

Appendix 4: Question evaluation survey and consent document.

Intro 1 - Survey Information

Thank you for agreeing to complete the survey below.

In an effort to to elevate awareness of Coupled Human and Natural Systems (CHANS) research and prioritize future scientific efforts for CHANS research, we asked CHANS-Net members in a previous survey: "What are the transformative questions to address in order to have the biggest impact on understanding and managing coupled human and natural systems?"

The following 20 questions were randomly selected from the questions received from CHANS-Net members. For each question listed, please indicate how important you think the question is to advancing understanding and management of coupled human and natural systems (CHANS). This survey should take approximately 10 minutes.

Regarding privacy and confidentiality of responses, your individual responses are anonymous and will not be shared with anyone else, in publications, or in presentations. Furthermore, your participation is voluntary. You may refuse to participate in certain questions or discontinue your participation at any time without consequence.

If you have concerns or questions, please contact Dr. Daniel Kramer at the Department of Fisheries and Wildlife at Michigan State University (dbk@msu.edu, +1 (517) 432-2199).

If you have questions or concerns about your role and rights as a research participant or would like to register a complaint about this study, you may contact the Michigan State University's Human Research Protection Program (517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu).

You are providing your voluntary consent to participate in this research by beginning the survey below.

Thank you again for your time and thoughtfulness.

CHANS Question Importance

How can we anticipate and adapt to novel conditions in response to climate change and demographic pressures?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How is ecosystem resilience changing with changes in climate, land use, and land cover?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do people best adapt to climate change?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What explains resilience in CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What essential 'rules' are most important to understand in various complex adaptive systems that being managed?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there general CHANS principles that tend to produce similar human adaptation processes for a variety of global change drivers (e.g., climate change, globalization) despite local context?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do natural resource institutions influence the adaptive capacity of coupled systems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we learn about ecological boundaries before we cross them, and adjust our human systems to avoid irreparable damage?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What self-organizing and managing parts are necessary in CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What factors positively contribute to reducing the impact of the global market system that erodes resilience of social-ecological systems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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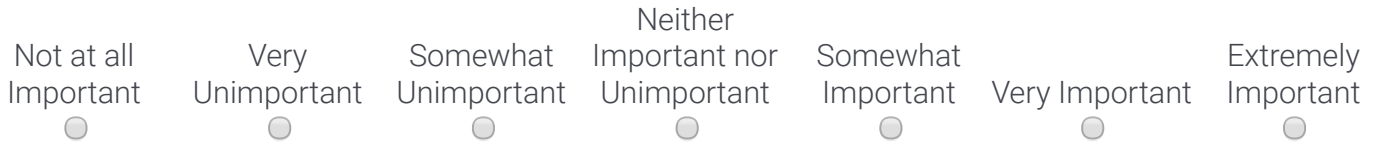
What is the plasticity (ease of change) and elasticity of major human drivers of environmental change?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor	Somewhat Important	Very Important	Extremely Important
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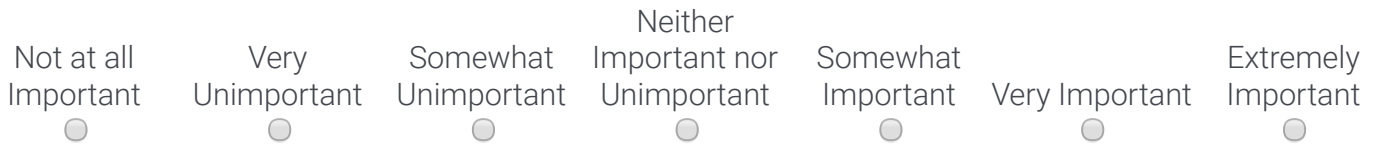
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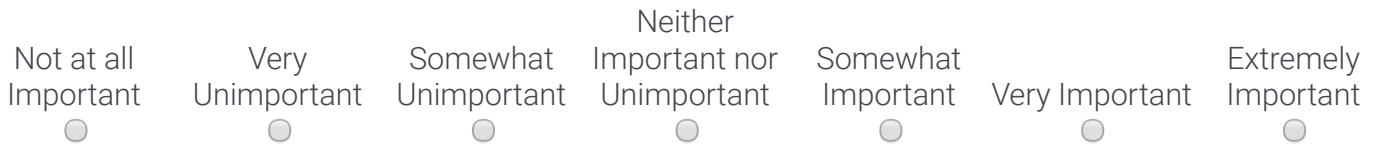
How rapidly can humans adapt to environmental change?



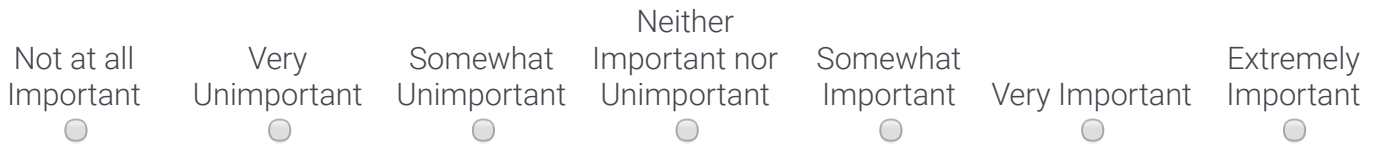
How can we best use the reciprocal nature of CHANS systems to support resilience?



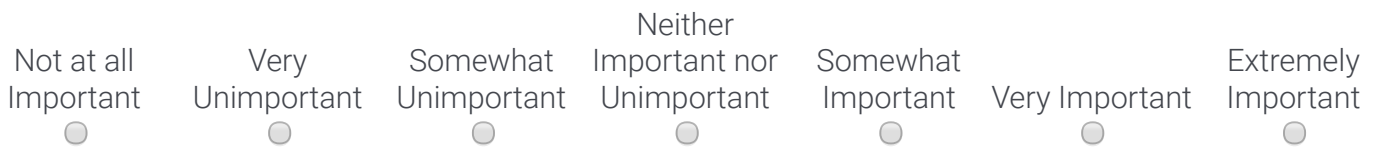
How can people adapt to changing system behavior while still getting what they need from the system?



How can we "unresilience" bad system dynamics while enhancing "good" dynamics?



How do humans increase their capacity for adaptation to global environmental change?



How can water management be improved to decrease scarcity, increase security and make the system less vulnerable?





What determines how people in the role of decision-makers value the environment?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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How do you best value natural resources especially when there is great uncertainty regarding environmental change?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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How much has economic valuation of natural resources helped in protecting natural systems from destruction and over-exploitation?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do humans respond similarly to general classes of ecological processes (e.g. linear, non-linear, slow, fast, threshold) despite local context (ecological, political, socio-economic)? Are there general CHANS principles?

Neither

Not at all important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the economic trade-offs in multiple-use management of natural resources?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we best use incentives to manage CHANS?

Not at all	Very	Somewhat	Neither	Somewhat	Very Important	Extremely
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Important Unimportant Unimportant Important nor Unimportant Important Important

How can we deal with externalities of human activities?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How can the importance of long-term consequences be weighed into decisions on human impacts on ecosystems?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do we mobilize individuals for collective action?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What is the perceived value of the cost or benefit of management of climate change and land use change?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What are the drivers of human decision-making regarding land use/land cover change and natural resources?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do we move from proxy variables and simple models of human behavior toward direct measurement?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do we integrate social science to understand individual and group behaviors and values and how they scale up in coupled human-natural systems?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What steps will result in incorporation of market externalities without causing large negative impacts on significant segments (e.g. low-income) of society?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

Why do people ignore what's in their best interest even when they know that it is in their best interest?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What influences human behavioral change towards natural systems?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do humans perceive and respond to natural systems?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How can human incentives be better aligned with their spatially and temporally removed impacts?

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What are the most effective ways to model human behavior and decision making?

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How do values influence human behavior in regards to natural systems?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How much of human action, and the ways that humans couple with natural systems, stems from intrinsic (e.g., preferences and values) vs. extrinsic factors?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

Where do individuals obtain information about the natural environment and their impact on it, and how do they evaluate the reliability of that information?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How does human learning at the individual and group level affect the interaction of coupled human and natural systems?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important



