

The IPAD ArcGIS Toolbox

Instructions for Installation

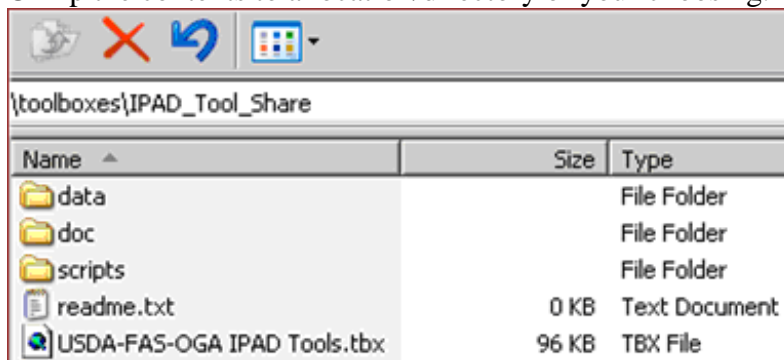
The USDA-FAS-OGA IPAD Toolbox contains tools which download and optionally mosaic MODIS and MODIS NDVI images from the Crop Explorer Image Gallery site. While it is possible for a user to download desired imagery from the site above as JPEG files, these files will not be spatially located and will therefore not display properly in ArcGIS. The purpose of this toolset is to georeference the JPEG files to their proper location on the MODIS grid and to simplify the steps for bringing said imagery into ArcGIS. The following steps will walk you through the installation and use of the IPAD ArcGIS Toolbox. All necessary files for installing this toolbox for ArcGIS are included in the ZIP file. You will need WinZIP, WinRAR or another program to extract the files from the ZIP file.


Also, since this tool was originally created for ArcGIS 9.x, and ESRI has altered environment variables set during the 10.x install, be sure to have the following system environment variables set before running the tool:

- Create an “ARCGISHOME” environment variable (if you don’t already see one) and set it to the install folder of ArcGIS. For ArcGIS 10 this is specifically the Desktop10.0 folder (e.g., C:\Program Files\ESRI\ArcGIS\Desktop10.0\). Please add the ending backslash.
- When installing ArcGIS Desktop, you should have been asked to install Python as well (specifically 2.6), and this Toolbox requires it. Be sure the “PATH” environment variable has a reference to this install within it (e.g., C:\Programs\Python26\ArcGIS10.0).

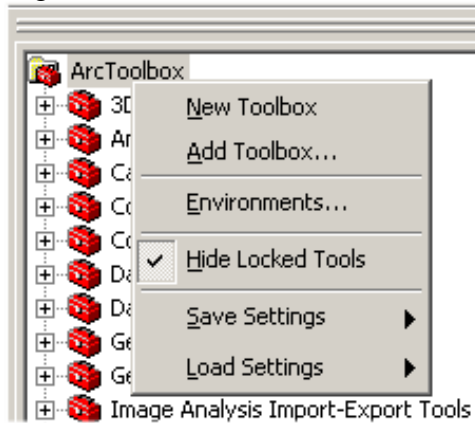
Installation

1. Download the IPAD_Tool_Share.zip file from the IPAD’s Web page.
2. Unzip the contents to a location/directory of your choosing.

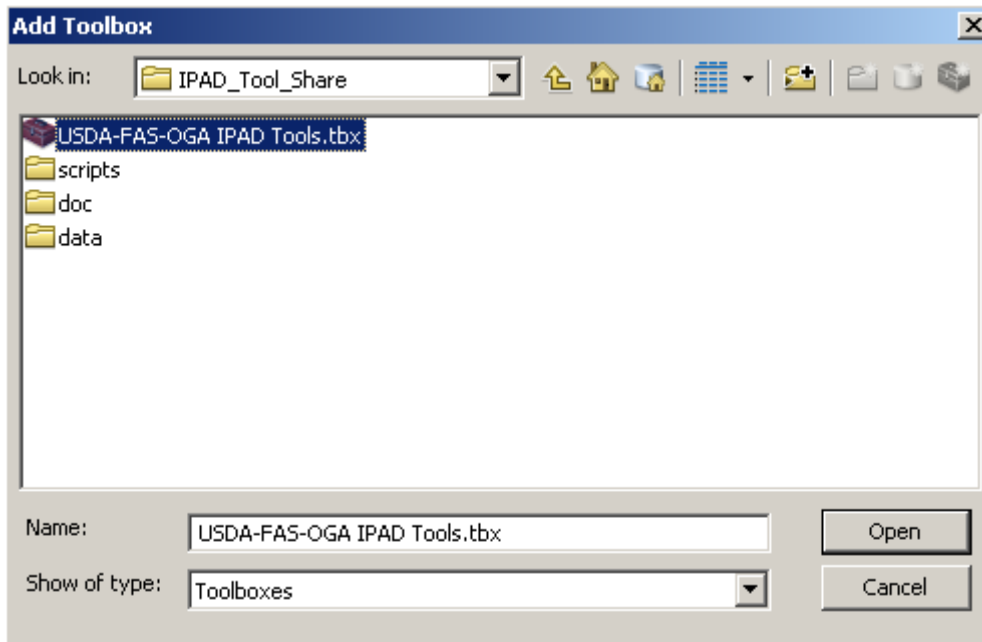


3. Open the ESRI ArcCatalog application and activate the ArcToolbox environment using ArcToolbox  button.

4. Right click on the 'ArcToolbox' root and choose 'Add Toolbox...'



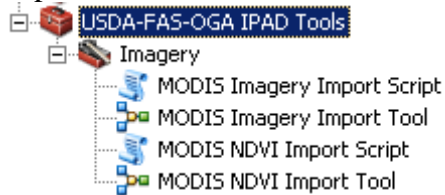
5. Navigate to where you have stored the IPAD toolbox and double click to add it.



