Integration Platform Update and Journal Special Issue

All-Team PINEMAP Meeting

July 17, 2015

Pine Integrated Network: Education, Mitigation, and Adaptation project (PINEMAP) is a Coordinated Agricultural Project funded by the USDA National Institute of Food and Agriculture, Award #2011-68002-30185

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PINEMAP

Aim 5: Education

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Proposed Aim 5 Integration Paper

- Broad review of three projects: UG Fellows, Grad course, PLT module
- Useful ideas for others integrating research and education; spin will depend on journal
- Common dimensions led to success
  - Integrating education with core research/science
  - Making science relevant to learners in a variety of ways
  - Multidisciplinary and interdisciplinary activities
  - Integration with stakeholders, in project development or directly with learners
  - Building learner capacity in a variety of ways
  - Iterative process of program development (adaptive management)

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ATP: Undergraduate Fellowship Update

- 14 undergraduates in this cohort
  - 10 universities (3 HBCU)
  - Last offering, including both summer and fall course
- 12 PINEMAP mentors + 2 non-PINEMAP
  - AU, NCSU, TAMU, UF, UGA, VT, IUP, VCU
- 4 Aims (1,2,5,6)
- Find out more about their summer @:

  www.pinemap.wordpress.com
- Fall distance course will outreach to more secondary schools

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PLT Module Evaluation Update

- 32 teachers successfully completed all components of evaluation process
- Student data includes:
  - pre and post Knowledge tests - All 1960 scored!
  - pre and post Hope surveys - All 1954 entered!
  - pre and post Systems Thinking surveys- Currently being entered
- Also conducted 21 student interviews to measure systems thinking skills
- Hope increased significantly among all packages based on pre and post tests
- Knowledge surveys showed an average increase in scores for all 3 packages

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Genotyping Integration and Outreach

- Genotyping and genetic analysis results will be summarized in separate papers by individual students as studies are completed
- Integrative analysis will compare and contrast results across studies, probably during no-cost extension
- Outreach to stakeholders occurs through cooperative breeding program meetings and workshops; cooperatives are coordinating with stakeholders on development of genetic assays

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Sap Flux Team

- Data needed to make progress:
  - Hydraulic conductivity and cavitation vulnerability of branches and stems:
  - >Branches to be completed late August/early September
  - >Roots to be completed late October/early November
  - >OK: Casey (to be trained at Auburn or NCSU), GA: Lisa and Stan, VA/FL: Ed, Eric and JC
  - Water potential measurements:
  - >GA: diurnals of water potential continuing this year
  - >OK: mid-days 2012-2014
  - >VA: predawn and middays being collected this year (Ed has already done first date)
  - >FL: some measurements 2012-2013
  - >All sites will collect predawn and middays at least twice this year (2 trees per plot)

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Sap Flux Team

- Status of (lead) authorship discussion:
  - Lisa 2014-15 data from GA
  - Max 2012-13 data from FL
  - Duncan 2012-2014 data from OK
  - Ed will use some data from VA, to be combined with novel data from the VA site for dissertation
  - Eric will lead 2 cross-site papers on sap flux and hydraulics
  - Everybody who contributes data will be co-authors in a 'cast of thousands'
- Communication/ meeting mechanisms:
  - Monthly web meeting/ conference calls

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Sap Flux Team

- Outreach product:
  - Fact sheet based on synthesis papers about relationsip b/t fertilization and drought sensitivity.
  - Improved parameterization of WaSSI for fertilized conditions.
  - Eric will organize efforts by the “cast of thousands” for fact sheet and work with Ge Sun on WaSSI
- Delivery anticipated:
  - Immediately post-PINEMAP or summer of NCE year.

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Soil Respiration

- Asko to convey verbally

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Tier II regional analysis

- Data/inputs needed:
  - Continued Qa/Qc; smoothing out the database
  - More detailed information from cooperatives on past treatments (timing) (Jason)
  - Ongoing analysis (soil properties from Virginia Tech and meta-data integration)
  - Qa/Qc from Daniel Markewitz (inter-lab comparison)
- Authorship discussion is ongoing
- Communication via Adobe Connect, in-person at SAF meeting in Baton Rouge

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Tier II regional analysis

- Outreach products:
  - Pamphlet highlighting where C pools are found in a managed forest ecosystem, Allan Bacon to interact with Leslie
  - Contribute to validation of aboveground (tree biomass, forest floor) component of DSS(?); Forest floor (Rosvel, Jason, Carlos)
  - Soil C change validation by treatment with DayCent (who will do this and should it be in DSS). Wade will be intially responsible, but we are going to wait to see how this develops
- Delivery anticipated as a March 2016 paper with outreach products produced concurrently

