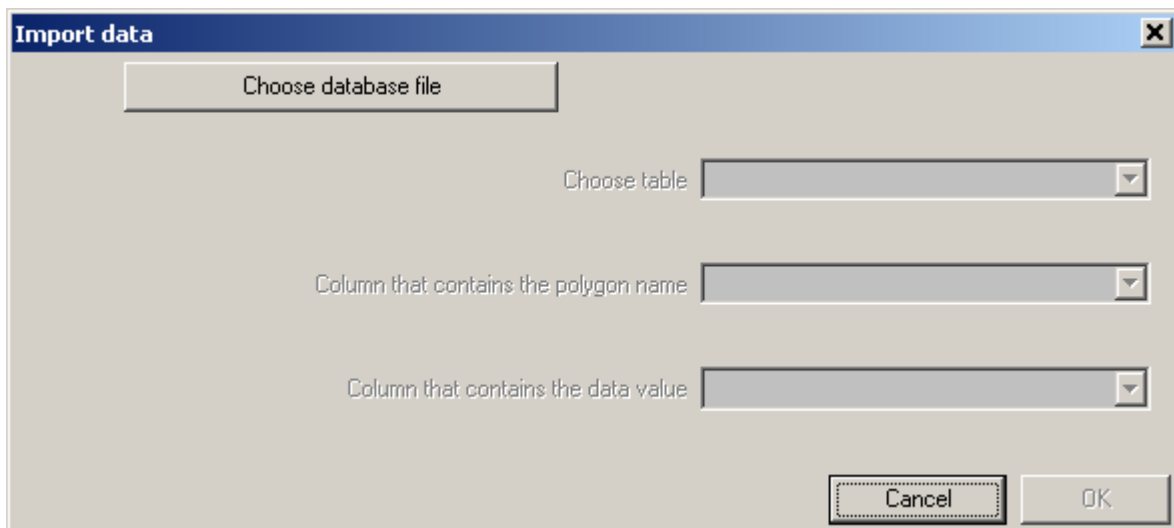
As with the key, the data table can be imported directly into your Word document. Place the cursor in your document where you want the table to appear, then back in WordMap click on the **“Import table into document”** button.

	Name	Data value
	BAHR EL GHAZAL	0
	BLUE NILE	40
	EASTERN EQUATOR	0
	EL BUHEYRAT	100
	EL GEZIRA	0
	JONGLEI	0
	KASSALA	0
	KHARTOUM	0

	NILE	80
	NORTHERN	0
	NORTHERN DARFUR	40
	NORTHERN KORDOF	60
	RED SEA	100
	SOUTHERN DARFUR	0
	SOUTHERN KORDOF	0
	UPPER NILE	0
	WESTERN EQUATOR	0
	WHITE NILE	0

### Importing data

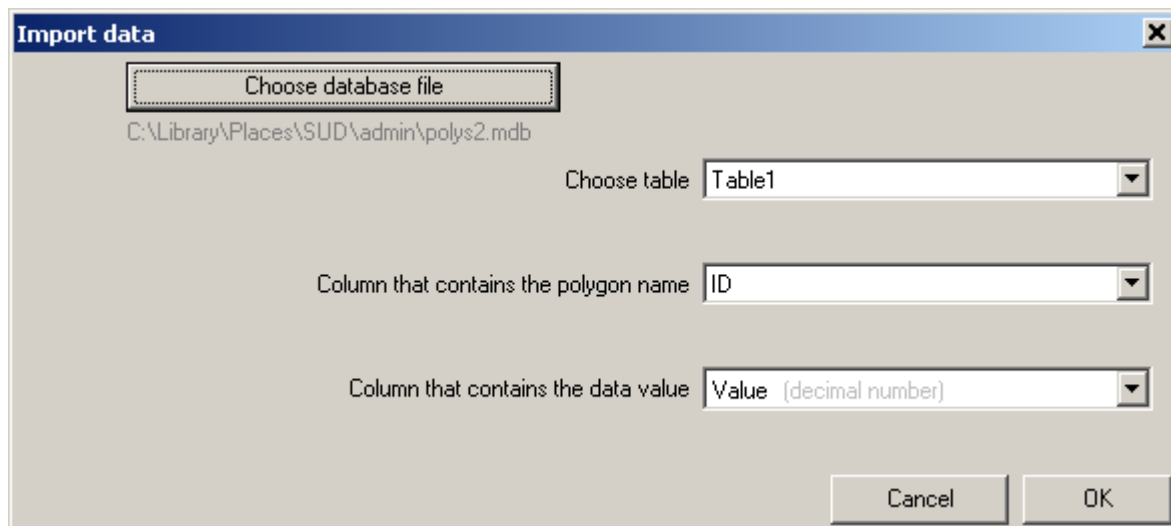
Data values can simply be entered manually, as described above. Alternatively you can import a column of data from a data table. On the “Data” page click on the “Import data” button:



