



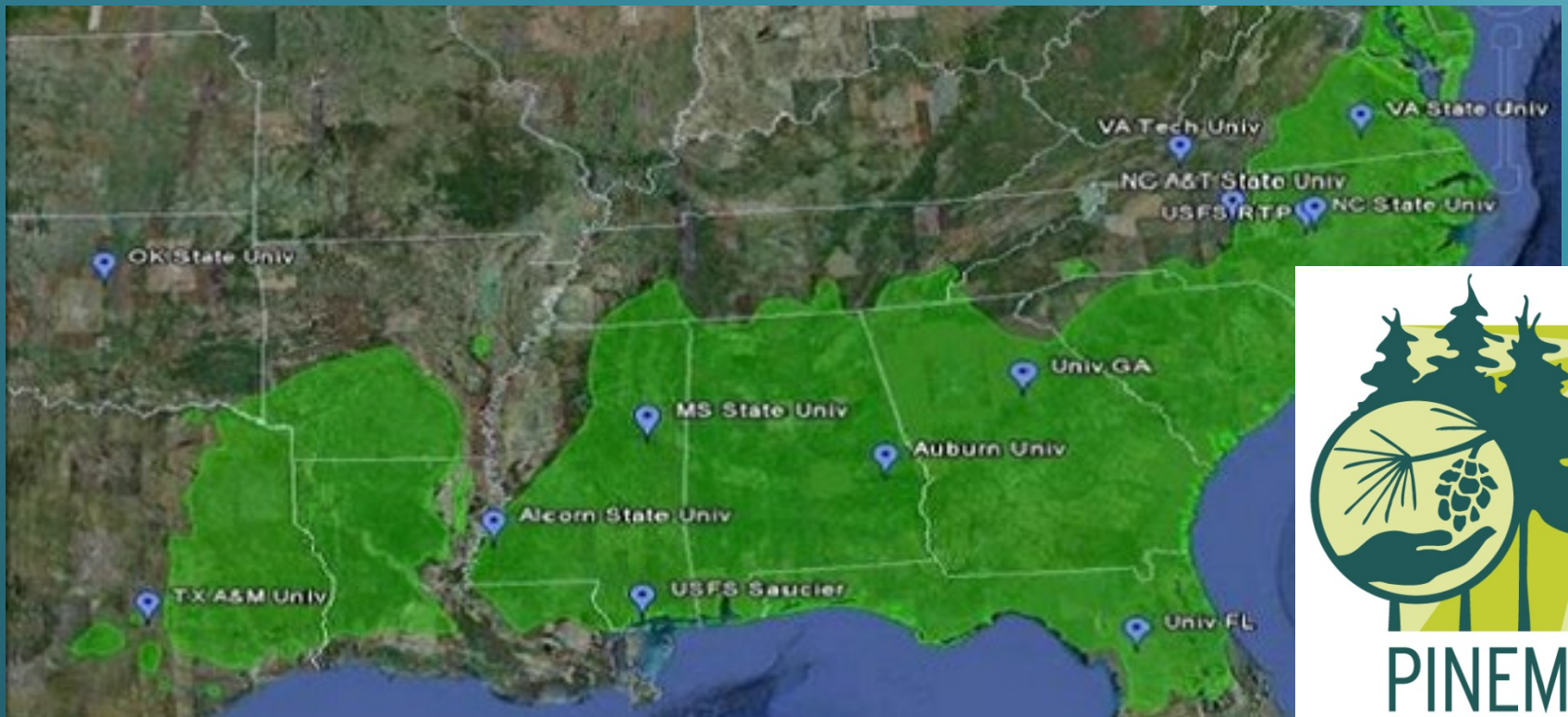
The PINEMAP Intern Program:

Integrating undergraduates into forest resource and climate change research, and education

