

# Can Climate Change Preparedness Efforts Spur Greater Interest in Emission Reductions?

The Influence of Adaptation Planning on  
Attitudes Toward Climate Change Mitigation:  
Evidence from Oregon

## **The Resource Innovation Group**

TRIG is a 501(c)(3) non-profit organization that provides innovative solutions to the challenges of sustainability and climate change. TRIG was founded in 1996, as an affiliate of the Portland State University Hatfield School of Government. From 2001 through 2010 TRIG was affiliated with the Institute for a Sustainable Environment at the University of Oregon. Today, TRIG is engaged in partnerships with academic institutions, non-profits, private companies and all levels of government nationwide.

In 2005, TRIG established the **Climate Leadership Initiative (CLI)** with a specific mission of fostering the development and application of innovative thinking and approaches to the complex causes and solutions to the planning and policy aspects of climate change.

To find out more, please visit: [www.theresourceinnovationgroup.org](http://www.theresourceinnovationgroup.org).

## **TRIG's Working Paper Series**

The Resource Innovation Group (TRIG) documents emerging findings and insights from its programs through our Working Paper Series for the purpose of engaging researchers and the broader policy community. We welcome feedback and comments from interested parties.

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For years, the conventional wisdom within climate policy circles was that focused attention on preparedness and adaptation would undermine efforts to reduce emissions. More recently, the need to prepare for the impacts of climate change has garnered greater attention as mitigation policy has faltered and the need to respond to climate change impacts that can no longer be prevented has become increasingly obvious. But what if the conventional wisdom was wrong? What if focusing on climate preparedness and adaptation is the missing link – not a second best option when mitigation efforts fail – but a proactive strategy for building commitment to emission reductions? This working paper outlines evidence suggestive of this link from four river basin-scale participatory projects in Oregon.

## Introduction

In response to the need for regional climate preparedness and adaptation planning across Oregon, as outlined in the 2008 final report of the Governor’s Climate Change Integration Group, the Resource Innovation Group’s Climate Leadership Initiative (CLI) developed and initiated a participatory planning model scaled to river basins in key regions of the state. The model, called “Climate Futures Forums,” was first implemented in 2008 for the Rogue River Basin and subsequently in the Upper Willamette River Basin (2009), the Klamath River Basin, including both Oregon and California reaches (2009-2010), and most recently, the Lower Willamette Basin, encompassing the greater Portland-Metro area, Salem, Albany and Corvallis Oregon (2010-2011).<sup>1</sup>

In addition to addressing the increasingly obvious need to prepare for the impacts of climate change, we were also interested in

understanding what effect preparedness and adaptation planning may have on local attitudes regarding emission reduction efforts. CLI hypothesized that a facilitated, interactive planning process could build local support for climate mitigation efforts for two reasons: 1) “downscaled” climate impact projections could make global climate change seem more immediate to



<sup>1</sup> The National Center for Science & Conservation Policy (now the Geos Institute) was a project partner with CLI for the Upper Willamette, Rogue and Klamath Basin Projects.

participants, and 2) the process of developing climate preparedness strategies for two scenarios of varying degrees of impact severity could underscore the benefits of mitigation in the present. These factors, we believed, might lead to increased support for climate mitigation efforts while also enabling communities to prepare for the climate impacts that are already resulting from past and current emissions.

In November 2010, CLI began an evaluation of the Climate Futures Forum process. Public sector participants were surveyed from 14 counties in Oregon and Southwest Washington, eleven of which had been the focus of Climate Futures Forums. Although the CLI survey was designed to address a range of issues of importance for evaluating the model, this working paper focuses solely on the nexus between participatory adaptation planning projects and local attitudes toward climate mitigation. Subsequent working papers will address other findings from the ongoing evaluation, including the value of information from locally scaled climate impacts modeling.

### The Climate Futures Forum Model

CLI's model features a facilitated interactive stakeholder process for identifying projected climate impacts downscaled to the regional level (8 km<sup>2</sup> grid cell resolution), assessing local vulnerabilities to the projected impacts, and developing recommendations to build resilience at the watershed scale. The process relied on modeled climate conditions for 2040 and 2080 developed by the US Forest Service Pacific Northwest Research Station, Portland State University, and the Oregon Climate Change Research Institute, using IPCC "business-as-usual" (A1b) and "green energy" (B1) emissions scenarios. The downscaling process projected average summer and winter temperatures, mountain snowpack,

precipitation, stream flow, wildfire potential and changes in prevailing vegetation.

The core of the Climate Futures Forums model is a systems perspective of the interactions between the local environment, the economy, the built environment and local culture.

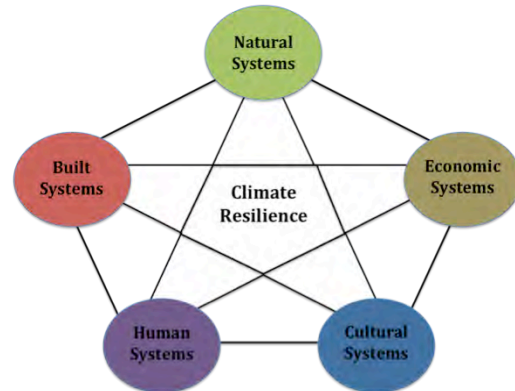


Figure 1: Climate Future Forum Systems Model

Stakeholders included local experts and opinion leaders representing academia, local, state, and federal public agencies, tribal representatives, non-profit organizations, and private businesses. After identifying how projected changes in climate conditions might impact each system, participants were facilitated in developing strategies to build resilience with a priority on those that foster resilience across more than one system. The results of each Climate Futures Forum were captured in a final report prepared by CLI for public release.