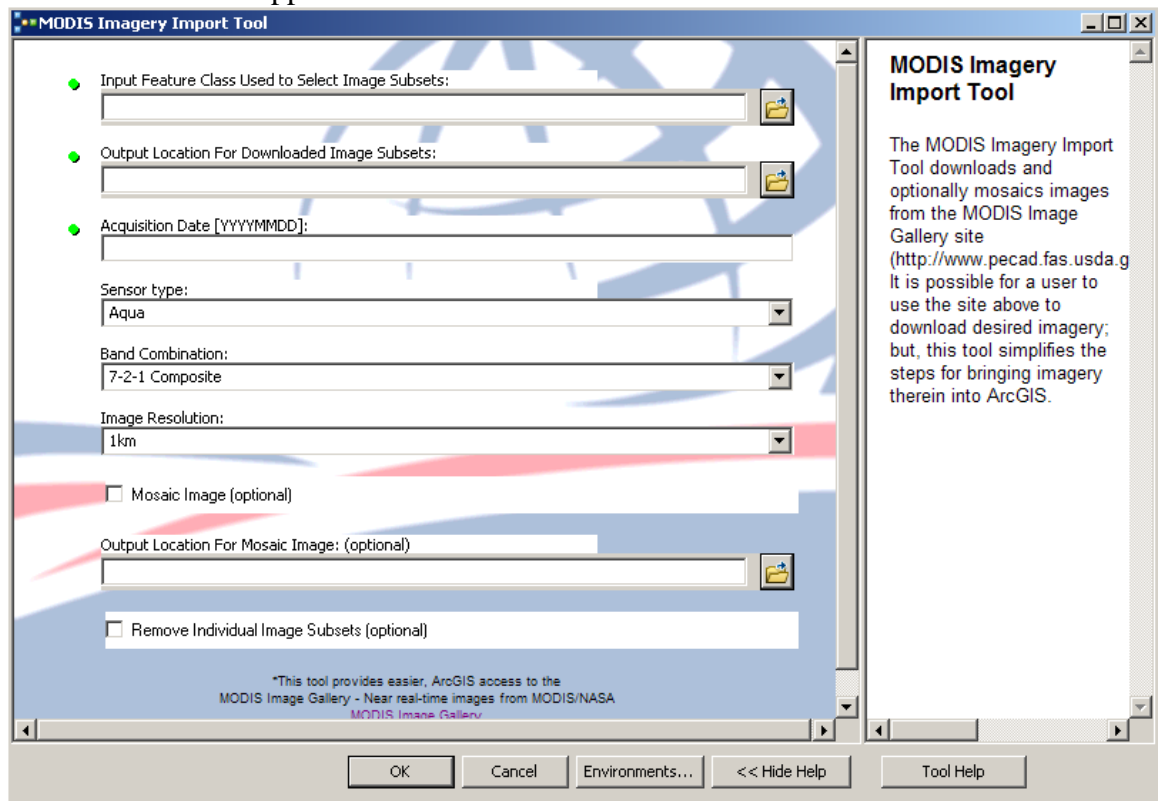
6. A new 'USDA-FAS-IPAD Tools' toolbox will be added to your ArcToolbox selections.

Use of Tools

- Expand the 'Imagery' toolset. Notice there are tools in the form of ArcGIS models and Python scripts to help you import both MODIS imagery and MODIS NDVI imagery and optionally mosaic it. Each tool has an identical interface and the Python scripts and ArcGIS models will deliver identical outputs, so the explanation of one will suffice.



- Double click on the 'MODIS Imagery Import Tool' model to open it and the tool's window will appear.



- At this point you will need to enter the following:
 - Input Feature Class to be used to select the image subsets. This will be a shapefile or layer which defines your area or region of interest that you have created and stored on your computer;
 - Output location for the downloaded imagery;
 - Acquisition Date (YYYYMMDD) you are searching for;

- The Sensor type (Terra or Aqua);
 - Band Combinations (7-2-1 Composite, True Color, NDVI);
 - Image Resolution (1-km, 500-km, or 250-km); and,
 - Whether or not you would like to automatically mosaic your images and where to store the mosaic output file.
10. The 'Show Help >>' button will open up a Help text window explaining the tool and various input parameters. When you click inside the input parameters, the Help desk will update to show an explanation of that particular input/output. If you no longer want to see the Help desk, click the '<< Hide Help' button to close it.
 11. When you have entered all the necessary parameters into the tool, click 'OK' to run the tool.