Click on the “Choose database file” button. The file picker dialogue box that appears will list the DBF files on your computer. If you have Microsoft Access installed it will also show the Access databases (MDB files). Similarly, if you have Excel installed it will also list the XLS spreadsheet files.

Note: We recommend not using Excel XLS files unless you have to. This is because an Excel spreadsheet is not a true database table – it is a spreadsheet. Excel is very flexible and good at manipulating data but it’s very flexibility means that it is not a good format simply for storing data to be used by other programs. In particular, Excel does not have the concept of columns that contain a particular data type (e.g string, integer, decimal number etc). An Excel spreadsheet *can* be configured as if it were a regular table of columns and rows but it can also be entirely free form.

A DBF file always contains just one data table, while an MDB or XLS file can contain multiple tables. If you choose an MDB or XLS file then you need to choose the table from the file by using the first drop-down list. The columns found in the table are listed in the two lower drop-down lists.



The polygons on the map need to be related to rows in the data table. This can be done in two ways:

- **Ordered.** The rows in the data table are assumed to be in the same order as the polygons in the map file, i.e. the first polygon uses the first row of the data table. If you are *sure* that this applies in your case then set **“Column that contains the polygon name”** to “- none -”.
- **By name.** The name of each polygon is linked to values in a specified column in the data table – for instance, in the dialogue box if you specify the **“column that contains the polygon name”** as **“ID”**, then when the program is preparing to draw the polygon called **“WHITE NILE”** it will look at the **“ID”** column in the database and find the row in which the ID value is **“WHITE NILE”**.

In the bottom field select the column in the data table which will be used to control the data value for the polygon fill.

