



## Download *ForWarn II* Imagery using the Web Coverage Service (WCS)

NOTE: ArcGIS Desktop/Pro is currently not supported for **WCS** connecting and exporting.  
Provided here are clip and download instructions using [QGIS 3.6](#)

1. **Use QGIS to connect and export your Area Of Interest (AOI)**
  - a. Create a new WCS connection by using a product-specific WCS URL from the *ForWarn II* Data Access webpage here - <https://forwarn.forestthreats.org/products/data-access>
  - b. Zoom to your AOI, right-click on the WCS layer and choose “Export” and “Save As”
  - c. For ‘Output mode’, select “Raw Data” and name the file
  - d. For ‘Extent’, select “Map Canvas Extent”, and select “OK”
2. **Assign the *ForWarn II* ‘percent NDVI change’ color table using ArcGIS Desktop or QGIS**
  - a. File downloads - <https://new.cloudvault.usda.gov/index.php/s/8q6bRZJBfBLNn8c>
    - i. For ArcGIS Desktop, download the color map designated with the file extension “.clr”
      1. Open the ‘Properties / Symbology’ tab for the change image, under ‘Show’, select “unique values”, under the ‘Value Field’ dropdown, select “DN”
      2. Navigate to the location of the saved color map, and double-click the filename
      3. Change “0” to ‘no color’, and “OK” to apply the changes
    - ii. For QGIS, download the color map designated with the file extension “.txt”
      1. Under layer properties, select Symbology, renderer type = singleband pseudocolor
      2. In min/max, select the folder icon to ‘load color map from file’
      3. Navigate to the save location of the .txt color map file
3. **Use ArcGIS Desktop to relate DN (raster values) to ‘percent NDVI change’ values**
  - a. Add the exported raster from QGIS into a data frame, double-click on the layer and open the Symbology tab, select ‘unique values’ and yes to build the raster attribute table
  - b. Save this Excel locally ([Percent NDVI change LUT ESRI.xlsx](#)), add it to the data frame
  - c. Right-click on the change image and choose ‘Joins and Relates’, and select “Join”
  - d. For 1 = “Value”, for 2 = the Excel file and for 3 = “DN”, “Keep all records”, “OK”
  - e. *Optional* - sorting the percent NDVI change column (“pctNDVIc”) will allow you to interactively select and threshold a range of percent NDVI change values of interest (positive or negative departure); to export the selected range of values, use the ArcGIS “reclassify” tool