How does uncertainty of CHANS affect human decision making?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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How do human responses to change alter the environment?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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How can we deal with issues of discounting?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the neurological explanations for behavior in CHANS?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the behavioral explanations for why people use resources one way in one place, but a different way in another place?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do people respond to predictive indicators of environmental stress?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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What are the tipping points in CHANS due to climate change?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Under what conditions do people exhibit limited or strong ability to respond to the (anticipated or observed) effects of climate change?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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How can conservation of natural systems provide resilience of human systems to impacts of climate change, such as extreme weather and rising sea levels?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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How does climate change affect ecosystems and biodiversity?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do humans best mitigate climate change?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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How will spatially differential climate change impacts affect local, national and international policy responses?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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What are the human consequences of anthropogenic climate change, and how will those human consequences further shape coupled human natural systems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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What are the socioeconomic effects on local communities of shale gas energy development in interior natural areas?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the long and short term socio-economic impacts of contaminated ecosystem mitigation due to Hydraulic fracturing processes?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How does climate variability and water resource accessibility affect population growth and distribution?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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How are the forces of globalization and climate change interacting?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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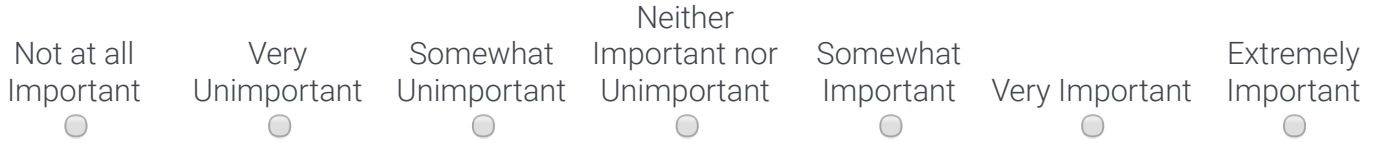
How do we address the complex interlinkages between rural livelihoods and natural resource use in the face of climate variability?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor	Somewhat Important	Very Important	Extremely Important
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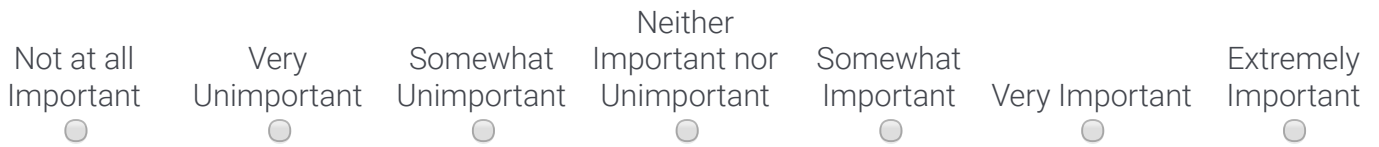
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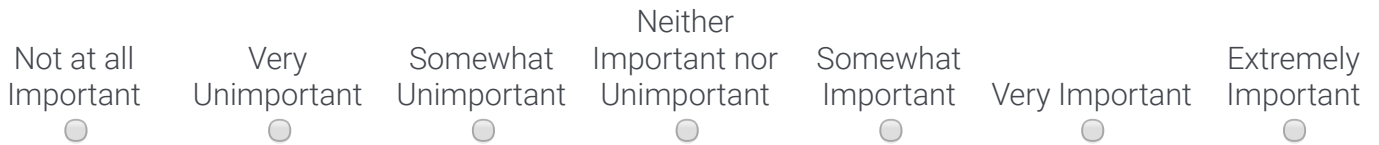
How can an environmentally sustainable energy system be constructed within existing institutional frameworks?



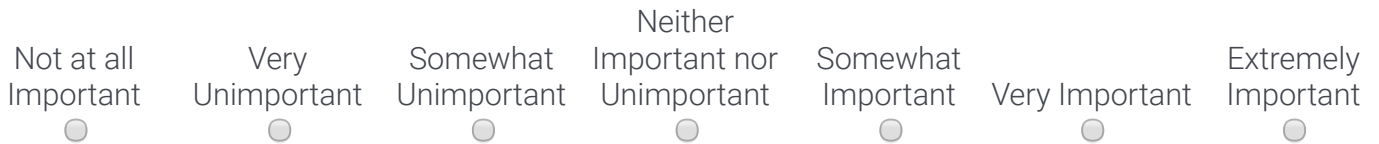
How can climate change adaptation and mitigation be integrated?



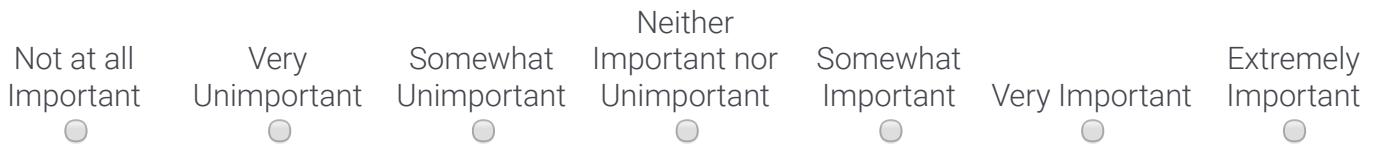
How can scientific results in climate be used to address CHANS research?



How can we protect the glaciers, highlands and the local population from opencast mining?



How can sustainable ecosystems that are resilient to change and provide ecosystem services for humans be built or managed?



What is the best way to get communities to pay for ecosystem services with little history of doing so and where enforcement is weak?



Important	Unimportant	Unimportant	Important nor Unimportant	Important		Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How does one promote human awareness of the CHANS basis for human livelihoods?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we measure and account for ecosystem services in decisions and connect this to policy-making agendas?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the population dynamics in ecosystems that are heavily impacted by humans?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can natural processes (i.e. ecosystem services) be integrated into human-dominated landscapes?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do various types and patterns of land uses relate to patterns of biodiversity?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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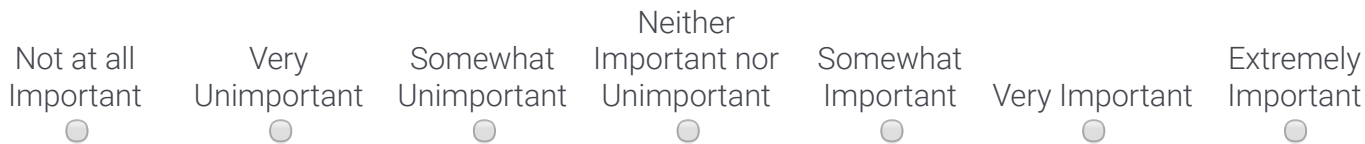
What tools can measure various ecological services with economic currencies?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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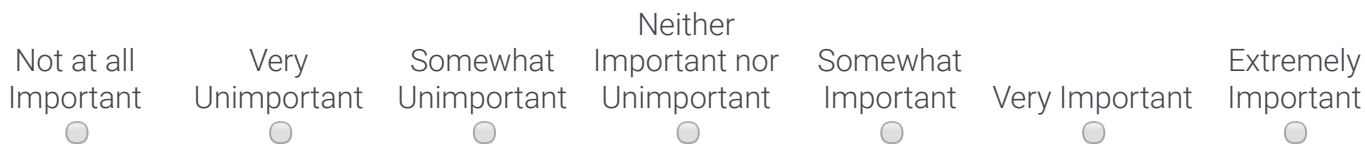
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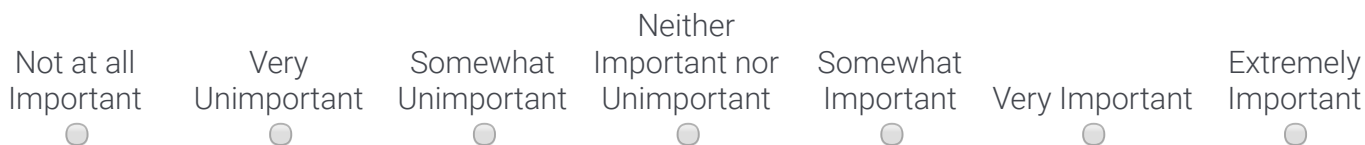
How can the ever-increasing natural resource needs of communities be balanced with the needs of wildlife?



What are the linkages between ecosystem services and human well-being?



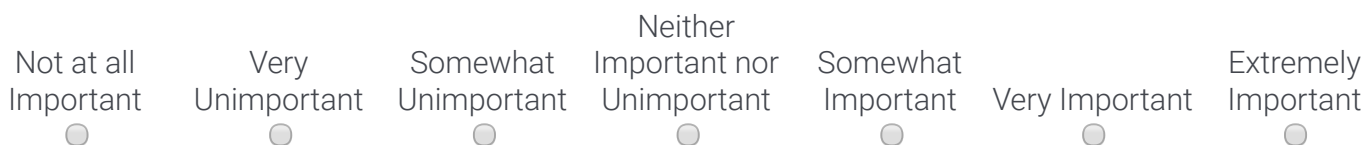
How can we enhance ecosystem services while reducing negative anthropogenic effects?



How do we improve connectivity of wildlife habitat across the landscape?



How can social systems and natural life sciences better interact to stop species loss?



What is the degree of the success of urban biodiversity conservation in major cities of the world?





How will the benefits provided by nature and the persistence and distribution of species change in the future?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can society better control the spread of invasive species that endanger agricultural and native ecosystems?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we design protected areas that are both biologically effective and socially just?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How should we evaluate biodiversity for human needs?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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How does upstream degradation affect downriver ecosystem services delivery?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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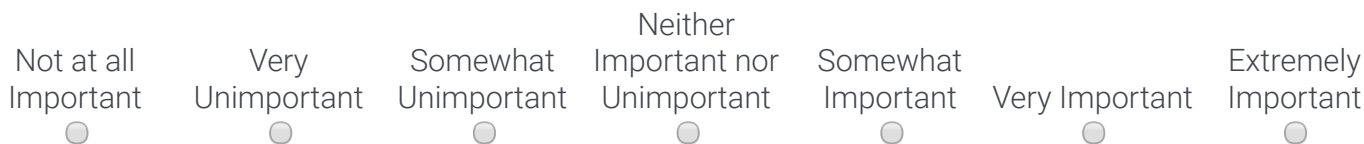
What is the relationship between ecosystem services and function in human dominated systems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor	Somewhat Important	Very Important	Extremely Important
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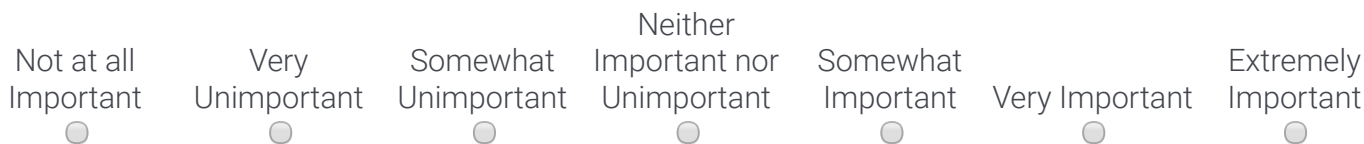
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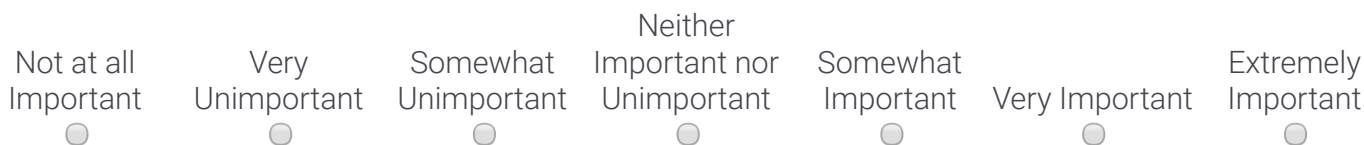
How can trade-offs among ecosystem services be quantitatively assessed to optimize ecosystem functioning and human livelihoods?



