Public perceptions of forest management and wildfire risk in northeast Oregon

Communities and Forests in Oregon (CAFOR) Interdisciplinary Research Project

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CAFOR 1.0 (2010-2014)

Community and Forest: Linked Human-Ecosystem Responses to Natural Disturbances in Oregon

Research Objectives

Provide a detailed description of landscape change including forest area, health, composition, and structure, and understand how land ownership affects landscape change. Also, explain complex relationships between public perceptions of forest characteristics, including wildfire risk, and objective measurements of those characteristics.

Key Activities:

- Remotely sensed data (MODIS, Landsat, UAVs)
- Forest structure (sampling plots)
- Human Dimensions: Mail and telephone surveys to understand how conceptions of land management, values, and wildfire risk vary by land owner groups, and how these conceptions translate into patterns of land use, land cover, and forest ecosystem health.
CAFOR 2.0 (2014-2018)

Climate Change Adaptation In Working Landscapes Of The Intermountain Northwest

Research Objectives

Provide an integrated social and biophysical assessment of vulnerability and adaptation of forested environments to climate change and variability in the Blue Mountains Ecoregion of Oregon.

Key Activities:

- Remotely sensed data (MODIS, Landsat, UAVs)
- Education and training (“K-grey”, stakeholder engagement)
- Human Dimensions: Surveys to understand conceptions of land management, environmental stressors and climate change vary by land owner groups, and how these conceptions affect adaptive capacity.
CAFOR Surveys

Telephone surveys
• 2011 and 2014
• ~1,500 respondents

Mail survey
• 2012 (forest owners only)
• 454 respondents
## 2012 Mail Survey of Forest Owners

Please rank these potential threats to your forest lands from 1 (most threatening) to 7 (least threatening):

<table>
<thead>
<tr>
<th>Threat</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildfire</td>
<td>56.7%</td>
<td>11.3%</td>
<td>11.6%</td>
<td>6.3%</td>
<td>0.7%</td>
<td>2.6%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Insects in your trees</td>
<td>11.8%</td>
<td>37.6%</td>
<td>20.8%</td>
<td>13.0%</td>
<td>8.1%</td>
<td>3.7%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Diseases that affect your trees</td>
<td>4.9%</td>
<td>17.9%</td>
<td>34.0%</td>
<td>23.7%</td>
<td>11.0%</td>
<td>4.0%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Drought</td>
<td>3.7%</td>
<td>9.0%</td>
<td>9.1%</td>
<td>26.0%</td>
<td>27.2%</td>
<td>18.3%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Long-term climate change</td>
<td>2.2%</td>
<td>2.7%</td>
<td>5.7%</td>
<td>4.3%</td>
<td>12.7%</td>
<td>21.2%</td>
<td>50.2%</td>
</tr>
<tr>
<td>Extreme weather events</td>
<td>2.2%</td>
<td>6.6%</td>
<td>7.5%</td>
<td>9.3%</td>
<td>23.3%</td>
<td>31.5%</td>
<td>19.5%</td>
</tr>
<tr>
<td>Neighboring forest land</td>
<td>4.7%</td>
<td>11.3%</td>
<td>9.4%</td>
<td>15.7%</td>
<td>17.0%</td>
<td>17.9%</td>
<td>20.3%</td>
</tr>
<tr>
<td>Other</td>
<td>13.8%</td>
<td>3.6%</td>
<td>1.9%</td>
<td>1.7%</td>
<td>0.7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Threat Ranking

- **Wildfire**: 56.7%
- **Drought**: 9.0% (most threatening)
Perceived risk of wildfire on different land ownership types:

Key predictors:

- If you work on your land full time, have experience with wildfire, have participated in extension within the last 5 years, and work in the forest industry, the greater the odds of perceiving high risk of wildfire

- No impact of employment, education, income, political party
Phone Surveys: Changing Perceptions of Forest Health 2011-2014

**Perception of forest health by self-assessed understanding**

**2011: Baker, Union & Wallowa Counties**

- Great deal: 13% Less, 22% Same, 50% More
- Moderate: 13% Less, 37% Same, 50% More
- Little: 14% Less, 32% Same, 54% More
- DK/nothing: 10% Less, 39% Same, 50% More

**2014: seven CAFOR counties**

- Great deal: 14% Less, 18% Same, 58% More
- Moderate: 15% Less, 27% Same, 53% More
- Little: 16% Less, 31% Same, 53% More
- DK/nothing: 20% Less, 30% Same, 50% More

Forest health compared w/ 20 years ago:
- Less
- Same
- More
High priorities for federal and state land management in NE Oregon

- Protect streams: 75%
- Road access: 67%
- Active management: 57%
- Prescribed burns: 57%
- Protect wilderness: 49%
- Commercial logging: 39%
More support for user fees than for property or gas taxes, if needed to support forest restoration.
Comparing 2011 with 2014 surveys: less support for elimination of wolves, more support for environmental protection and renewable energy.
Fire-season temperatures trending up, precipitation down
Conclusions & Application

• Legacy of fire suppression, changes in forest management on public lands, and climate change create a strong positive feedback that results in more combustible conditions

• Views increasingly aligned with the scientific consensus, but climate change not perceived as a threat
Conclusions & Application

How data can support Collaboratives:

• Evidence that education & engagement works

• Majority of general public believes active management is a high priority
  – Minority believe commercial logging is a high priority – need to change messaging on commercial logging for forest restoration

• Creative restoration-based economic solutions needed to fund forest restoration due to low support for increasing taxes or user fees

Questions?
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Publications


CAFOR Project Contact: http://cafor.weebly.com/