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Regional Modeling

- placeholder

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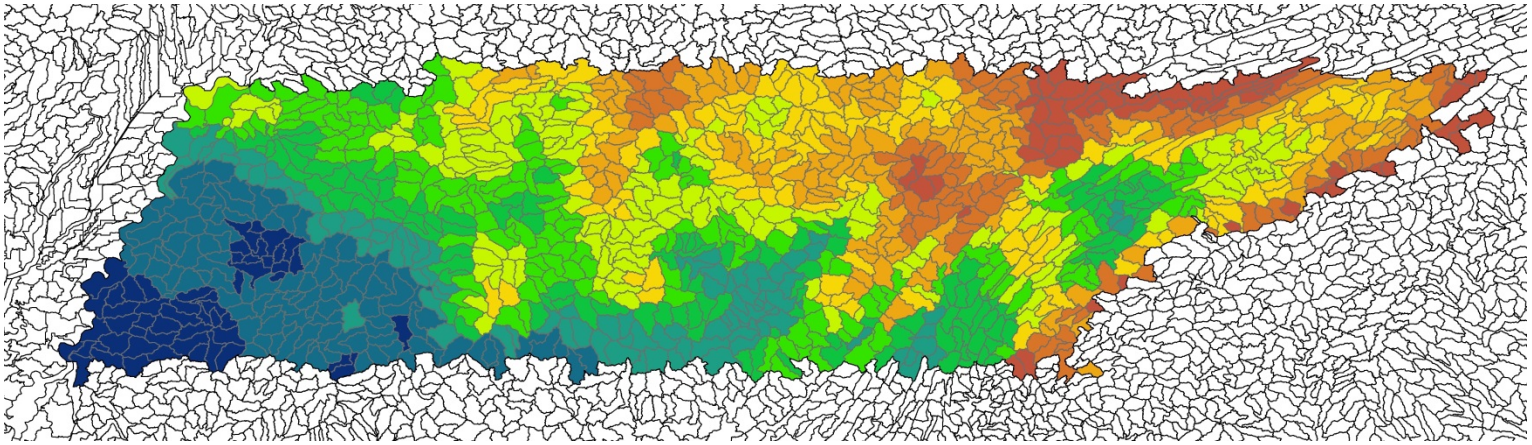
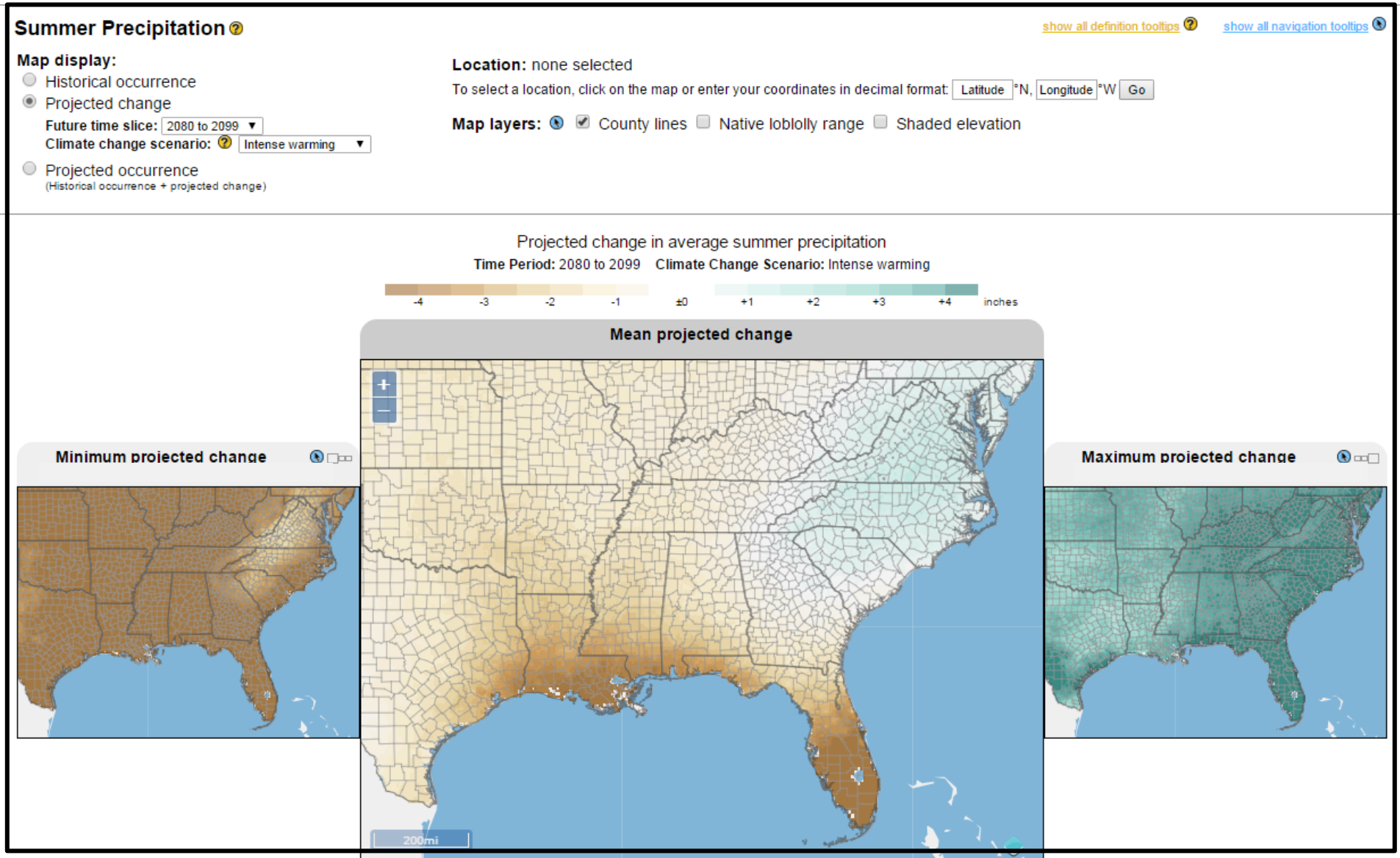
MACA/DSS Status Update

- Regional modeling
  - 3PG and G&Y (East Coast done)



- Climate risk and opportunity tools
  - 3 tools are almost ready for beta testing (alpha now)
  - Updating time series from box-and-whisker to bar chart with error bars

- Climate risk and opportunity tools continued…
  - Generating number of days <28F, <25F, <20F, and <15F
  - Summer average precipitation and future changes



Outreach Team

- Verbal report?

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Special Issue Journal Discussion

Time permitting

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