BioEarth

Biosphere-relevant earth system model

2013 BioEarth Stakeholder Advisory Meetings

-Meeting Objectives
-Review of discussion questions to be posed to stakeholders

Stakeholder Advisory Group Process

Stakeholder advisory group members represent diverse perspectives on agriculture and forest land management in the Pacific Northwest

2013
Nitrogen and Carbon Management
Water Availability

2014
Water and Air Quality
Forests and Rangelands

2015
Continuing communication of model outputs, model refinement based on stakeholder input

Stakeholders Attending Feb 27 & 28 Advisory Meetings in Seattle

EPA	Washington State Department of Agriculture
Snake and Columbia Irrigators Association	OSU Forestry Extension
Natural Resource Conservation Society	Climate Trust
Stockholm Environmental Institute	Columbia Basin farmers
UI Forestry Extension	National Parks Service
Washington Organics Recycling Council	WA State Water Resources Association
Ferry County Tribal WSU Extension Liaison	Spokane Regional Clean Air Agency
Aspect Consulting	Berkeley Forestry Extension
WSU/USDA	Oregon Department of Agriculture
Idaho Water Resources	American Rivers
Department of Natural Resources	Washington Department of Ecology
American Farmland Trust	McGregor Company
Washington State Dairy Federation	Resource Conservation and Development Council
University of Idaho	Climate Solutions

Goal: Gain insights into 3 key questions

I. What are current problems of concern (environmental, economic, resource availability)?

II. What questions do stakeholders have about future changes (climate change impacts, effects of alternative practices), and what information would aid in making better decisions?

III. What are people's highest priority questions and information needs?

- Suggestions for modifications to the discussion questions for stakeholders?

- Plans for stakeholder advisory meeting evaluation and continued research on stakeholders' and researchers' perceptions of the process

- Plans for reporting findings to the BioEarth research team

- Connecting with WISDM stakeholder engagement efforts

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Communications Research Update

Studying ourselves – documenting the evolution of PIs perceptions of stakeholder engagement.

Allen, E, C Kruger, FY Leung, JC Stephens (submitted September 2012). Diverse Perceptions of Stakeholder Engagement within an Environmental Modeling Research Team. *Journal of Environmental Studies and Science.*

Studying engaged stakeholders – documenting evolution of stakeholders' perceptions of utility of modeling and engaging with modelers/scientists

Surveying stakeholders before and after stakeholder advisory meetings

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Growing Relevance/Importance of our work

- Severe underutilization of climate models as tools supporting decision-making – a usability gap in climate information

RECOMMENDATION: Several high-profile important papers:

Weaver, C. P., Lempert, R. J., Brown, C., Hall, J. A., Revell, D., & Sarewitz, D. (2013). **Improving the contribution of climate model information to decision making: the value and demands of robust decision frameworks.** *Wiley Interdisciplinary Reviews: Climate Change, 4(1), 39-60.*

Lemos, M. C., Kirchhoff, C. J., & Ramprasad, V. (2012). **Narrowing the climate information usability gap.** *Nature Climate Change, 2, 789-794.*

Call for a Paradigm Shift

Complexity/uncertainties in both earth systems & human decision-making

Paradigm 1 : predict-then-act

Figure out best-guess future and design best policy for that future

Guiding Question: What is most likely to happen?

Prediction-based paradigm places unrealistic demands on modeling and climate science and artificially limits use for supporting real decisions

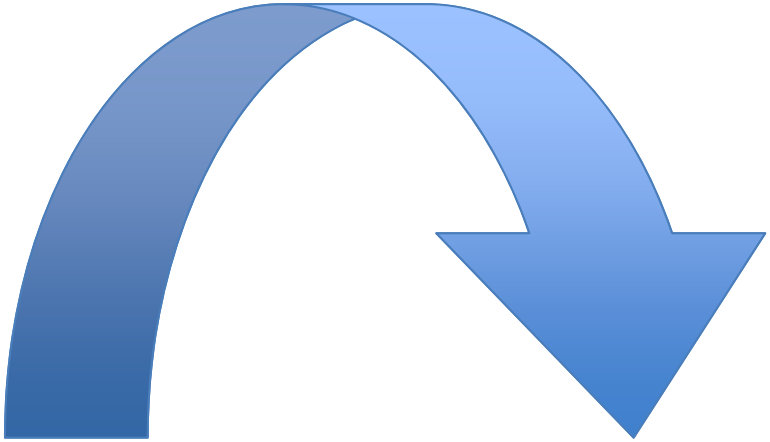
Paradigm 2: Seek Robust Solutions

Identify greatest vulnerabilities across range of possible futures (different scenarios) and identify suite of policies that perform reasonably well across the range

Guiding Question: How does the system work and when might policies fail?

Weaver et al 2013. **Improving the contribution of climate model information to decision making: the value and demands of robust decision frameworks.** *Wiley Interdisciplinary Reviews: Climate Change, 4(1), 39-60.*

Call for sustained processes of close interactions among knowledge producers & users



Paradigm 1 :
focus on products

Paradigm 2:
focus on process

Lemos et al 2012. **Narrowing the climate information usability gap**. *Nature Climate Change, 2, 789-794.*

Stakeholder Advisory Group Process

Depending on relationships developed during initial meetings…

-We may want to broaden or expand scope of stakeholder engagement

- We may want to work more closely with a specific sub-set of stakeholders

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