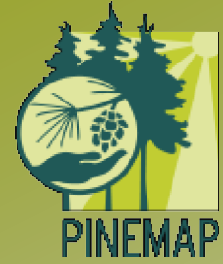


Decision Support System:

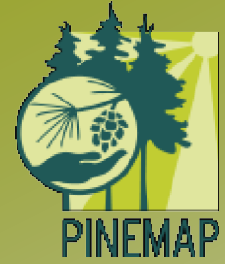
Connecting your research to decisions

Heather Dinon Aldridge and Ryan Boyles
State Climate Office of NC
NC State University
April 24, 2013



What is the DSS & what is it not?

- Goal of DSS: Web-based toolbox to help users make decisions while reducing risk due to climate, climate change, and other factors
- Builds on research outputs
 - not fully integrated
- Incorporates educational, extension materials



Initial DSS approach...

- Focus on identifying tools



These are drop down menu topics



Get Started

Advanced

Tools & Tips

PINEMAP
Concepts

Get Started → Stand Parameters: Location

Observation Time

- ◀◀ **Previous Day**
(Aug 26 at 4 pm)
 - ◀ **Previous Hour**
(Today at 3 pm)
 - Currently Viewing**
(Today at 4 pm)
- Most current ob (Today at 4 pm)
 Custom date/time

Location

- Use my current zoom level & location
- Zoom to a state Zoom to a county

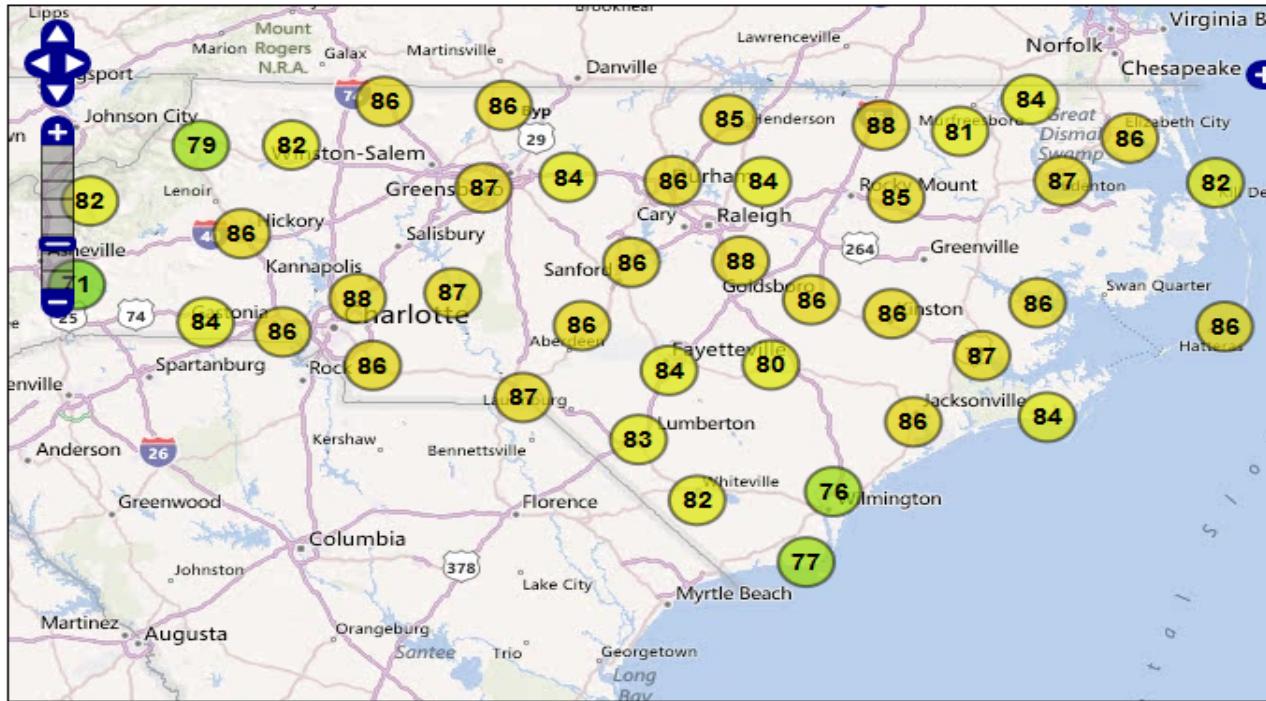
Point Data

- Show one parameter
Air temperature
- Show four parameters

Gridded Data

MPE: Diff. from normal precip.

