### **Communicating with and Informing Farmers and Food System Stakeholders**

- These notes were labeled as important
  - Collaboration for actionable knowledge for changing climate
  - To address needs of farmers for better understanding their system. To understand priorities of stakeholders. To reach large numbers of clients or stakeholders. To translate science to action.
  - What needs addressed
    - Common understanding/ language for isssues
    - Understand the problems with stakeholders farves
    - Funding opportunity to work along
    - Collaboration access discipline
    - Inventive for
- What needs to be addressed within this action item?
  - Stakeholder engagement
  - o Prioritizing stakeholders
  - Modelers
  - Establish or connect with existing stakeholder organizations or CC. e.g., SWEDs,
     commodity comm. Input suppliers, crop consultants, government agencies, rall political support for user-vased tools to increase financial support.
  - Need to establish a reward system that recognizes and promotes engagement with various stakeholders/communities
  - Work with, extension, NRCS, private consultants.
  - Effective way/channel for communicating information. Involving farmers and stakeholders in planning and implementations (strong participatory platform).
     Researchers-farmers on collaborative efforts.
  - Identify importance to modelers what is in it for them?
  - O How do we get grower participation on this issue?
  - How to effectively involve stakeholders
  - Engage producers in the research to develop solutions. E.g. on farm research.
  - Reaching to farmers. Scientific community collaboration. Participatory research to collect "real data." Include wider range of environments and geographic location.
  - Describe how models (climate) and modelers currently interact with end users and decision makers.
  - Are all stakeholders equal?
  - o How do we address the issue of heterogeneity among farmers?
  - Are same tools available to all stake holders or personalized?
  - Describe how modelers currently want their products used and describe how users would like to use models.
  - Input from farmers and food system stakeholder about what actions and approaches they want to see.
  - Real world examples of farmer-researcher partnerships in this area.
  - Develop continuum between mechanistic models that can be used to understand climate change impacts and more empirical site-specific decision-support tools. Engage

- stakeholders in the process of creating this 2-way interaction between mechanistic large-scale and site-specific models.
- Bring stakeholders into the model development process from the very beginning. We can use them to prioritize which aspects of the model to develop first, how much sophistication, etc....
- Increase capacity to understand and analyyze different stakeholder or client needs/incentives. – methods? – tools?

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- Establish trust
- Develop a community of practice where we can learn from each others methods, skills, strategies, that work in diverse contacts.
- Develop a roadmap that can be used to guide various scientists and others in effectively engaging in partnerships.
- Find a common language
- Funding disparities
- o Incentives for making partnerships work. (for farmers, ranchers, for scientists)
- Time expectations
- Resources for transdisciplinary science
- o Technical assistance for those of us trying to bridge the modeler-farmer divide.
- Why is this action item important/why should it be addressed?
  - o Feedback and improvement mechanism (the learning part). Empower others.
  - The purpose of doing research on climate change is to create actionable knowledge.
  - O I would like to have grower input on my research- what have I missed? What do they want to know?
  - o What are the farmers' priorities in terms of research questions/problems?
  - Communicating grown not driven research, user level communication, collaborating partners "collaboration for actionable knowledge." (for climate change), "synergy" stakeholders –farmers –modelers – data people. Qualifier. Climate change – for adaptions.
  - This is important because adaptation by producers will come from trusted information sources.
  - -practical solution demand derive model (farmers need to address risk with respect
    to climate change) translate science to action climat soil model how to convince
    farmers on model farmers don't believe model? collaboration approach with
    farmers. science relevant to decision makers stakeholder inform farmers in front
    line.
  - Service
  - o To address the needs of farmers through better understanding their system
  - Complexity requires input from multiple decision makers on the ground. "70% of women are farmers in Africa"
  - Translating science to action
  - Fostering communication and understandin between farmers, farm advisors, researchers, creditors, ..... absolutely critical to create durable solutions.

- The only way to reach large numbers of clients or stakeholders. Convert data into knowledge that can be used. Without sharing "it" does not exist (and can have no impact)
- Help farmers with actionable knowledge to adapt to climate change.
- o To date, model development has not been adequately driven by demand.
- o Solutions without implantation was twice used anywhere. Language and trust critical.
- I want to know what matters to people.
- informing farmers help them use up to date available technologies for better farm decision. – Informed stakeholders can update their resource use and decision making. – research/knowledge that is not informed to farmers/stakeholders do not add value.
- We need to know what are farmers' risk perception with respect to climate change?
- Identifies priorities targeting research promotes impact and adaption. Engages various stakeholders thereby developing a "richer picture" of the situation for all involved. Builds trust among interested groups (potentially) will provide more meaning and results. Will create synergy and capacity to learn more quickly and recognize issues respond more knowledgably. accelerate adaptive management. provides more and more meaningful options (tools in the toolbox)

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### o Row 1

- Intergenerational learning
- Builds communities
- Spreads out cost of change
- Makes intentional/desirable systemic transformation more likely
- Reduces likelihood of maladaptation
- Engages people who can make change happen
- Optimizes freedom CAS
- Builds leadership in rural communities
- Ensures ownership of ideas minimizes blame, 2 head better than 1
- Maximizes innovation and creativity

#### Notes

- Adaptive capacity is site specific
- Are paradigm shifts possible?
- To practically implement empirical field research. Find out what is possible to implement quickly and over large area.
- What are good techniques to interact with other stakeholders. Break down "caneuaoe" barriers and misconceptions between "siloed" groups.
- Need climate/weather models to inform SS management policy and research priorities. – farmers don't trust models. – how to change/convince them. – Need rotation markets with alternation crops. – develop win-win-win scenarios for short-intermitent. –sustainable scale time frames to drive change of systems. – need system with models for inputs=storage-trans p. -markets
- To learn about the nuances of each context (place) and learn the changes being experienced.

- -Stakeholder input will improve science (relevance). Increase effectiveness of tech transfer and outreach. Generate a forum for gathering new/novel approaches to adaptation/mitigation. \_Establish a mechanism for increasing input from social/community perspectives. –farmers/ranchers are on the "front line" of climate change adaptation. We owe them a partnership/collaboration approach.
- Understand what are data needs/tool needs of decision makers. Realistic assumptions for models: increase in realism. Vetting of modeling results.
- Our scientific work needs to be ground-truthed by grower: are we working on solution that can be used?
- To learn about the contexts where decision makers (farmers) have to adapt.
- Collaborations to be build trust are necessary in risky and vulnerable context: will impart use of informant.
- Science that is relevant to decisions. buy –in from the decision makers. –
  increase use of scientific knowledge. increase local data for scientific inquiry.