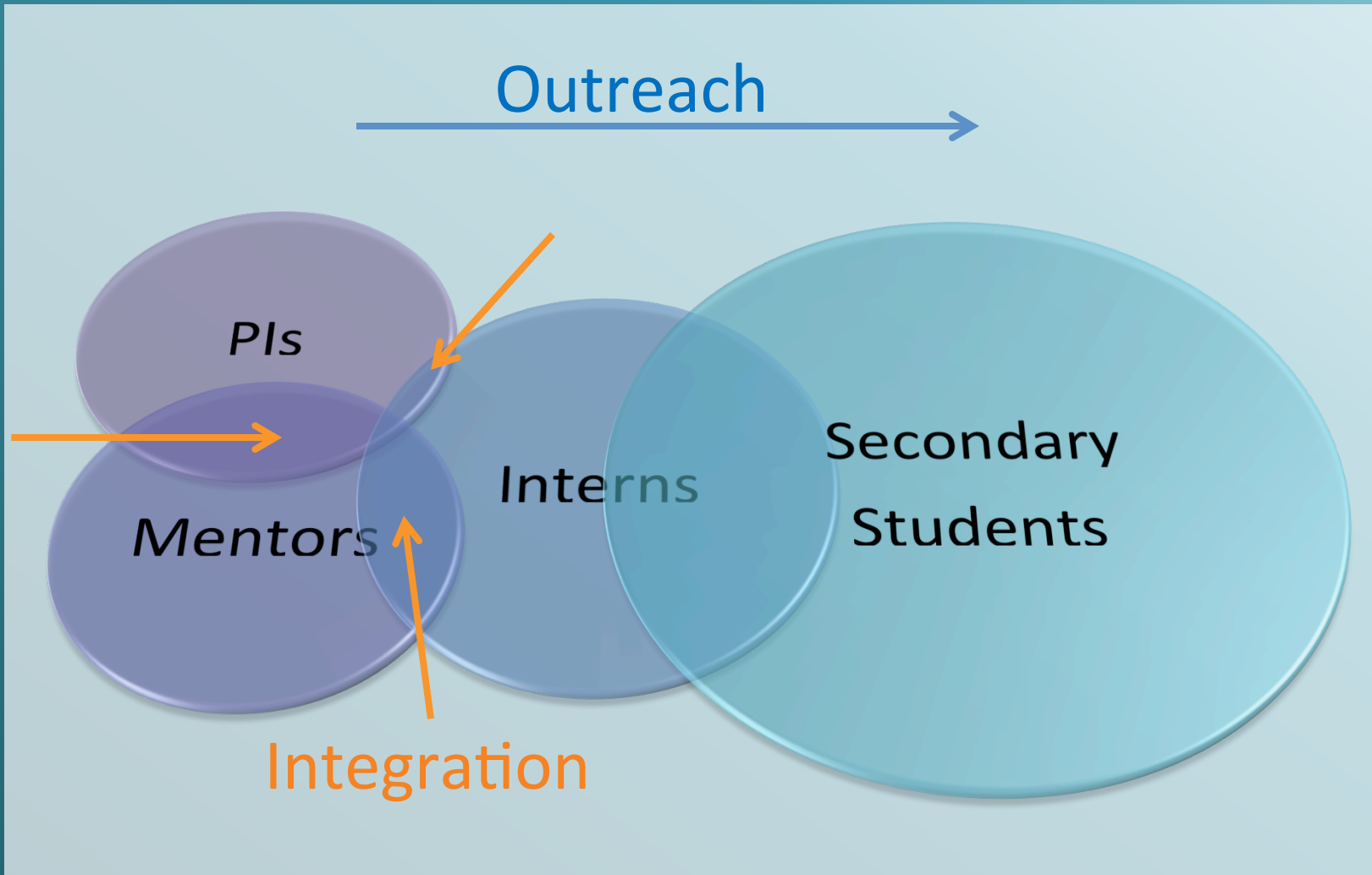
John B Kidd¹, John R Seiler¹, Martha C Monroe², Shobha Sriharan³

About PINEMAP

- Pine Integrated Network: Education, Mitigation, and Adaptation Project
- Coordinated Agricultural Project (CAP)
- Six research areas



Justification



Program Goals

1. Engage undergraduate interns in research and teaching
2. Develop and deliver inquiry-based science lessons
3. Convey value and relevance of southern forests and climate change

Marketing

- Two separate postings
 - Internship announcement
 - Call for proposals
- Eligibility Criteria
 - Undergraduates
 - Graduate students
- Distribution
 - Listservs, internal contacts, job boards
 - PINEMAP PI email