Submit These Options



Air temperature (°F) -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

Pine Integrated Network: Education, Mitigation, and Adaptation project (PINEMAP) is a Coordinated Agriculture Project funded by USDA National Institute of Food and Agriculture.



Novice user – follow process

Basic User Start:

- About the Stand
- What You want to Do

About the Stand

- Location
- Soil / Weather
- Limitations
- New / Existing
 - If Existing - parameters

What Do You Want To Do?

- Establish New stands
- Improve Existing Stand

Establish New Stand

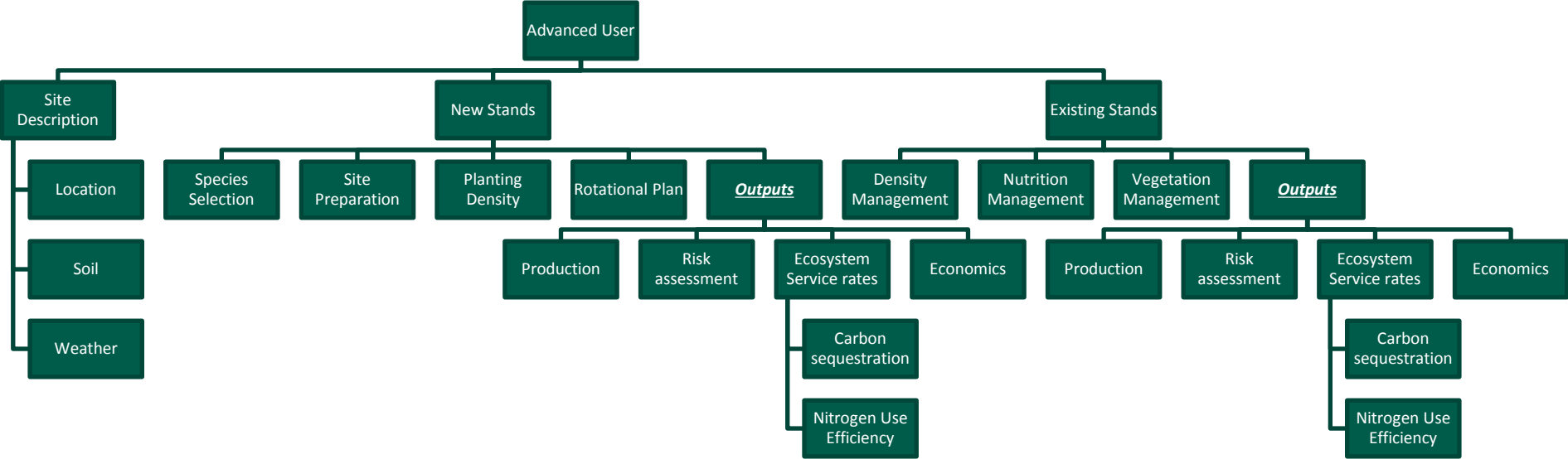
- Species selection
- Density
- Site Prep
- Soil Fertility
- Rotational Plan
- Output:
 - Production
 - Risk assessment
 - Ecosystem Service rates
 - Carbon sequestration
 - Other
 - Economics

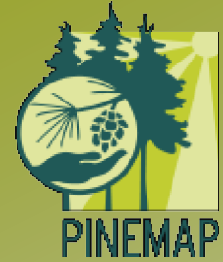
or

Improve Existing stands

- Density management
- Nutrition Management**
- Competition Control**
- Outputs**
 - Production
 - Risk assessment
 - Ecosystem Service rates
 - Carbon sequestration
 - Other
 - Economics

Advanced User – can skip around





Step 1: develop list of “tools”

- Mechanism: aim team meetings
 - At least one research highlight from each aim

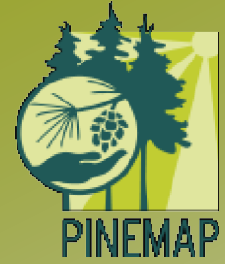
Conference call:

What can you provide??