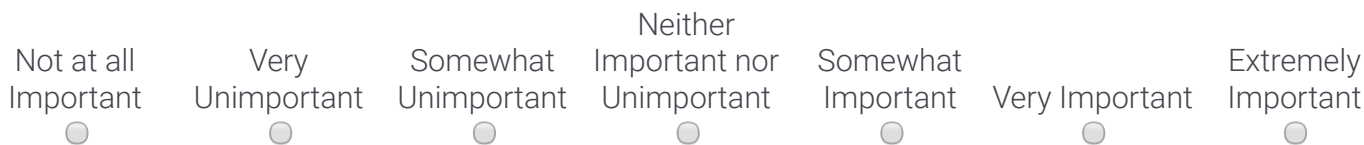
How do we move beyond ecosystem services to re-conceptualize CHANS linkages?



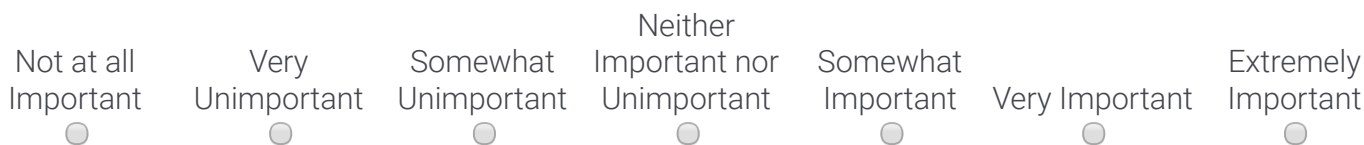
How can income streams be linked to various ecosystem services so that better environmental outcomes can be realized?



What are the perceived and real tradeoffs in valuing specific ecosystem services (for society, environment etc.)?



How can we employ an ecosystem services approach to management from the local to global scale?



How can science (ecology) embrace novel ecosystems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can research inform the urban sustainability community to foster creation of resilient cities?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What types of outreach measures are needed to draw the link between humans and natural systems for non science demographics?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What has been gained from knowledge of coupled natural and human systems, and what more can be gained?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

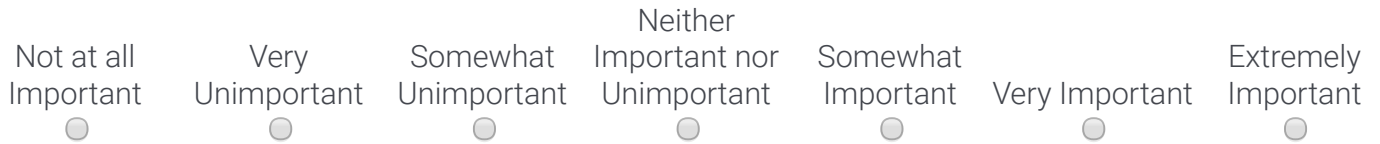
What is the role of CHANS researchers in the policy debates that are generated as a function of the community's research?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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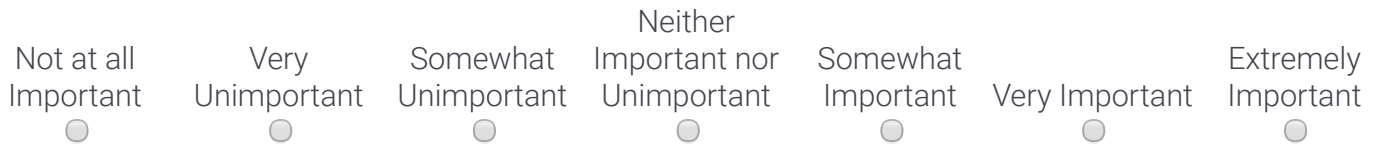
What are the most effective ways to communicate and/or implement interventions in CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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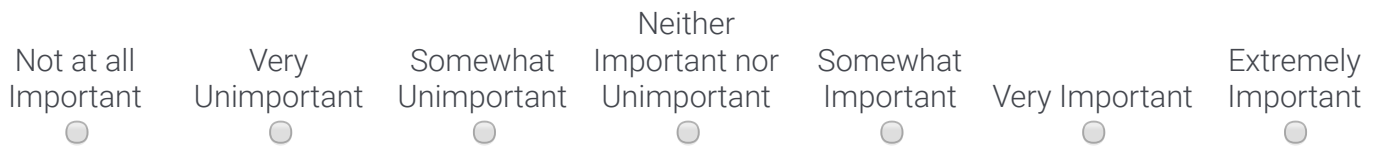
How do we co-produce knowledge between scientists, managers and society?



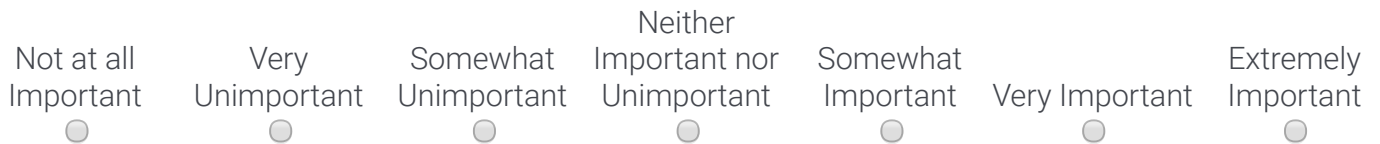
How do we convince society of the value of data to support information-driven management?



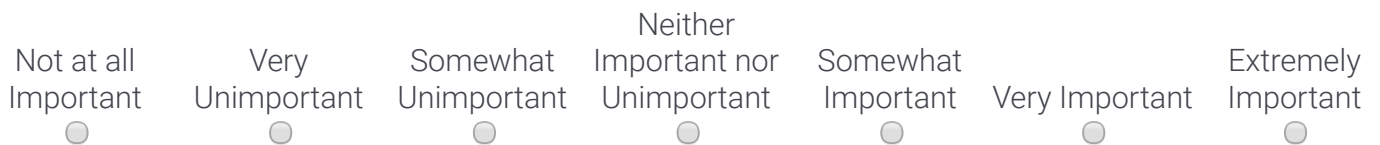
How do scientists best communicate the complexity of CHANS to resource managers, policy makers, and the public?



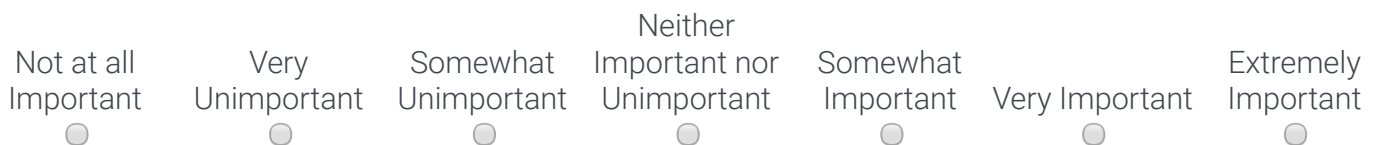
How do we improve primary education on the complexity of CHANS?



Will the mushrooming of sustainability programs at the graduate level produce a critical mass of people who appreciate coupled human and natural systems?



What mechanisms facilitate social learning for sustainability?



How can we build science/arts conjoined programs in the public school system with limited budgets?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What types of education and skills are needed by CHANS scientists?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can the public be educated on the link between extreme events and long-term changes in coupled human-natural systems?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we change the stovepipe attitudes of academia and its stovepipe training of students?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How many syllabi or curricula at the undergraduate level include CHANS?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent might we develop a "global culture" of understanding and managing CHANS?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How persistent is youth education (into adulthood) and how effective is 'spillover' to parents?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What products and outcomes are most useful and relevant in this era of wicked problems and post-normal science?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What characterizes tipping points or thresholds in CHANS and can we predict them?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do CHANS evolve?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the feedbacks between human decision making and natural system processes?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How much mechanistic knowledge is needed of coupled systems dynamics in order to predict likely responses?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do economic and institutional factors interact at multiple scales to influence local conditions?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there common dynamics and couplings across all CHANS at all scales?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do CHANS interact across multiple scales?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Can researchers develop transferable operationalized metrics showing connections between social and ecological systems?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can coupled-system complexity be reconciled with societal need for a degree of clarity and predictability, and how does this need vary at different social/ecological scales?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do short term actions affect the long term behavior of the CHANS?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do changes in the environment feedback on individuals, groups and institutions?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What factors of the human system affect the environmental system?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Under what conditions do social and ecological disturbances create positive/negative feedback and positive/negative social and ecological consequences?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What can we know about how new human and physical perturbations affect the behaviour of systems?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is and what explains the variability in coupling between human and natural systems?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the feedbacks between CHANS?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do we use past systems behavior as a predictor for future systems behaviors?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What is the human influence on the biogeochemical cycling of toxic trace elements within Earth's System?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do CHANS respond to external perturbations?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do telecouplings (i.e., socioeconomic and environmental interactions among CHANS over distances) evolve?