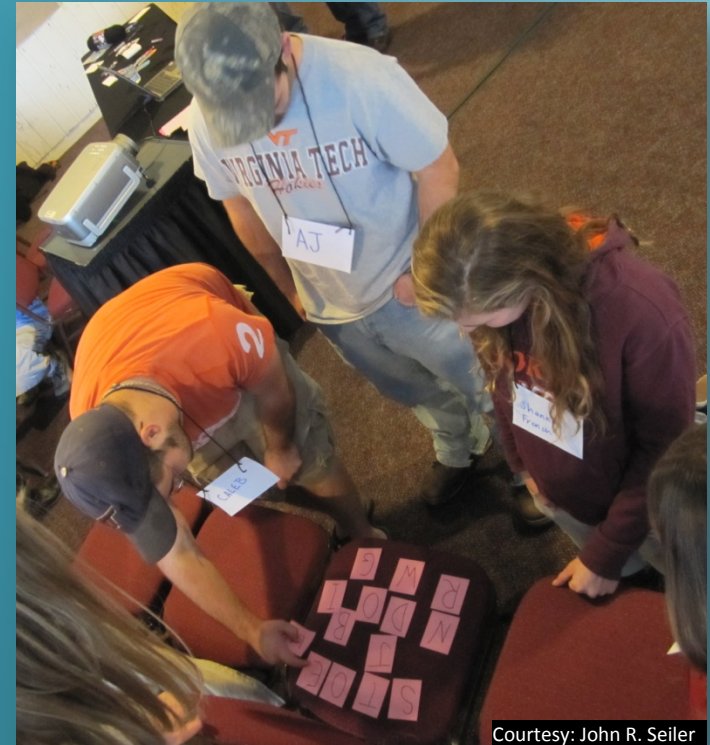
Application Process

- Applying
 - Online only
 - Fillable form PDF
- Application Data
 - Standard Resume Data
 - Interest Area
 - Personalized Data
 - Essay for interns
 - Proposal for mentors

The image shows two overlapping application forms. The top form is titled "PINEMAP Intern Program Graduate Student Micro-Grant Application" and the bottom form is titled "PINEMAP Intern Program Undergraduate Internship Application". Both forms include sections for Personal Information, Education, and Aim/Interest. The forms are fillable PDFs with various input fields and checkboxes. The top form has a deadline of January 20, 2012, and the bottom form has a deadline of February 17, 2012. Both forms include a "Submit" button and a note that required fields are outlined in red. The bottom form also includes a "Geographic/State Preference" dropdown menu. The forms are set against a blue background with a yellow and red horizontal line at the top.

Selection Process

- 2012 year = 6 interns*
 - 6 internships
 - 6 micro-grants
- Selection committee
 - Education Aim leaders
 - Program coordinator
 - PINEMAP PIs from other Aims



Courtesy: John R. Seiler

*Increases to 12, then 18 total in subsequent years

Program Awards

- Undergraduate Interns
 - \$4,800 stipend over 12 wks
 - \$2,200 housing and subsistence
- Graduate Mentors
 - Micro-grant
 - Intern assistant



