Overview

- Need for an inventory and monitoring toolkit
- Overview of the toolkit
- Analysis Tool for Inventory and Monitoring (ATIM)
- Current status and path forward
Need for an Inventory and Monitoring Toolkit

• There is no nationally supported analysis tool for NFS Regions to use to derive current condition, prioritize management needs, perform cumulative effects analysis.

• Estimates of current condition and monitoring trend over time may not be statistically sound, defensible in court, efficient, consistent over time or space.

• The 2008 Planning Rule requires
  – to conduct a comprehensive evaluation of current ecological conditions and trends as a part of the NFMA forest planning process. They must be described using available information and consider the best available science.
  – that Forest Plans have an associated Monitoring Program to ensure that each National Forest is progressing toward its Desired Conditions.

• Specialists from Regions that have analysis toolkits, as well as additional subject matter experts from NFS and FIA, are collaborating to determine specifications of a nationally consistent analytical tool.
Overview of the Inventory and Monitoring Toolkit

The toolkit has 4 main tools:

- **Design Tool** – to identify monitoring needs, and to specify sampling design to balance cost and precision in order to address monitoring questions.

- **Portable Data Recorder Tool** – software on PDR to collect, validate, and transfer data.

- **Database and Compilation Tool** – to store and compute calculated fields

- **Spatial / Tabular Analytical Tools** – use standard methods or spatial means of specifying area for which to derive estimate and produce associated maps.
The Analysis Tool for Inventory and Monitoring (ATIM)

1. Access Inventory Data which meets criteria – spatially balanced, known probability of selection, metadata, etc. This includes FIA, intensified FIA, periodic, collocated, periodic, all condition inventories, etc.

2. Access spatial datasets – associate spatial attributes with plots, selecting area of interest and determining area, post-stratification

3. Process (compile) data – calculate and store variables. For example tons per acre, canopy base height, canopy bulk density, classification algorithms such as old growth, dominance type, vertical structure, etc.
4. Calculate estimates – include confidence intervals, sampling error, etc. Accommodate variable weights.

5. Query data – to process estimates, allow data exploration of tabular data


7. Store data and meta data – need the ability to “freeze” and store data for analysis such as forest plan revision

8. Integrate with other NFS applications – GI tool, FACTS, (QA Analyst??) etc

9. Document Process – user’s guides, tech transfer
Current Status

- Documented basic functional requirements of ATIM
- Further develop vision and scope document about software requirements
- NIMAC will be working on prototype
  - Will evaluate what R1, R5, and R6 have done to summarize and analyze data
Questions / Comments

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