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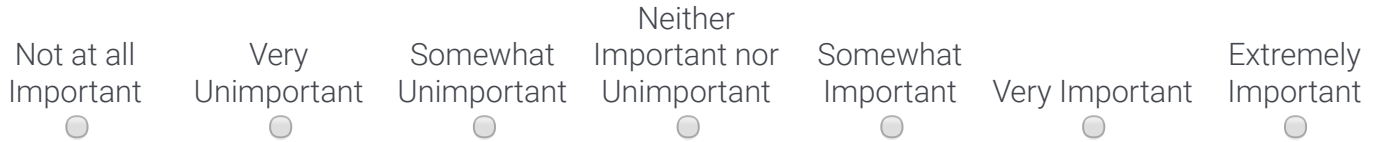
Which system elements function as underlying, persisting, slow variables vs. fast variables?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

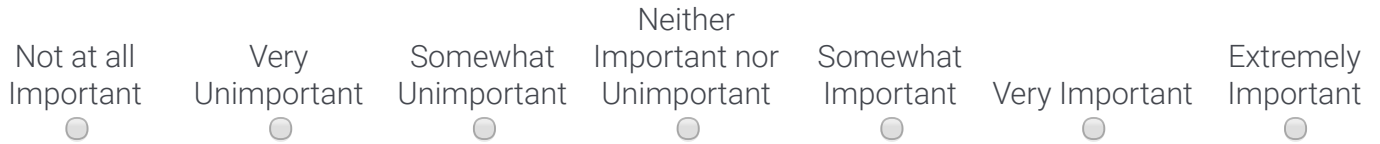
What are the similarities, differences and relationships between physical, biological and sociocultural evolution?

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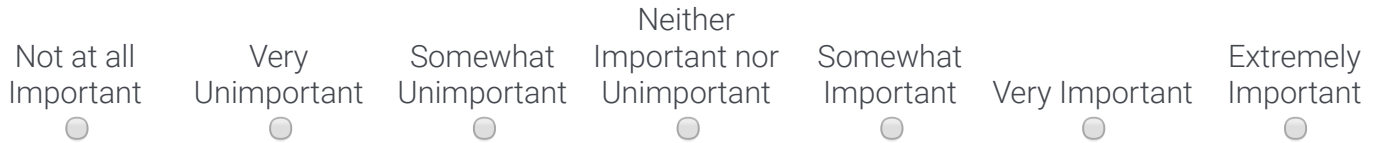
How can we develop CHANS theory?



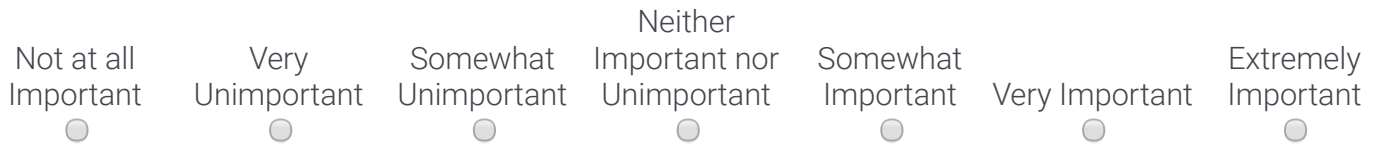
How do we understand context-dependency and place as a driving force?



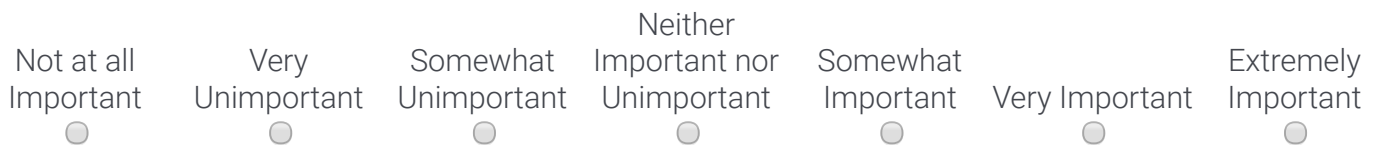
What are the emergent properties in CHANS?



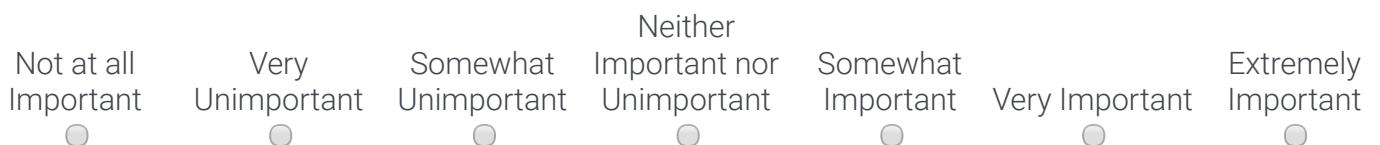
What drives variability in CHANS and how does variability govern system behavior?



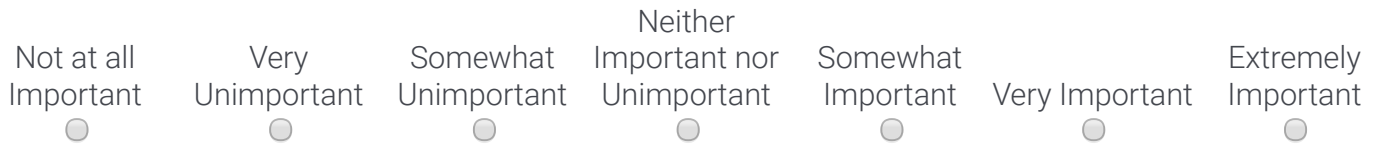
How do feedbacks control CHANS?



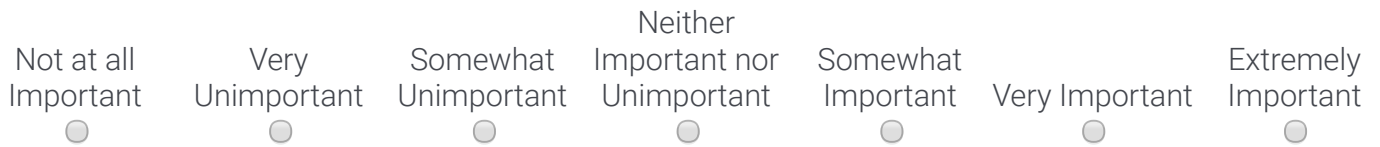
What are the feedbacks among sending, receiving, and spillover systems in the telecoupled world?



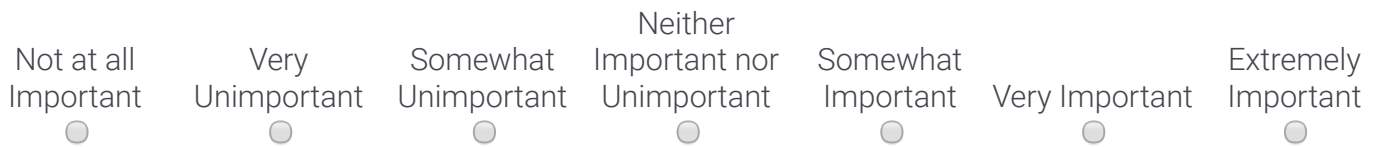
How do telecouplings shape socioeconomic and environmental sustainability across local to global levels?



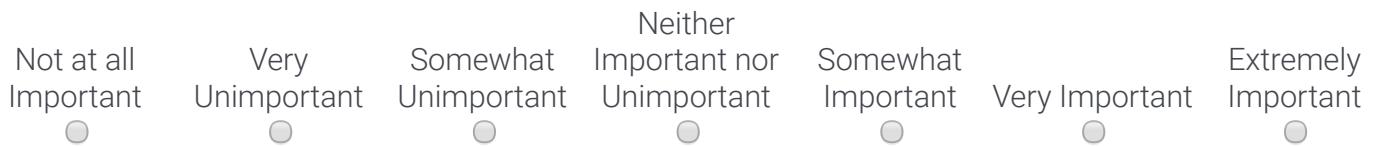
How do global environmental changes affect the dynamics of regional and local coupled systems, and how do these feed back to higher level processes?



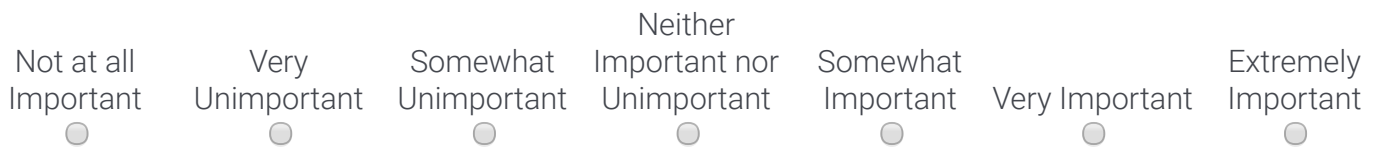
What are the key sets of internal system feedback connections, that are most likely to trigger system change, or be affected by external changes?



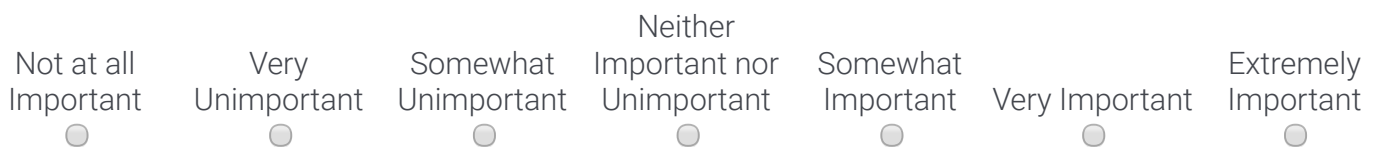
What are the linkages between evolving concepts of nature and the changing earthscape?



How do the self-organizing processes of CHANS recognize each other?



How do human interactions with an ecosystem circulate through ecological networks?