Courtesy: John R. Seiler

Internship Logistics



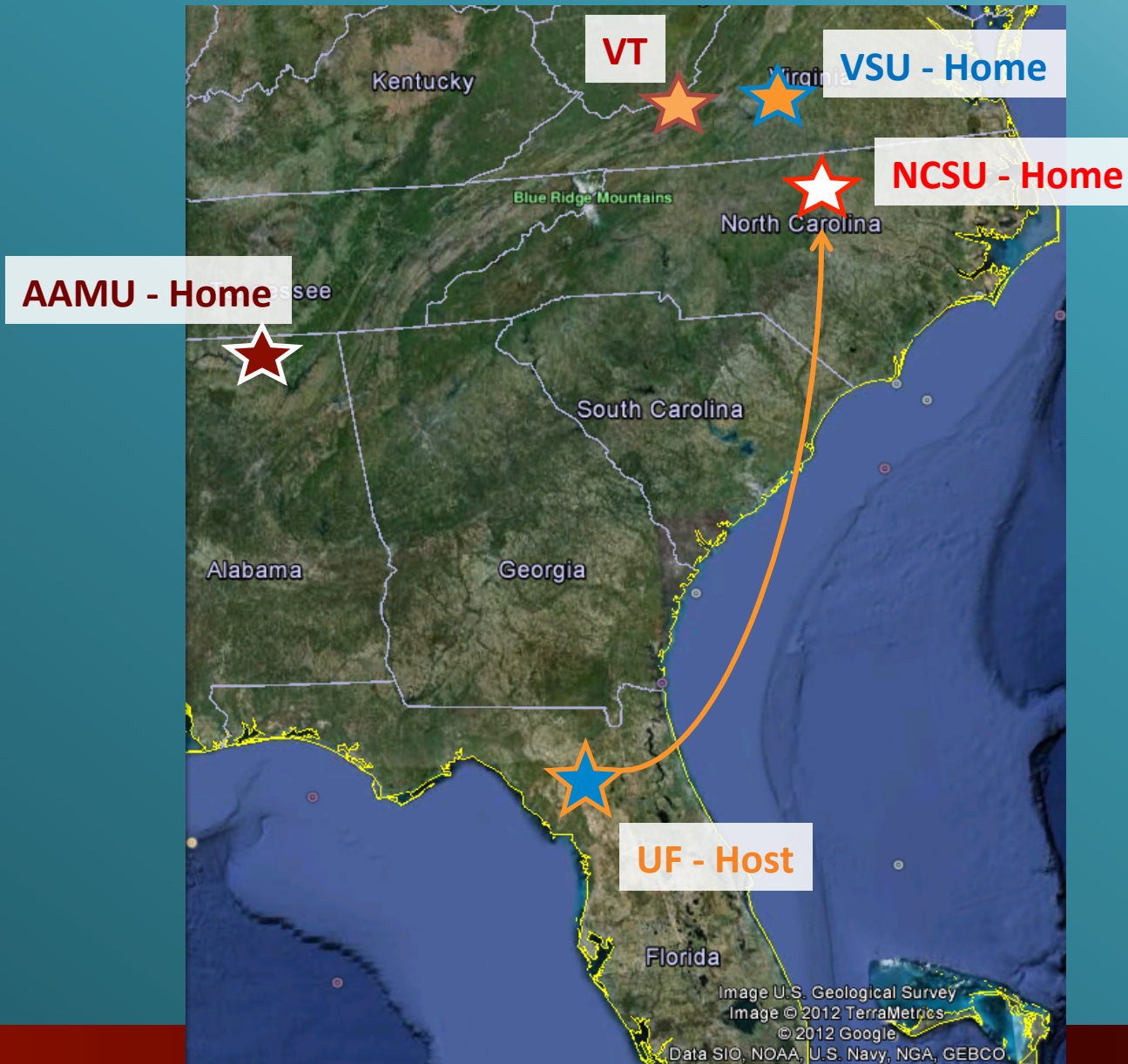
Summer Internship

- Field work
- Lab work
- Attend lab meetings, etc.
- Journaling
- Intern program meetings



Courtesy: John R. Seiler

Internship Logistics



Distance Course

- Distance-based Class
 - 3 Credits, Fall 2012
 - Independent study
 - Synchronously delivered
 - Twice per week in evenings
 - 3 units

Distance Course

- Communication Skills
- Education
 - SOLs
 - Inquiry-based learning
 - Science ed. pedagogy
- Journaling continued



Distance Course

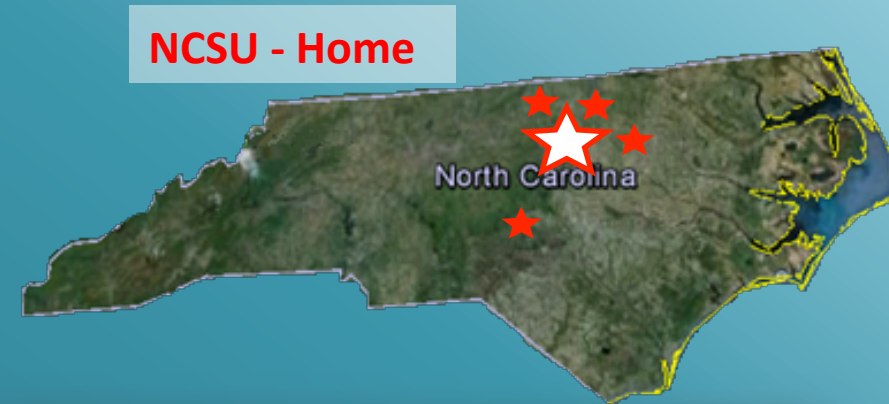
- Developing Presentations
 - Learning experience for secondary students
 - Focus on internship project
 - Hands-on component
- Preparation!
 - Mentors will help
 - Practice runs during class