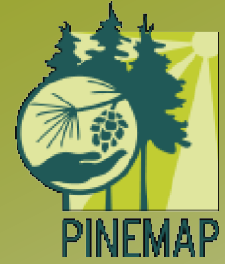
What do you need??





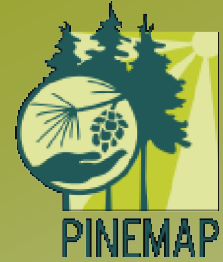
New decision process approach

- Built around types of decisions and questions from target audience



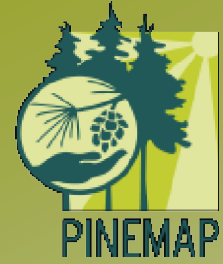
Step 1: clarify target audience

- **Professional foresters**
- **Specialized practitioner / land manager**
- **Landowner**



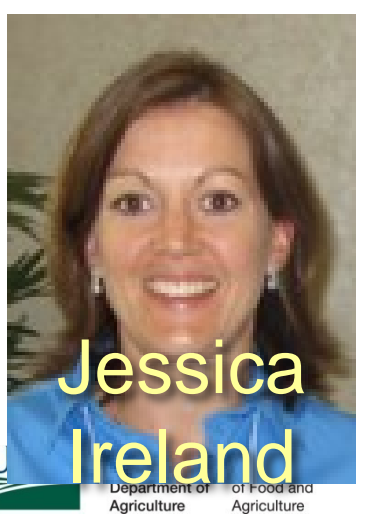
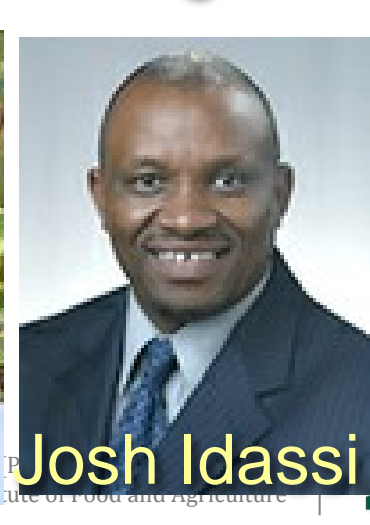
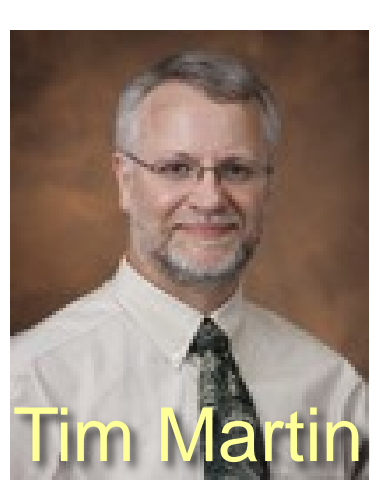
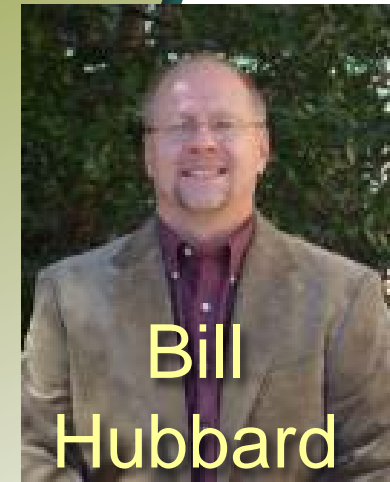
Who is our target audience? 2012

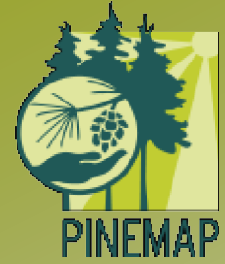
- Practicing forester & other natural resource managers
- Family forest landowners
- Corporate landowners
- Formal science educators (K-12, undergrad, graduate programs)
- Extension and other agency educators
- Policy makers



Step 2: identify decisions & questions of our target audience

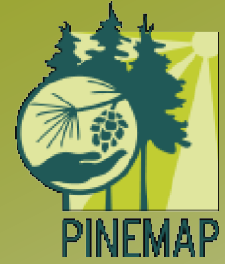
- Lead by Aim 6: Extension!