Are CHANS dynamics lawful (i.e. universal)?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we use our knowledge of cities - the ultimate CHANS - to understand and manage other coupled systems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we use our knowledge of 'natural' systems to understand cities?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What quantifiable impacts on natural systems do human activities have?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the linkages between globalization processes and CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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How do we better understand linkages between systems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we effectively identify both the relevant human and nonhuman actors within systems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we understand causation in complex coupled systems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How should we manage the impacts of improved adaptive capacity and ecological justice?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What pathways of governance can work with complexity, feedbacks, and adaptive management?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can governance systems become resilient in the face of rapidly changing ecological-social systems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can resource management practices better integrate ecological resiliency and anticipate disturbance?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



What institutional frameworks best facilitate adaptation to environmental change and resource scarcity?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How can social systems and natural life sciences be integrated to better inform each other to make wise use decisions?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do we move beyond the case study in the governance of CHANS?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do individual values and governance systems interact to produce outcomes?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What factors enable motivated people to govern CHANS effectively?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

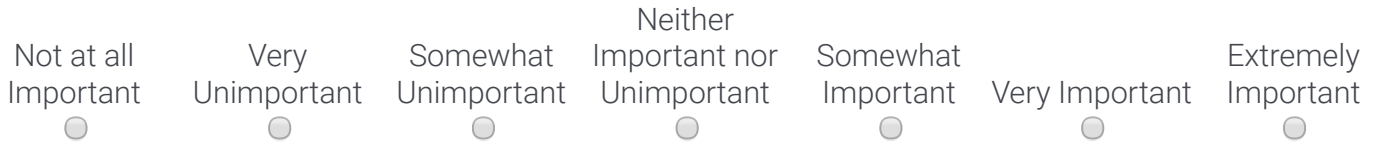
How can uncertainty be more effectively employed in understanding and managing coupled systems?

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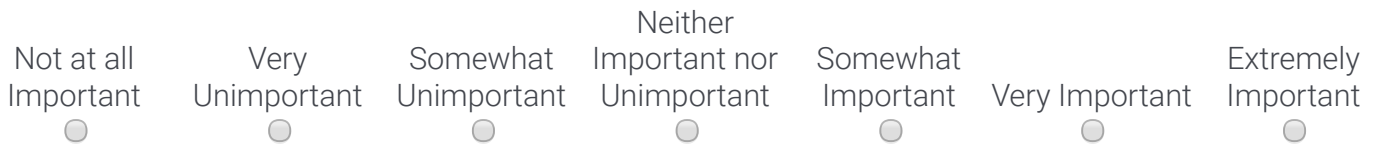
Unimportant



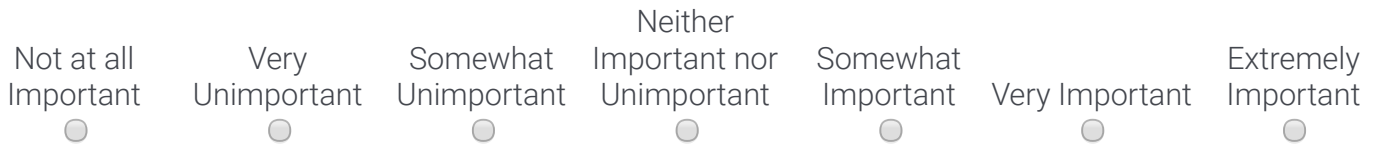
How do we best manage complex, multi-scaled, multi-objective CHANS?



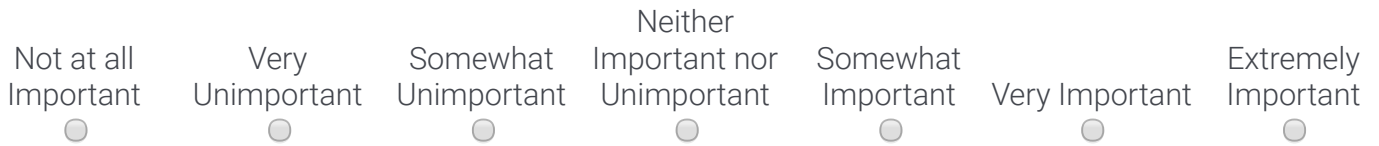
How can we design natural resource management approaches that reflect and work with biophysical variability (in time & space)?



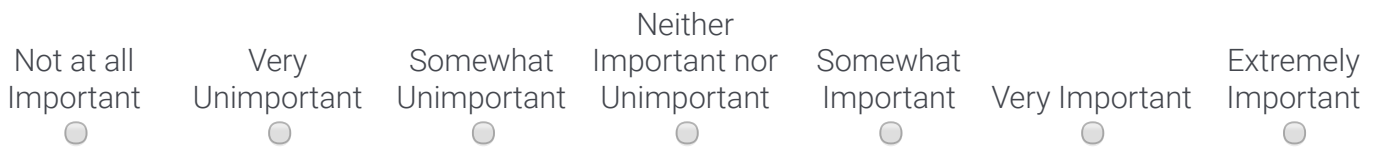
What are the linkages between local and global governance of CHANS?



How can we anticipate system change in a very narrow management time frame?



How do we improve cooperation in the commons?



What are the mechanisms and circumstances that create the conditions appropriate for successful collective action?





What are the right policies for achieving optimal scale of economy relative to the natural systems?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can CHANS feedbacks best be managed for both human needs and the good of the environment?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is the most effective way to get managers and policy makers involved in coupled systems research?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do we truly incorporate iterative processes into our decision making process?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the interrelated and interacting human institutions that must be created (or altered) to identify and cope with different coupled system changes?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do we transform (or retrofit) existing socio-political systems/institutions that serve as barriers to change?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How should CHANS be situated in an institutional/political context?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do we use technological advances to manage and mitigate environmental change?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How can communities adaptively (and peacefully) manage common-pool, declining resources?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How can political constraints to sustainable management be overcome?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What are the points at which ceding decision making about highly technical matters to a professional elite break down?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What kinds of governance systems contribute to improved social and ecological outcomes?

Not at all Very Somewhat Neither Somewhat Very Important Extremely

Important	Unimportant	Unimportant	Important nor Unimportant	Important		Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do we reform global governance (UN work) so that scientists and research carries the day?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What types of science have a real influence on management?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are existing governance structures, policies and service delivery mechanisms effective in addressing marginal places and persons in urban areas, especially in developing economies?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can management planners use basic science most effectively?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is the role of bottom-up versus top-down policy in the management of CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Can we better understand and manage the environmental impacts of the resource and waste streams through which people's needs and wants are met?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Can the public trust doctrine offer a framework for delivering better social and ecological outcomes?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What policies improve management of CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Is governance up to the task of managing global change?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do we ensure regulations are flexible and practical but ensure environmental safety?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do policies influence human-nature interactions?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we design decision-making structures to bring together groups with disparate objectives?

Not at all	Very	Somewhat	Neither	Somewhat	Very Important	Extremely
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Important	Unimportant	Unimportant	Important nor Unimportant	Important		Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do we find more resources for research and management?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can non-traditional ontologies and epistemologies be used to understand and manage CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we control climate change with demands of increasing food production and increasing energy use?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How will climate & other global environmental changes (e.g., water availability) affect agricultural systems in different areas of the world?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How will ongoing and future climate change affect the agriculture sector?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is the impact of human-induced land cover change on climate?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can forest disappearance due to the expansion of industrial agriculture and urbanization be stopped?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we link landscape ecology and life cycle assessment to promote sustainable landscapes?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How does the spatial configuration of land uses contribute to ecosystem services and sustainability?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do network-based hydrologic CHANS behave in fundamentally different ways from patchwork-based terrestrial CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which modeling tools are suitable for understanding and forecasting land use change in developing regions, and at what scales?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How is the global economy affecting land-use change at regional and finer scales, and how does this impact natural systems?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Under what scenarios will drivers of urbanization and land use change promote sustainable city development?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What effects will changing agricultural trends have on modern human diet and/or nutrition?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are GMOs safe for the environment and can GMOs be contained to minimize ecological impact?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the environmental and social impacts and underpinnings of a sustainable and just food system?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
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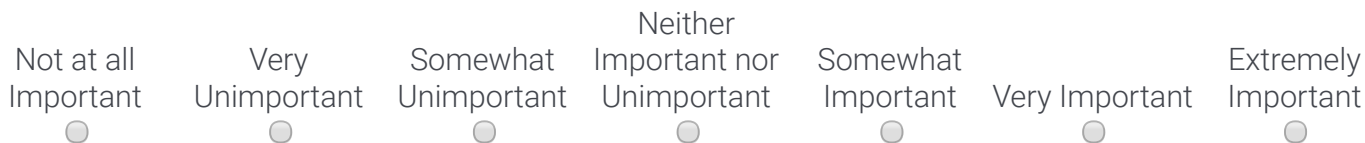
What are some economical and social factors that prevent sustainable agriculture and permaculture from succeeding?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor	Somewhat Important	Very Important	Extremely Important
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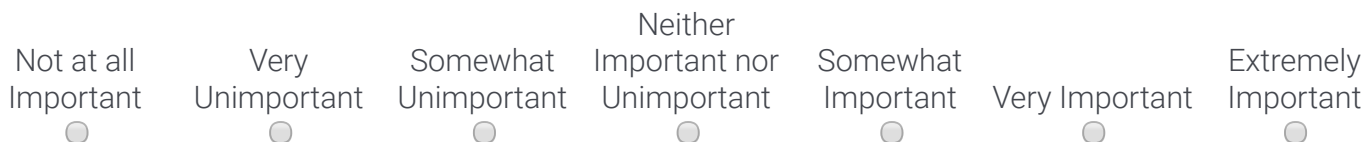
Unimportant



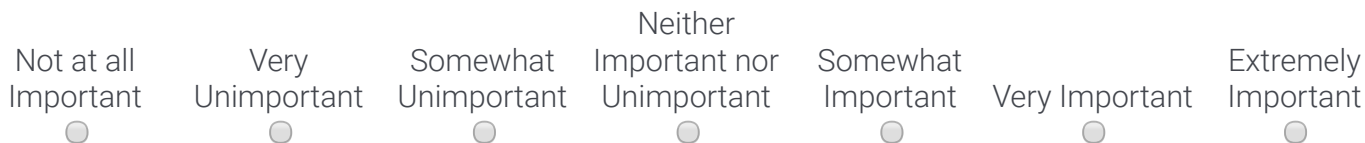
How sustainable are our current industrial food systems?



