

In order to use BSQ imagery in ESRI ArcGIS 8.x ArcMap follow the steps below:

1. **Create a “World File” to Allow ArcView to Import the BSQ File:** In the case of our sample image [bookmark above], open the .glcf file you downloaded. It should list all the information you will need for basic image display and analysis. Create a text file with the extension .hdr. The file should appear similar to the example shown below but you will need to change the parameter information based on the documentation for each of the data files:

```
Image BSQ header file
nrows 21600
ncols 43200
nbands 1
nbits 8
layout bsq
skipbytes 0
ulxmap 324000
ulymap -648000
xdim 1000
ydim 1000
```

2. **Start ArcMap:** In MS Windows this will generally be through either a desktop icon or an entry under the “Start -> Program Files -> ArcGIS” section of the Windows menu. Open “A New Empty Map” when the program initializes.
3. **Activate the Appropriate Extensions:** In order to retrieve spatial data from an image *it is necessary to have the Spatial Analyst* extension installed. In ArcView go to “File -> Extensions” and ensure that Spatial Analyst support is installed and checked.
4. **Add and Display as Raster Imagery:** Highlight a blank data frame and select “File -> Add Data”. Navigate to the location where the land cover data set is located, it will display with a beige icon next to it. Highlight the data set and click “Add”. It will display as a grayscale image in your data frame. Note the values next to the color bar in the table of contents. The 0 to 13 values are indicative of the 14 land cover classes available.
5. **Display as Classification:** Thus far, we have succeeded in displaying the classification as a normal BSQ raster image. In order to display it as a classification, right click the layer and select “Properties” then the select the “Symbology” tab. Under the left “Show” window, select “Classified”. Select 14 as the number of classes and click “Classify”. In the “Classification Method” drop-down box select “Defined Interval” and set the interval at 1. Click “OK”. The final step in displaying the classification is to select an appropriate (or “useful”) color ramp. Chose a color ramp from the drop-down menu and click OK (see Figure 1). The result should then display as in Figure 2.

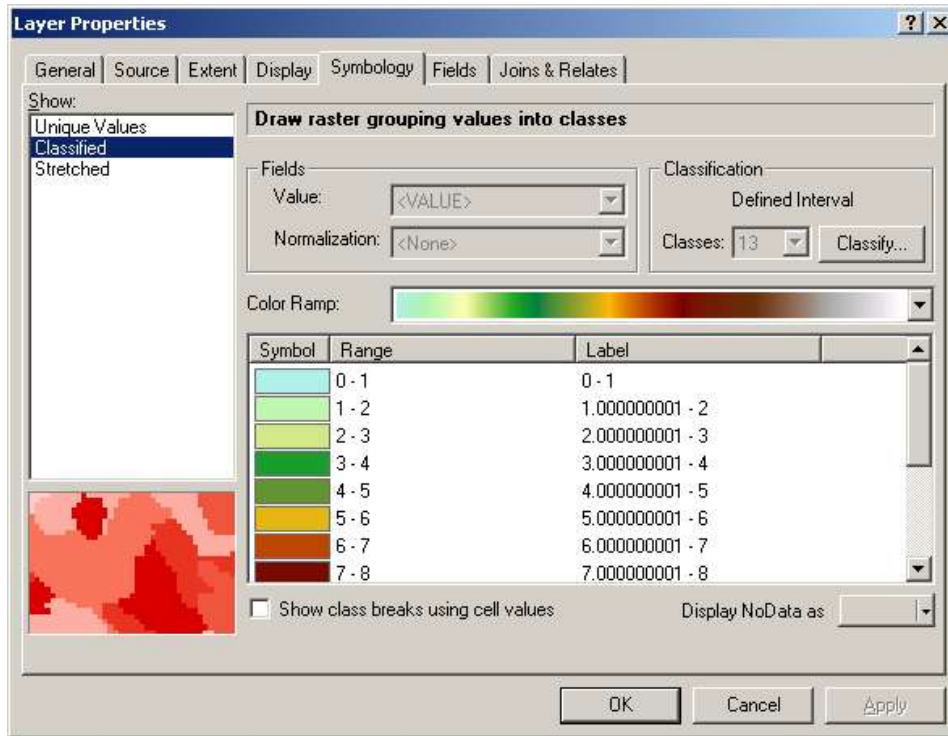


Figure 1: ArcGIS Layer Properties Result

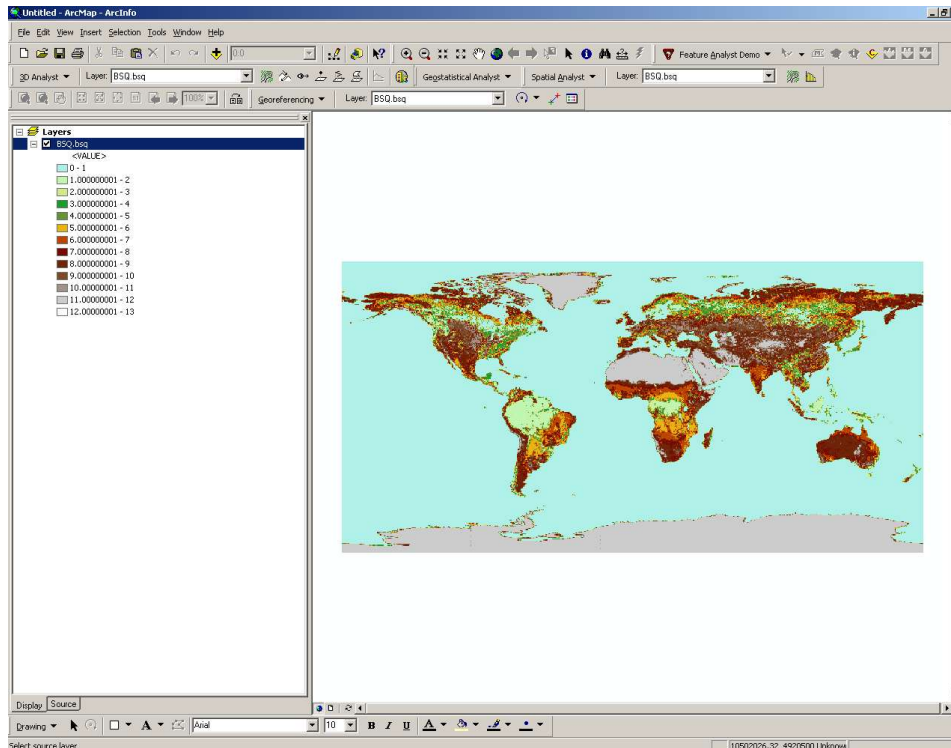


Figure 2: The Classification Displayed

6. **Save your Work:** “File -> Save As”, indicate a path and name and click “OK”.

7. **Convert to Grid** (NOTE: this step is optional): To access some of the higher-end features of ArcGIS, it is desirable to convert the classification to a Grid. To do this, open ArcToolbox ("Start -> Programs -> ArcGIS"). Under ArcToolbox, navigate to "Conversion Tools -> Import to Raster -> Image to Grid", select the original image (not the saved .mxd file from the previous step), indicate the resampling method and an output name then click "OK". The result will be a new Grid which may then be utilized within ArcGIS.