

## Converting ENVI Classifications to ArcGIS Shapefiles

Once you have created a landcover classification in ENVI you may wish to view or work with these data in ArcGIS. If you include a file extension of “.DAT” as part of the filename you can open this file directly in ArcGIS. For example, you can open the file **MyClass.dat** in ArcGIS and you will see the classified image with the colors that you have specified.

You need to be aware that this is an 8-bit raster image, it does not have the attributes of a vector image in ArcGIS, i.e. you cannot use this for zonal statistics, selection by attribute (class), or clipping and buffering other data. To perform any of these GIS functions you will need to convert the ENVI raster file to an ArcGIS shapefile.

When you use the Classification Workflow the last step has an option to Export Classification Vectors directly to a shapefile. While this is easy to do; generally we need to perform many classifications, modifying the training regions along the way. Also you may want to perform post classification steps such as combining classes. For these reasons, it is generally better to NOT export the classes at this stage of your analysis.

Once you have performed your image classification(s) and assessed the accuracy of your work, there is a simple two-step process that you can use to convert the final classified raster data into a vector file structure that can be used in ArcGIS. Be advised that this can be a time consuming process depending on the size of the image and the number of individual class polygons.

### 1. Export to Vector:

From the ENVI Toolbox select **Classification | Post Classification | Classification to Vector**. Select your classified image and click OK to open the *Raster To Vector Parameters* dialog (Figure 1). You have several options within this dialog; you can select all classes or some subset of them, you can save all of the data to a single layer file or save each class as a separate layer.

Typically you will select all classes into a single layer file. Make sure you **do not** select the default class “Unclassified” or a class labeled “Masked pixels” (created if you apply a mask to your image). Direct the Output to a Single Layer, enter a new filename such as **Class\_Vector**, and click OK. This creates an ENVI vector file with the file extension “.EVF” When opened in the Layer Manager or Data Manager this will display the name **RTV(your original classified file name)**.

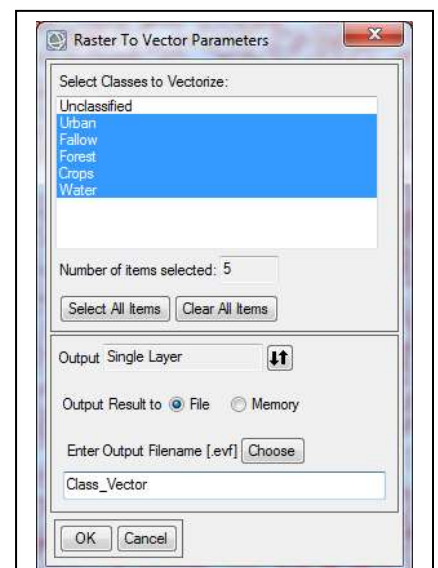


Figure 1

## 2. Export to Shapefile:

Using the Toolbox select: **Vector | Classic EVF to Shapefile**. Select the EVF file from the previous step, enter an appropriate filename for the new shapefile, and click OK. ENVI will append your name with the 'SHP file extension. It may take some time to complete the export, be patient.

Once this is complete, add this shapefile to a map in ArcGIS. Open the *Layer Properties* and under the **Symbology** tab select **Categories → Unique Values** then click on the button *Add All Values* to display the separate classes. ArcGIS will use the ENVI class names but will use its own color scheme. You can easily change the individual colors and labels here or in the Table of Contents pane.