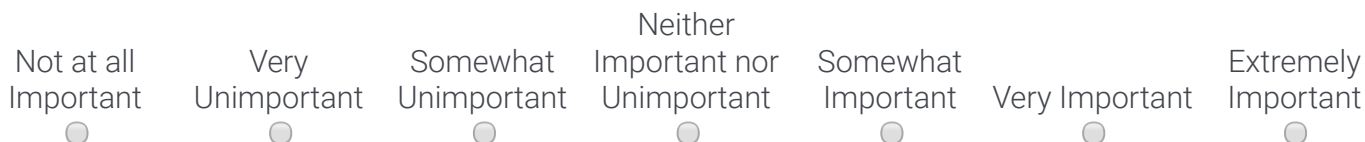
How do land use and land cover change influence household and/or community vulnerability and vice versa, especially in marginal environments?



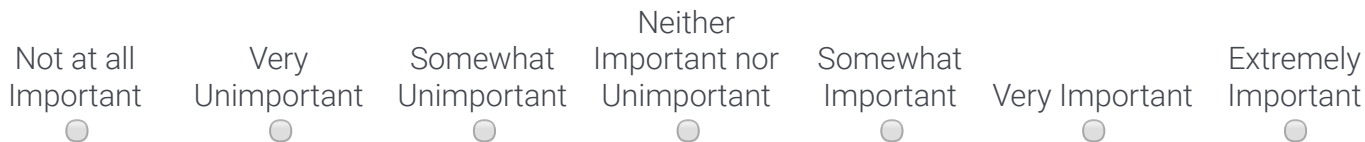
What characterizes sustainable land use systems and how can we transition to such systems?



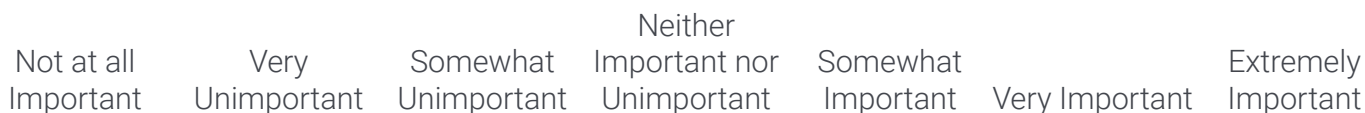
What are ecological and socio-political consequences of land cover change?



Under what sorts of circumstances does land sharing as opposed to land sparing occur?



How do human activities alter ecological landscape processes?





What urbanization strategies best promote sustainable urban landscapes?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do we integrate efficient high population density communities within an urban sprawl framework?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do we measure resilience in CHANS, and how do we develop predictive models of resilience?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we incorporate behavior, tipping points, emergent properties and regime shifts especially for ecosystem function and social organizations in CHANS models?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we systematically consider the tradeoffs between decisions across coupled and human and natural systems?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can the existing knowledge of human behavior within multiple social science disciplines serve in answering whether lab or field based models can help us better understand as well as

predict how human decisions influence physical systems and vice versa?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What role should citizen stakeholders play in CHANS research?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we effectively treat technological-infrastructure systems within a CHANS framework?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can recent innovations in data science (i.e. storage, access, processing power) be used to understand CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

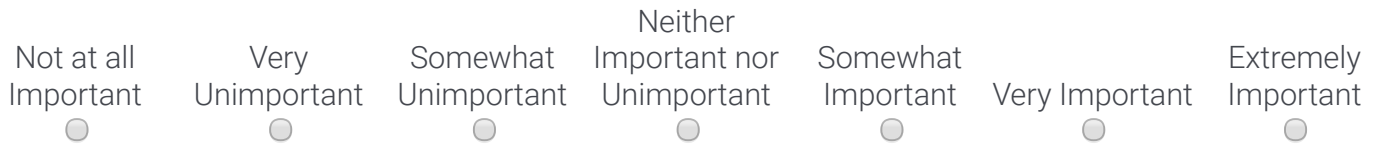
To what extent should research design and management be different to best address CHANS issues?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

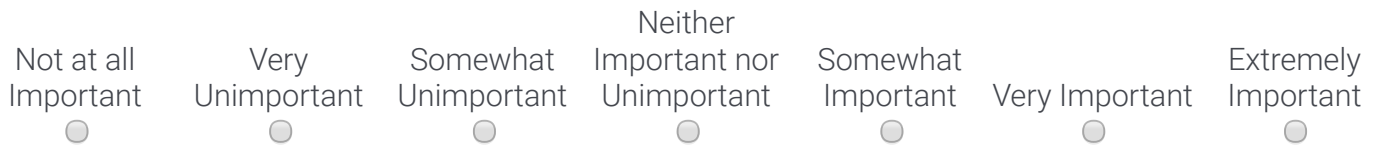
How can we best model complex, multi-scale, multi-actor CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

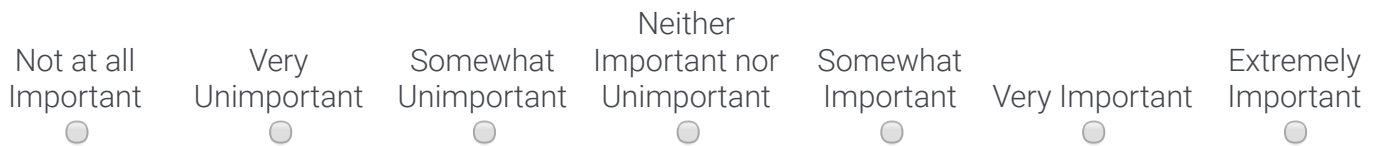
What are the costs and benefits of channeling human and fiscal resources to coupled systems research vs fundamental disciplinary research?



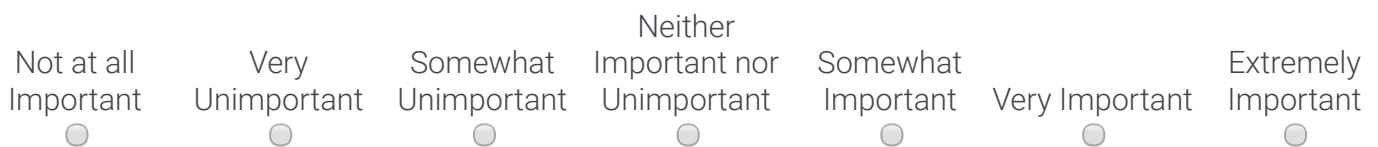
Can we generate political ecology/economy methods that incorporate history, asymmetrical power, and access?



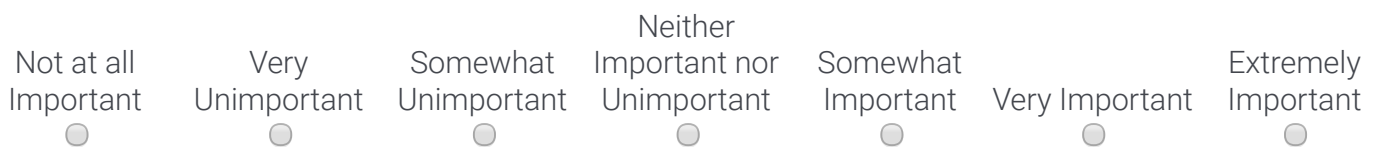
How best can various disciplines be integrated for effective research on CHANS?



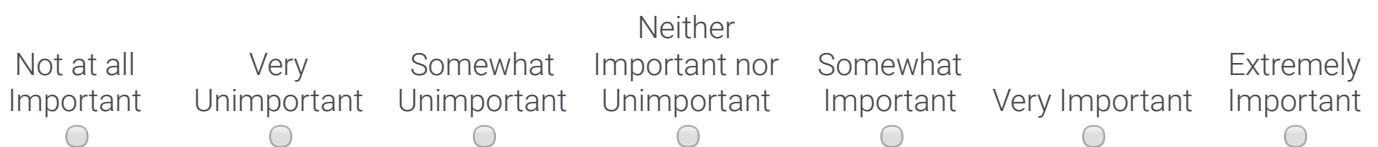
How do we effectively link mechanistic and agent-based models in simulating CHANS?



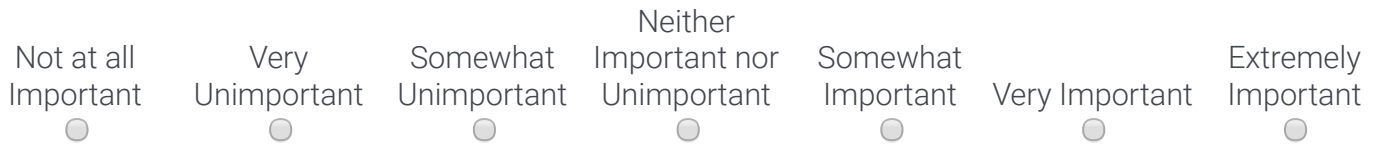
How do we create a translational research framework for managing human ecosystems?



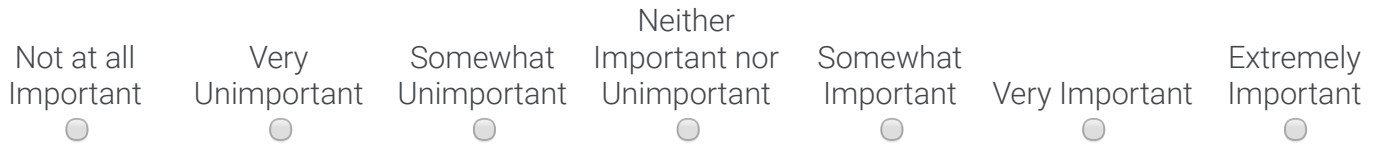
What are the best methods for the study of CHANS?