### ***Creating a data table***

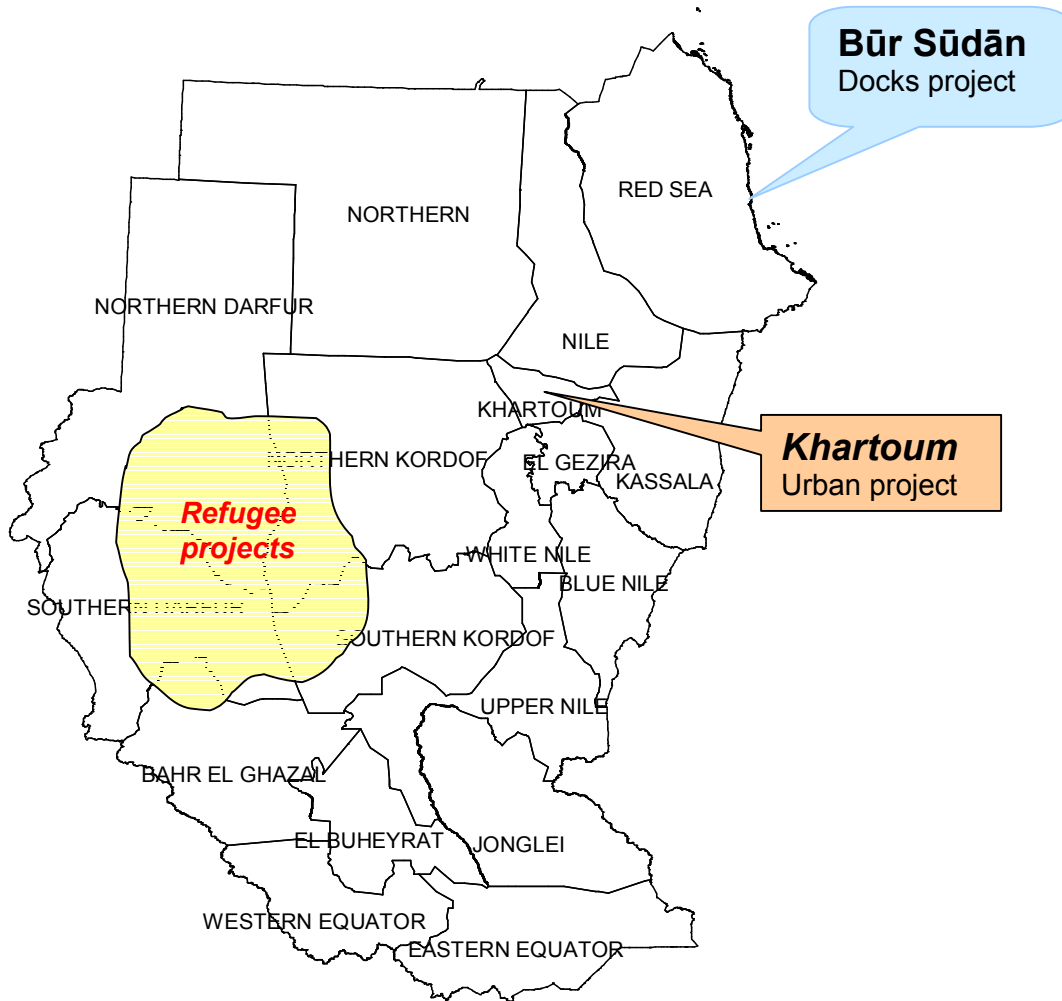
The **“Create table”** button on the **“Data”** page can be used to create a new table from a map. This can be useful even where you already have a data table for a map. For instance ArcView SHP files and MapInfo MIF files both come with their own data tables – a DBF file for a shape file and a MID file for a MIF file. However in both these cases there is a data entry for each polygon. In some cases, like the Sudan map illustrated above where there are a number of small islands, then several polygons will share the same name – they are all part of the same administrative area. In WordMap each polygon name only appears once so the data table should have one row for each unique polygon name, not for each polygon.

## Beyond WordMap....

### Annotating a map

Word contains tools for simple drawing. While these are not adequate for drawing a map they are useful for annotating a map created by WordMap.

In Word go to the “**View – Toolbars**” menu and ensure that the “**Drawing**” toolbar is selected.



Using the tools on the “**Drawing**” toolbar you can rapidly annotate a map in the above fashion.

## ***Other applications***

### ***Maps for web pages***

To create a map for a web page, use WordMap in the normal way to create your map then click on the “**Save**” button, choose “**JPEG image (\*.jpg)**” as the file type, and name the new file. The new JPG file can then be placed in any web page.

### ***Maps in PowerPoint presentations***

To create a map for a Microsoft PowerPoint presentation, use WordMap in the normal way to create your map then click on the “**Save**” button, choose “**Enhanced metafile (\*.emf)**” as the file type, and name the new file. The new EMF file can then be placed on a PowerPoint slide by going to the “Insert – Picture – From file” menu in PowerPoint and selecting the EMF file.

<p>Note that EMF files are not “backwardly compatible”. This means that if you prepare an EMF file on a Windows 2000 or XP computer then you cannot reliably use it on a Windows 98 machine.</p>
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