

Lab # 3 – Progression maps and analysis

Objectives:

Learn how to view data in ArcCatalog

Understand how to clean ICS data and create a progression map using AML

Overlay burn data of progression with fire severity from BARC map and landownership

Data	Location	Description	Scale	Type
coonbarcutm	C:\NR506\data\Cooney_Ridge_GIS\Cooneyridge_unsupervised	Burn area reflectance classification, severity 1- no burn, 2 – low, 3-med, 4-high	20 m SPOT	ESRI Grid
int_cooney_owner.shp	C:\NR506\data\Cooney_Ridge_GIS\Cooneyridge_Unsupervised	Ownership		Shape file
20030813.shp etc.	C:\NR506\data\Cooney_Ridge_GIS\Cooney_progression_dates\20030813.shp	Progression dates, ICS perimeter data		Shape file
cooney_ridge_01sept03_20m_utm.img	C:\NR506\data\Cooney_Ridge_GIS\	20 m SPOT scene	20 m	Scene
cooney_ridge_31aug03_30m_utm.img	C:\NR506\data\Cooney_Ridge_GIS\	Landsat Scene	30 m	Landsat Scene

1. View data in ArcCatalog

Start ArcCatalog

View the 20 m SPOT image and the 30 m Landsat image and notice the difference in resolution

Explore the other data, both Geography and Tables

2. Run AML to create progression map

Go to Start – Programs – ArcGIS – ArcInfo Workstation-Arc

Set workspace **Arc:** w c:\NR506\data\Cooney_Ridge_GIS\Cooney_progression_dates Enter

Open c:\NR506\data\Cooney_Ridge_GIS\Cooney_progression_dates PROGRESSION.AML using Wordpad and explore ArcMacro Language. This AML creates a 5m grid of the progression dates into one grid with attributes of each individual burn date. This process eliminates slivers, checks errors and parameters. The output grid is named BURNDATE.

Run aml: **Arc:** &r progression.aml

Check outputs at the Arc-prompt **Arc:** describe burndate Enter

Check outputs in ArcCatalog

Open ArcMap and add the burndate grid

3. Overlay burn data of progression with fire severity from BARC map

How did the fire burn on 2003-08-18? How much area was in high severity? (HINT: use the COMBINE command in Raster Calculator).

What land owner category has the highest proportion in high severity burn? (HINT: convert ownership to a grid and use the COMBINE command). What is the percent high severity fire? Create a map showing your results.

Develop two additional questions that you could answer by analyzing this data.