

# Forestry Data Issues for the RCP Process

Steven Smith

*Joint Global Change Research Institute  
College Park, MD*

Snowmass

*July 30, 2008*

ssmith@pnl.gov

# Forest Scenario Data

LUC in forests is one of the most important carbon-cycle drivers.

One challenge for the scenarios will be produce forest data that is “reasonably” continuous between history and future scenarios. Forest land-use dynamics results in substantial temporal (vintage) and spatial structure.

## *Illustrative analysis of UNH LU History for Latin America*

	1700	1800	1900	1950	2000
Primary Forest	937,070	880,970	806,450	735,460	622,320
SF_300yo	0	23,030	6,301	2,161	2,819
SF_250yo	0	29,778	10,505	3,277	3,476
Forest area (1000 Ha)					
SF_200yo	0	0	24,736	7,443	5,272
SF_150yo	0	0	63,019	21,555	11,974
SF_100yo	0	0	0	90,537	34,676
SF_50yo	0	0	0	0	145,650

*Data shows a continual “churn” in forest age structure due to the combination of land-use change dynamics (abandonment of cultivated areas) and wood harvest rotations. Substantial spatial changes have also occurred (**where** secondary forests exist and logging occurs has changed over time).*

# Challenges/Issues

- *ESMs use different histories as do IAMs.*
- *What data needs to be provided to allow a “reasonable” transition between ESM (or IAM) history and future projections?*
- *Some discontinuities and/or inconsistencies will be inevitable*

## Some Options

*The “extended” LUC harmonization approach*

- *Provide UNH with same future data as used for the historical re-construction (cropland area expansion/contraction, wood harvest data, etc.) so that a continuous historical -> future land-use data set can be produced.*
- *The result will be different than the IAM produced data sets in terms of assumptions for forest yields, etc. Will need to examine these differences (and consequences thereof) in post-RCP analysis.*

*Provide gridded or regional data on forest harvest and clearing areas*

- *This will be necessary for groups that have their own land-use history.*
- *Some smooth transition between historical and scenario data would still need to be developed by the ESM groups using this data.*