Side note: thanks!

- Brandon Hoover, PINEMAP data manager
- Darryl Outlaw, PINEMAP website



Step 3: how does research fit into questions/decisions?

- Initial round: DSS subcommittee and team conference calls



Tom Fox



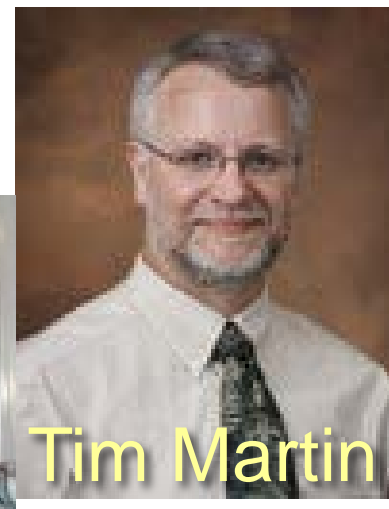
Mike Ka...



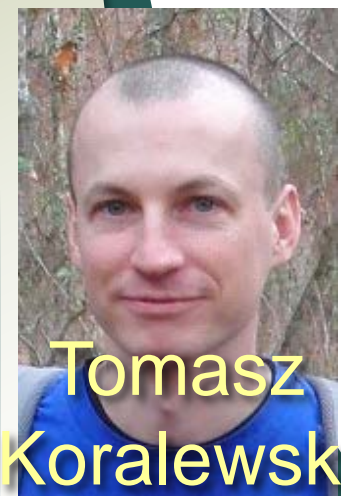
Steve...
Julty



R...
W...



Tim Martin



Tomasz
Koralewski



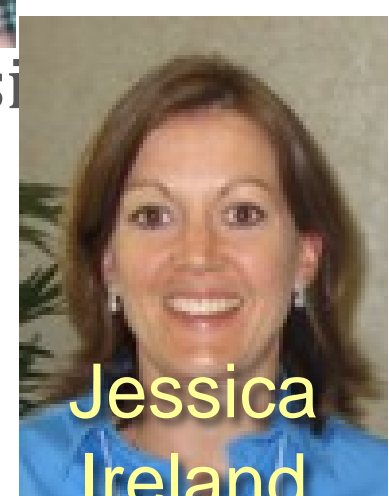
Tom
Byram



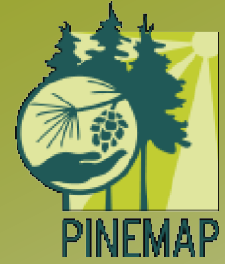
Ross
Whetten



Don
Grebner



Jessica
Ireland



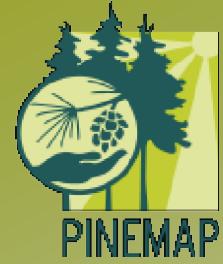
DSS website tour

Pine Integrated Network: Education, Mitigation, and Adaptation project (PINEMAP) is a Coordinated Agriculture Project funded by the USDA National Institute of Food and Agriculture



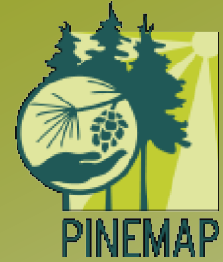
United States
Department of
Agriculture

National Institute
of Food and
Agriculture



DSS activity task

1. Identify research (PINEMAP or external)
 - a) Existing or planned
2. Identify tools (PINEMAP or external)
 - a) Existing or planned
3. Connect with questions/decisions
4. Add missing questions/decisions



Future of the DSS

Summer 2013:

- Incorporate new questions/decisions
- Link existing tools
- Follow-up with research/tool contacts

Fall 2013:

- Release prototype for evaluation (Aim 6)
- Obtain user feedback
- Build/integrate other tools