Over the course of four river-basin scale projects, CLI engaged over 400 participants in Oregon and Northern California who collectively developed 140 recommendations, of which 87% provided co-benefits for resilience to climate change

impacts across multiple sectors. Further, over a third of the recommendations provided climate mitigation benefits in addition to building climate resilience.

### **Evaluating the Model**

In each of the four projects, the majority of participants recognized that climate preparedness strategies were necessary to manage climate change impacts that are already occurring or expected in the near future. However, after seeing that the green emissions scenario (IPCC B1) reduces end of century impacts by approximately half in comparison to the “business-as-usual” scenario (IPCC A1b), some participants asked how their communities could reduce emissions as a preventative measure. These anecdotes suggested that a facilitated process to confront possible climate futures could build local commitment to efforts to reduce emissions.

CLI used a 30-question survey instrument to evaluate this and other outcomes of the Climate Futures Forum process.

Approximately 360 people received the survey of which 120 people (33% response rate) partially or fully completed the survey. Respondents were primarily from the “Public Agency - City” category (38%) with a professional focus on Environment/Natural Resource Management (30%). The majority of respondents were at the manager or coordinator level with an average tenure of twelve years in their position. Of the 74 respondents that identified the county in which they work, nearly half (47%) indicated the Portland Metro region. Of all survey respondents reporting a county location, nearly two-thirds (63%) work within the area most recently engaged by a CLI Climate Futures Forum process covering the Lower Willamette Basin.

### **Results**

Respondents that participated in a Climate Futures Forum or other adaptation-related workshop reported higher concern for local climate impacts than non-participants (58.7% to 49.9%). Further, these participants demonstrated a greater sense of urgency with respect to the timing of impacts and were more active in educating the public on climate change issues (52% to 18%). Workshop participants were also more likely to allocate staff time to climate preparedness (48% to 22%). Each of these differences was statistically significant.<sup>2</sup>

A majority of participants (69.62% or 55 of 79 respondents) of Climate Futures Forums or other climate adaptation workshops answered “yes” to the question: “Has involvement (learning about, taking action, etc) in adaptation/preparation efforts led you to an increased interest or action in mitigation?” Of the remainder, nearly 14% answered “no” while 16.5% responded, “I don’t know.”

In the aggregate, a majority of all survey respondents agreed that climate adaptation considerations have led to increased interest or action on climate mitigation (58% Yes; 19% No; 23% Not Sure). Of those providing a definitive “Yes” or “No” answer, a full 75% reported that learning about climate preparedness had increased local commitments to mitigation. The majority of respondents (64%) said that the reverse is also true, with mitigation efforts leading to increased interest or action in adaptation.<sup>3</sup>

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<sup>2</sup> Statistical significance was tested for all responses using t-test, Chi square or ANOVA.

<sup>3</sup> 64% chose “Yes”; 20% chose “No” and 15.6% chose “Not Sure”. When “Not Sure” respondents are omitted, 76% are “Yes” and 24% are “No.”

## **Policy and Strategy Implications**

The experience offered by the Climate Futures Forums process in Oregon suggests that participatory initiatives focused on climate preparedness can build commitment for climate mitigation among public sector participants. Further, the traditionally assumed trajectory of interest in preparedness and adaptation stemming from previous work in mitigation also appears to be valid for the subjects of the current research.

While the survey suggests that the process has increased commitment for mitigation among public sector participants in Oregon, we have not yet assessed the underlying reasons why this may be so. This will be further explored in the next phase of research involving qualitative interviews with the 25 survey respondents that agreed to participate in our process evaluation as interview subjects.

The findings from the Oregon Climate Futures Forums, while insightful, cannot be assumed to be representative of other regions of the nation. However, it is noteworthy that roughly the same two-thirds proportion of respondents indicating that preparation and adaptation planning builds commitment for mitigation holds across the full range of variance in rural/urban, political/cultural, and regional characteristics found in the four test case regions. In the three relatively conservative counties of the Rogue and Klamath Basin projects (Klamath, Jackson and Josephine Counties), 66.7% of respondents indicated that adaptation planning increased interest in mitigation. This compares with 62.7% of respondents affirming this relationship in the four most progressive counties of the Upper and Lower Willamette Basin projects (Lane, Multnomah, Clackamas and Washington Counties).

## **Preliminary Conclusions**

Mitigation and adaptation are increasingly viewed as the vital components of a holistic approach to climate policy that must be implemented simultaneously; many respondents recognized this need in qualitative comments included in the survey. Holistic climate policy is critical in order to address the inevitable trade-offs between the two objectives of reducing emissions and preparing for impacts. Proficiency in both objectives is vital in order to maximize the long-term performance of federal, state and local climate policy.

Facilitated climate preparedness planning may provide an effective starting point for some communities that have struggled to move forward with climate mitigation efforts. Because many adaptation strategies align with economic resiliency, emergency preparedness, public health initiatives, and ecosystem restoration activities, a stakeholder planning process may be perceived as less controversial within communities where issue salience of climate change is low or where climate skepticism is strong. By first initiating a planning process, communities may then be able to build support for climate mitigation.

Further research from similar adaptation planning processes around the United States and in other developed countries is a vital next step and one that we hope to facilitate with other practitioners in sharing our survey instrument and results.

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