



Climate Change and Social Vulnerability:

Who is at risk? Who benefits?

Western Stewardship Summit

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Overview

- Climate change context
 - Who is at risk?
 - Understanding social vulnerability in the context of climate change
 - Who benefits?
 - Understanding the context of climate change policy discussions
 - Identifying policy opportunities
 - Discussion questions
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Climate Change Context

Mitigation -

addresses the **causes** of climate change by reducing Greenhouse Gas Emissions

Examples:

- Biofuels and bioenergy (low life-cycle emissions)
- Forest restoration: additional carbon sequestration
- Fire prevention: less CO₂ emitted

Adaptation -

addresses the **effects** of climate change through planning and preparedness.

Examples:

- Disaster preparedness
 - Water resources: prepare for less
 - Fuels reduction and noxious weeds/ invasive species abatement for forest and ecosystem health
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Rural communities...

- Are vulnerable to physical changes in climate
 - Will face unique challenges from climate change that are unlike those faced in urban areas.
 - Have important potential roles in implementing mitigation and adaptation measures
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What is social vulnerability in the context of climate change?

- ... exposure, sensitivity, and capacity to adapt to present and future climate-related hazards (Williamson et al. 2007).
- Socially vulnerable populations may have **less capacity** to prepare for, respond to, and recover from climate-related hazards and effects and be **disproportionately affected** by climate change.



Who is at risk?

- Low-income, elderly, disabled, and special needs citizens and families
- Marginalized and underserved populations
 - Minority populations
 - Migrant workers
 - Native American and Alaska Native Tribes
- Rural and Urban



International Context

- Disproportionate contributions to and effects in developing countries
- From 1990 to 1998, 97% of deaths related to natural disasters occurred in developing countries (World Bank 2001)
- People in low-income countries are 4 times more likely to die in extreme natural events than people in high income countries (IFRC 1993)

"Africa is one of the most vulnerable continents to climate variability and change because of multiple stresses and low adaptive capacity."

IPCC Report: Impacts
Adaptation and
Vulnerability

Poverty

- Hurricane Katrina: extreme impacts to low-income and minority populations.
- Poverty affected capacity to:
 - Prepare
 - Evacuate/Respond
 - Recover/Deal with the long-term consequences

Poverty is a major cause and effect of global environmental problems. It is therefore futile to attempt to deal with environmental problems without a broader perspective that encompasses the factors underlying world poverty and international inequality"

- Bruntland Report, World Commission on Environment and Development

Indigenous Communities

- **Impacts:** Tribal cultural, religious, environmental and economic resources
 - Salmon in the Pacific Northwest
 - Relocation of Native Alaskan Tribes
- **Opportunities:** Utilize traditional knowledge and oral history in developing adaptation and mitigation strategies

"The history of federal relations with tribes indicates that policies with the harshest effects on American Indians were those crafted without their consultation and consent."

The State of Native Nations

Needs and Opportunities

- Increase knowledge about social vulnerability:
 - Little research has focused on rural communities and climate change in the United States
 - Understand risk
 - In rural communities
 - Among marginalized and vulnerable populations
 - Recognize the necessity of involving socially vulnerable populations
 - Utilize local and traditional knowledge
 - Emphasize opportunities for rural voices to be heard!
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Who benefits?

- Understanding the context of climate change policy discussions
 - Identifying policy opportunities
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Understanding the policy context

- International
 - Domestic
 - National
 - State and local
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Cap-and-Trade System

- The consensus approach
 - Market based
 - Uniform price for carbon (GHG)
 - Goal: To reduce carbon emissions by establishing a cap
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Cap-and-Trade components

- Emissions Allowances
 - S. 3036 estimates 5775 million (2012); 1732 (2050)
 - L-W estimates total allowance market of \$120 to \$180 billion annually
 - Allocations of Allowances
 - To whom?
 - For what purpose?
 - How?
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Cap-and-Trade components

■ Auctions

- Who should operate market trading platform-- public or private sector?
 - Where and how should values from auctions be allocated?
 - Common to consider socially vulnerable through adaptation funds
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Cap-and-Trade components

- Offset allowances
 - Covered entities may also purchase “carbon offsets”
 - S. 3036 limits domestic offset allowances to 15%; with other offsets, covered entities may emit up to 30% above the cap
 - How many offsets should be allowed? If not credible, offset may weaken overall cap.
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Current U.S. Policy Debate

■ Key issues for forests

- How specific should legislation be?
 - Which federal agencies should determine and implement key program elements (USDA, EPA)?
 - How should forests participate in offsets markets?
 - How should allowances be awarded to forests?
 - How should public forests be included?
 - How do policies broaden participation of landowners?
 - How do diverse forest interests advocate for inclusion of forests in major policy frameworks?
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Who Benefits?

- Identifying policy opportunities for Socially Vulnerable Communities
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Current Consideration of Socially Vulnerable Communities

- Poor and vulnerable communities are considered in climate change discussions at all scales
 - International—Stern, Council on Foreign Relations
 - National—Lieberman-Warner
 - State—Oregon
 - Generally included in adaptation funding, based on sense of public responsibility.
 - Seek approaches that integrate social, economic and environmental issues.
 - Delivery of resources and services through existing programs.
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Assistance to Communities: L-W

- Allowances to States (9.5%)
 - Mitigate impacts on low-income consumers
 - Address impacts on affected communities
 - Address impacts of climate change policy on low-income and displaced workers
 - Reduce hazardous fuels to prevent wildfire
 - Fund rural, municipal and agricultural water projects.
 - Climate Change Worker Training Program
 - 5% of Auction proceeds
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Policy Opportunities: *Rural Voices for Conservation Coalition*

- Key policy principles:

1. Ensure development and dissemination of reliable climate change information for climate change assessments, strategies, and plans, and monitoring.
 2. Policies should include strategies to ensure that low-income and other vulnerable populations receive assistance.
 3. Public and private forest land management should integrate climate change considerations within collaborative, landscape-scale forest restoration efforts.
 4. Markets for forest carbon-offsets and ecosystem services should provide access and opportunity for rural communities.
 5. Provide technical and financial assistance to rural communities for capacity building and workforce training.
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Discussion Questions:

- What do we know about how climate change will affect rural, resource-based communities?
 - Ecological impacts on forests and terrestrial ecosystems
 - Social and economic impacts on rural communities
- What are the economic effects on (and opportunities for) rural communities from:
 - Cap and trade
 - Carbon tax
 - Green Jobs
- What do state, regional, and national climate policies need to include to protect and engage socially vulnerable populations?

Resources

- RVCC Climate Change Working Group
 - www.sustainablenorthwest.org/rvcc/policy-priorities/climate-change
 - Rural Community Climate Change Policy
 - ruralclimate.wordpress.com/
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try not to feel like this