Courtesy: Lindsey McConnell

Distance Course

- Presentation Deployment
 - Area public secondary schools
 - VT staff helps identify
 - Target Biology, Environmental Science
 - Multiple presentations
 - Presentation evaluations
 - Supervising teachers evaluate
 - Self evaluations



Courtesy: John R. Seiler

Expected Outcomes

- Interns
 - Increased understanding of scientific research
 - Enhanced skills
 - Research
 - Communication & Education
 - Service learning experience
- Mentors
 - Supervisory experience
 - Promote importance of research
 - Better prepared for post-doc, etc.



Initial Response

- Underwhelming
- 6/25 graduate students applied
- UG Responses
 - 1 undergraduate application as of 1/27
 - 2 as of 2/06
 - 7 applicants total



Courtesy: John R. Seiler

Program Evaluation

- Potential problems
 - Under marketing
 - 1st year grad students
 - Broken application process
- Improvements
 - Open up micro-grants to non-PINEMAP conifer research
 - Allow seniors to apply
 - Clarity on announcements
 - Increase recruitment in areas other than Aim 1

Conclusions

- Internship program for education/outreach
- Recruit interns into graduate studies
- Two components
 - Internship; focus on research
 - Distance class; focus on education
- Low number of applicants in year 1
- Evaluation to increase attractiveness and prospects

Questions



United States
Department of
Agriculture

National Institute
of Food and
Agriculture

Outline

- I. About PINEMAP
- II. Intern Program
 - A. Justification
 - B. Goals
 - C. Application Process
 - D. Program Components
 1. Summer Internship
 2. Fall Distance Course
- III. Initial Responses
- IV. Expected Outcomes
- V. Conclusions



PINEMAP Goals

Create, synthesize and disseminate knowledge enabling southern forest landowners to:

1. Harness productivity to mitigate CO₂
2. More efficiently utilize fertilizer inputs
3. Adapt management practices to increase resilience

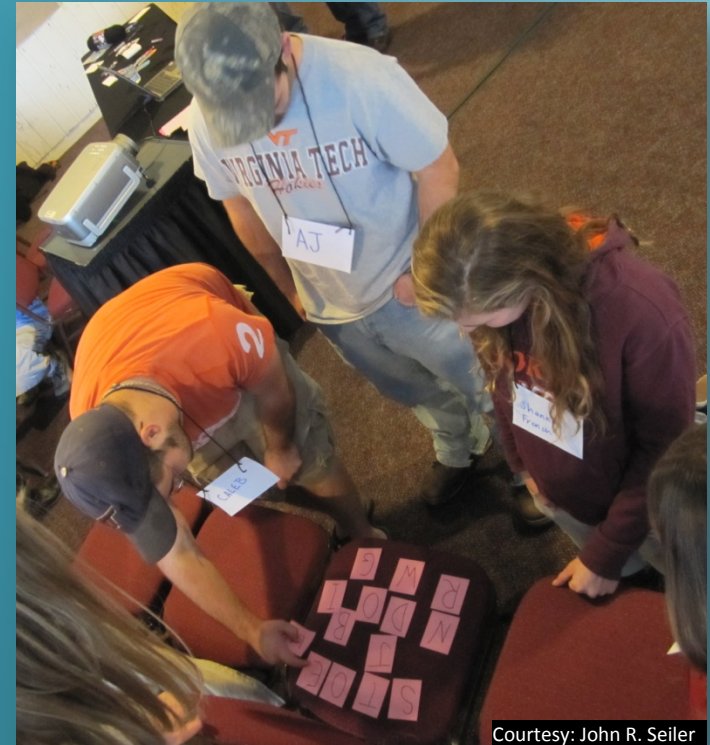
Education and Extension teams transfer research to stakeholders



Courtesy: Tim Martin

Selection Criteria

- Undergraduates
 - Application strength
 - Academic standing
 - Aim interest essay
 - Reference letters
- Graduate proposals
 - Thoroughness
 - Clarity
 - Consideration for interns
 - Indication of future involvement



Courtesy: John R. Seiler