21 February 2013

NE SE Land Cover Web conference

Attendees: Lori Pelech (GIS NELCC), BJ Richardson (R5 NELCC), Melissa Clark (TNC), Todd Earnhardt (SE GAP), Steve Williams (SE GAP), Tim Jones (ACJV), Kirsten Luke (ACJV), Jeff, Alexa McKerrow (SE GAP), Mark Anderson (TNC), Jean Brennan (AMLCC), Scott Schwenk (NALCC), Bridgett Constanzo – (AMLCC)

Tim Jones and BJ Richardson reviewed the reason why this call was happening and in the simplest terms the Atlantic Coast Joint Venture, North Atlantic LCC and the Appalachian Mountain LCC need a seamless land cover coverage for their geographies.

Alexa McKerrow : GAP & Landfire product that might work for some needs – working on update

Mark Anderson: there are two main issues that need to be discussed

1. GIS overlay issue – solvable
2. Difference in methodology

Todd Earnhardt – SE Regional GAP overview

* NLCD 2001
* 3 season mosaic of TM data
* Hybrid
* Image segmentation and decision tree modeling
* Expert rules
* Pattern recognition
* Range maps for ecological systems used as mask
* Ancillary data
  + - * Mid-fine scale
      * Coarse scale

Alexa – One big difference was our lack of access to FIA data

Mark – Image Objects were based on image and note similarity of methods in certain situations.

SE GAP is working with Landfire for accuracy assessment. Accuracy assessment for the NETHM is based on cross-validation of the random forest models (i.e., statistical accuracy).

Mark – Northeast Terrestrial Habitat Map (NETHM)

* Natureserve classification
* Initially developed ancillary data
* NLCD 2001 but VA Piedmont NLCD 2006
* Each system map is a model, models based on FIA, National Heritage and specific maps developed for specific area. Used image objects based on landform as 100 ac hexagons; this creates a smoothing effect.
* Random forest used.

Jeff Horan asked whether it was correct to consider the NETHM as more of a predictive model.

Alexa noted that models were first done for the “matrix” types then other types added.

NETHM does not map altered vegetation well.

Jeff asked whether it was possible to run models (the NE ones) in the SE?

* Mark thought it would be possible to take the SE GAP map and create a hybrid, using underlying data layers
* Alexa agreed that they should be able to get to common land unit type (ELU)

BJ noted that this call was less about improving either product but how to use what we have, especially for the AMLCC.

Alexa noted that she would recommend not merging but there are several things we could do in post- processing:

1: look at Mark’s map and bring in NLCD (disturbed classes)

2: SE look at ELUs and fix mis-classifications.

3: Landfire has developed disturbance layers.

Mark’s suggestion was that if we had unlimited finds, take the NETHM and use it in the Appalachians; in coastal plain and Piedmont use SE GAP approach.

Scott Schwenk noted that the NALCC would like to update the land cover to 2006 and are there interim steps that could get us most of the way there but less drastic than starting over?

Lori Pelech’s shared two maps she had developed with Scott showing discrepancy between mesic and xeric forest types in southwest (?) Virginia as mapped by the two projects. Alexa noted that we may eed to do a reality check on extent of ecological types and that it may be as simple as those two types are difficult to distinguish in the field.

Both groups noted there was more reliance on biogeography in the SE than NE. And that this may have led to issues with how ecologist describes systems.

Alexa also noted that neither product has evaluated what the artifact of “range creep” is.

Kirsten Luke asked as a user that needs a consistent data set for the Atlantic Flyway what should I use?

* Alexa noted that her biased opinion would be Landfire , National Gap or Landscope.
* Mark had a different take on how to handle “merging” the NE and SE data:
  + BCR 30 NE data
  + Piedmont – SE up to MD and NE north of there.
  + For the AMLCC finish the southern portion (and currently unmapped areas) using the approach developed for the NETHM. This would require additional funds

Online links to resources mentioned on this call:

Landfire: <http://www.landfire.gov/>

National GAP: <http://gapanalysis.usgs.gov/gaplandcover/>

LandScope: <http://www.landscope.org/>