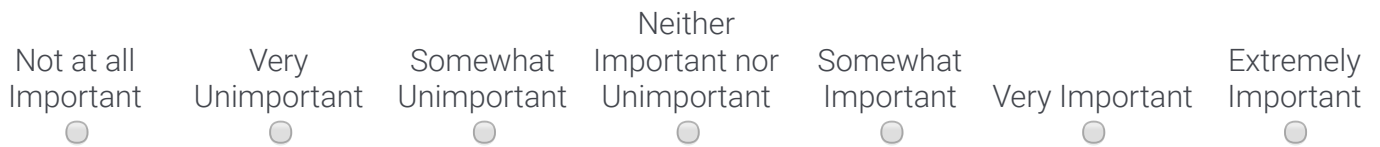
How do scientists best integrate data, methods, and epistemologies from different disciplines to best understand CHANS?



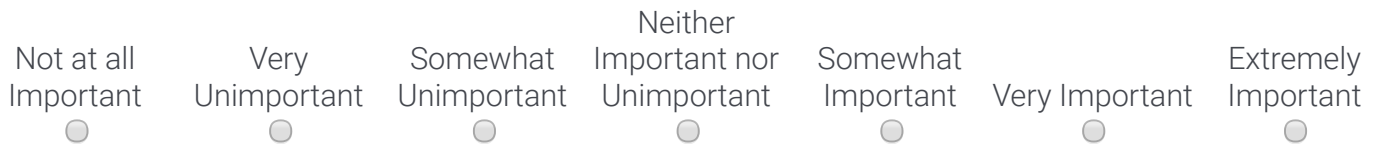
How do we recognize teleconnections and represent them in CHANS models?



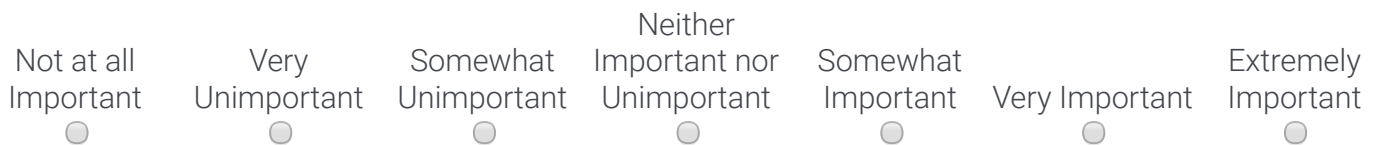
How do we evaluate models of environmental change in a no-analogue earth system state?



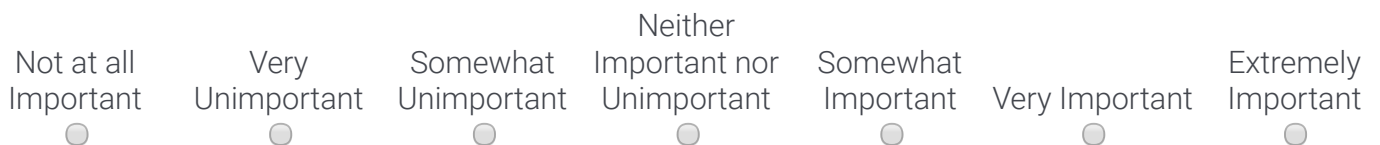
How do we measure externalities and interactions in CHANS?



How can we effectively leverage rich place-based studies and "big data" to create more comprehensive knowledge?



How can we better represent social systems and processes in CHANS models?



How can we accurately measure human response to a CHANS project?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can CHANS methods be developed beyond integrative modeling?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do we operationalize a measure of human well-being?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What types of research questions are best investigated using a CHANS framework?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we quantify and incorporate culturally valued resources in CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we explore the question of networks between and within CHANS?

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can we best represent human decisions, behavior, and human-built elements of natural systems in coupled process models?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How can we design socio-ecological research that is relevant to the social communities affected by ecosystem processes?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What new data sets should we be building to improve our modeling of human-natural system dynamics?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How can issues of accelerating uncertainty for future projections from coupled human-natural systems be modelled?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do researchers evaluate the data needs of a CHANS approach in inquiry?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How can analysis of currently employed measures of human-environment interactions be effectively used, or improved, to improve observations of change?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

Can researchers integrate models for a Global System Science that serves to both design and create technology for biological and socio-technical systems?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How can we ensure that inter-disciplinary projects that include non-academic stakeholders become the norm rather than the exception (especially in sustainability science)?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What are the tradeoffs between resolution, model fidelity, scale, and tightness of coupling?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How is decision making coupled across scales?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do we account for and understand the role of legacy and cumulative effects in CHANS?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do we quantify the spatio-temporal interactions among human and natural systems?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do we account for spatial autocorrelation and distance relationships in these systems?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do CHANS researchers determine the most appropriate system boundaries for CHANS for effective research and management?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is the best way to sample annual systems with long-term studies?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is the scale at which humans are most capable of sustainable interaction with the natural world?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can researchers improve assessment strategies at appropriate time and space scales?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is the most appropriate scale at which to study CHANS?

Neither

Not at all Important	Very Unimportant	Somewhat Unimportant	Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How can scientists best integrate data, methods, and research designs across multiple spatial and temporal scales?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

What is the role of spatial scale in understanding the coupling between natural and human systems?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do CHANS dynamics and feedbacks vary across spatial and temporal scales?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

To what extent is our understanding of hierarchies in CHANS an accurate reflection of what is occurring, and what are alternate explanations?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

How do we scale up smaller-scale analyses of managed processes in the environment to reflect policy and governance?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

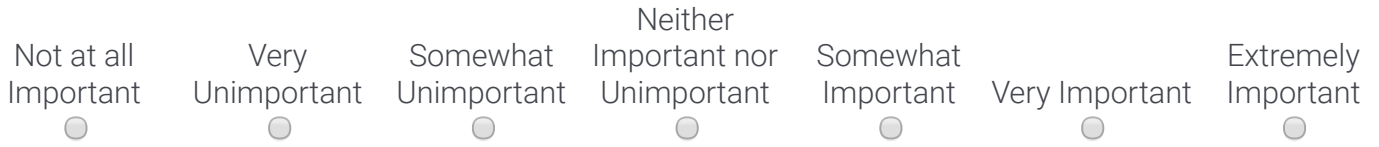
How do local biophysical changes from human interventions influence regional and global biophysical processes - especially with respect to water?

Not at all Important Very Unimportant Somewhat Unimportant Neither Important nor Unimportant Somewhat Important Very Important Extremely Important

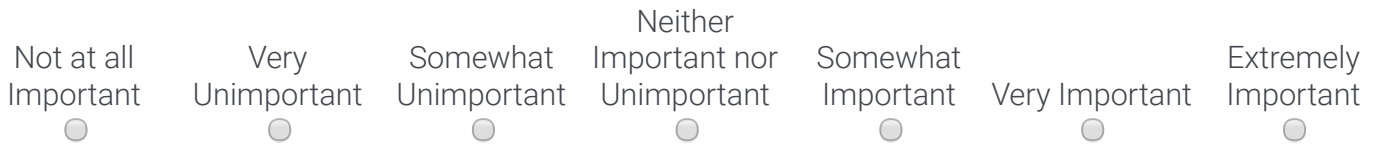
Unimportant



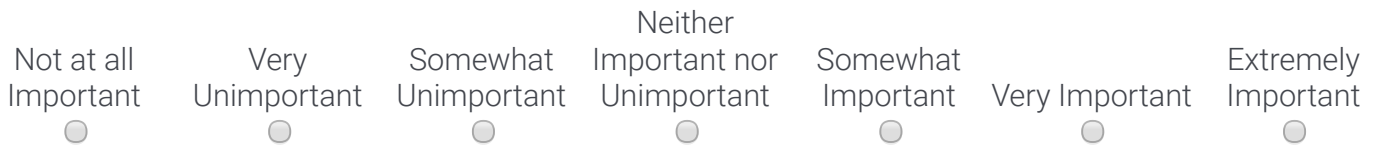
What is the role of technology and human adaptation in managing CHANS systems?



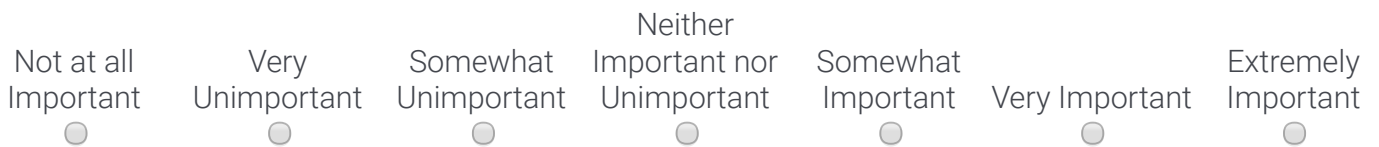
How does culture motivate or demotivate humans in protecting their natural environments?



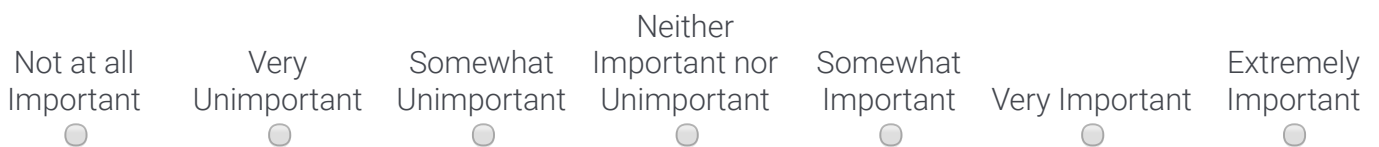
What are the social drivers at multiple scales of coupled complex systems?



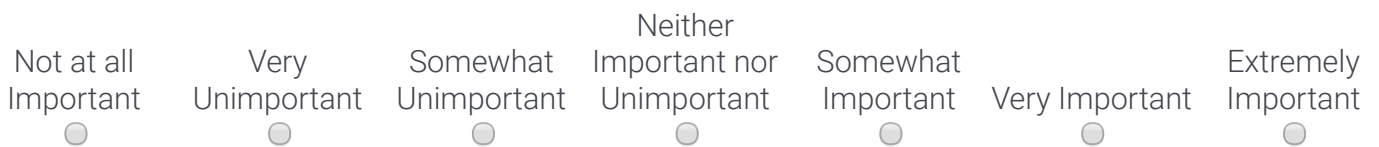
How do human social networks affect the way humans interact with ecological systems?



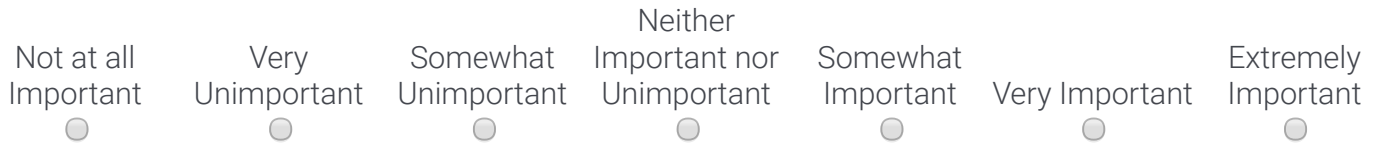
How can knowledge of CHANS be co-produced among various stakeholders for learning and action?



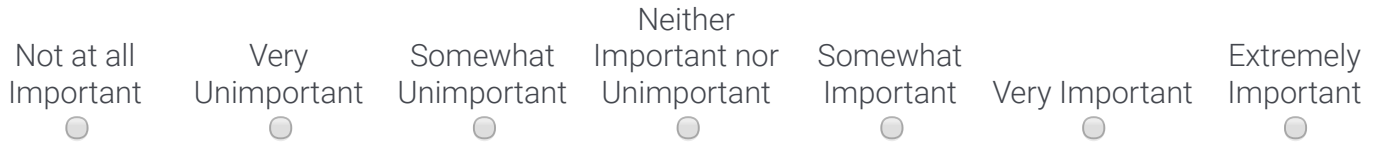
What is the role of ideology in understanding system change?



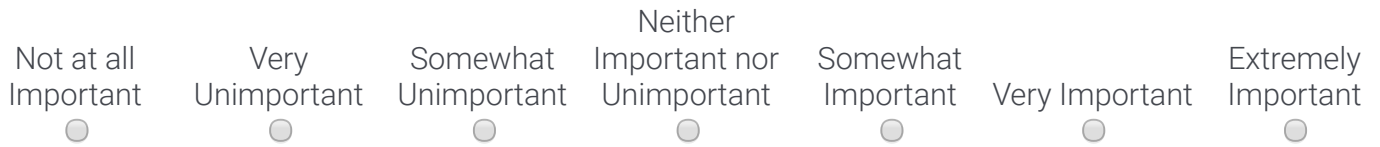
What are the constants in socio-ecological perception and values across race, culture, and economic status?



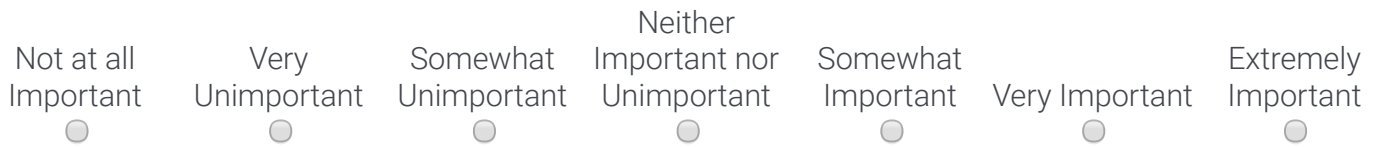
How are the clear facts of coupled human and natural systems obscured in policy, in management, and in Western cultural orientations?



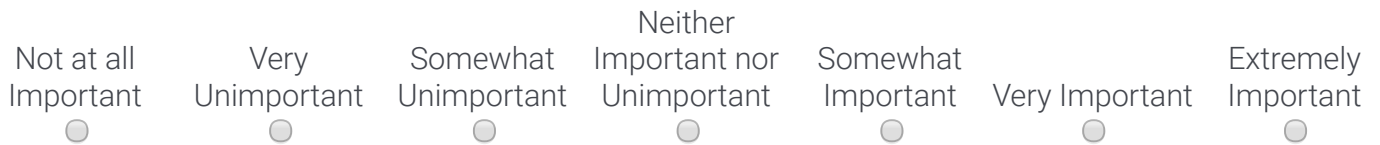
How does scientific information--e.g., predictions, risk assessments, response plans, or scientific study in general--influence people, organizations, and societies in their approach to coupled or potentially coupled systems?



How can we reintegrate humans into our conceptualization and management of 'natural' systems?



How can connections to nature of a global urbanizing population be strengthened?



How can cultures be transformed into more sustainable social systems?



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How do different socio-cultural contexts affect CHANS research itself, for example, when CHANS research is applied internationally?

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How do we integrate humans in the natural world rather than treat them as 'coupled'?

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What areas of human systems have the greatest potential for mitigation of human impacts on natural systems?

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What are the linkages between human population and natural systems?

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How and when do humans feel connected to natural systems?

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How have human relationships with nature changed over time and how will they change in the future?

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How do power dynamics and differentials within social systems affect CHANS dynamics?

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How will human per capita population growth rates change and what will be the spatial distribution of that change?

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How has culture been integrated to improve community based natural resource management?

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How do we break through and begin discussing the role of hard/uncomfortable issues in coupled processes (e.g., privilege, racism, etc.)?

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How can we empower community-based decisions that satisfy as many stakeholders as possible?

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What is the relationship between settlement type and ecosystem type?

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How do social and cultural factors affect the management of CHANS?

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How is environmental change affecting people's capacity and prospects for survival?

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How will human consumption patterns change in the coming decades?

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What are appropriate and effective methods to bring stakeholders together to address environmental issues?

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How do different types of ownership of resources (public, private, commons, nullius) affect the viability of CHANS?

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How does social organization mediate human interaction with the environment, i.e., amplify or attenuate perceptions of risk associated with environmental change?

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What are the perceptions of landholders/land managers of environmental issues and how do those compare to public perceptions and scientific knowledge?

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What are the relationships between cultural values, management and natural systems?

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What are the relationships among environment, population dynamics, settlement structure, and human mobility?

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How will human population patterns change with ongoing changes in availability of water?

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How do certain political and social development decisions impact natural systems?

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If both people and the environment should be considered in development, how can we strike the balance?

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What attitudes, dispositions, and knowledge are needed to further the transition to a just sustainability?

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What are the linkages between inequality and CHANS processes?

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Why and how do social inequalities emerge, grow, persist, and diminish, and with what consequences?

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What factors predispose CHANS to be more or less sustainable, both in absolute and in relative terms?

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What is the extent of the existence of a resources curse in areas with abundant natural resources but high rates of poverty?

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What is the relationship between poverty, livelihoods and environmental degradation?

Neither

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How does society improve medium and long term co-viability of ecological and social processes in CHANS?

Neither

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How can the monetary system and the economy be transformed, so that they don't require growth to avoid collapse, and don't continually concentrate wealth and power in few hands?

Neither

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How do we achieve a steady state economy?

Neither

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How can we rescue natural systems in socially depressed areas of big cities in Latin America as a tool for human development?

Neither

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What other global environmental change besides climate change pose threats to sustainability?

Neither

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How are sustainability and peace linked? Can conservation and other sustainability efforts, as well as CHANS research help promote peace or conflict resolution?

Neither

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Under what livelihood and environmental conditions do we see an alleviation of poverty?

Neither

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How can the interests of people and the environment be balanced in development, particularly in developing countries which still require a lot of natural resources?

Neither

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How do we rebuild the connection between humanity and the natural environment in order to foster a protective attitude towards sustainability?

Neither

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What alternative pathways of development are available that have a lesser impact on ecosystems and the biosphere?

Neither

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What is the appropriate balance between economic development and environmental protection?

Neither

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How can we transform the human dimension to be more aware of its integration and dependence on natural systems?

Neither

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Is a good life predicated on negative environmental footprints?

Neither

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What are the social and economic challenges to moving forward to a low impact path of development?

Neither

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How do we couple environmental sustainability with social and economic sustainability?

Neither

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Respondent Information

Have you ever been a Principal Investigator (PI) or co-Principal Investigator (co-PI) on an NSF Coupled Natural and Human Systems (CNHS) grant?

- Yes
- No

Decline to Respond

Page 3 of 4

On how many NSF CNHS grants have you been a PI or co-PI? (enter number)

What is your primary occupational sector?

Academic

Government

Non-Profit

Private

Decline to Respond

Other (please specify)

Do you consider your work to be strongly inter- or multi-disciplinary (i.e. integration of at least one natural science and one social science discipline)?

Yes

No

Decline to Repond

Based on the following categories from NSF-supported disciplines, which of the following do you consider your primary field?

Chemistry

Computer and Information Science

Engineering

Geosciences

Mathematical Sciences

- Physics
- Psychology
- Social Sciences
- Life Sciences

In what year were you born?

What is your gender identity?

- Male
- Female
- Decline to Respond

What country do you consider your primary nationality?

In which country are you primarily employed?

