Public and Expert Understandings of MPB
Preliminary Findings

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Social Complexity of Managing MPB

- Communities differ in social, cultural, and economic characteristics
- Diverse attitudes, perspectives, and preferences
- Impacts & risks change over time with the cycle of the disturbance
- Agency perspectives about impacts & management strategies may differ from the public’s
Presentation outline

- MPB in the news
- Public awareness
- Public perceptions of MPB and its impacts
- Public acceptance of management options
- Public trust in government & industry
- Compare land managers and the public
What did we do?

- 3 study regions
- Content analysis of newspaper articles
- Recruited residents by telephone in 2009
- Mail survey (n = 1,303)
- Invited 68 land managers
  - 43 completed an internet survey
MPB in the News

MPB Newspaper Articles

Number of Articles Published Each Year

Source: Romanowski 2009
Analysis of AB Newspapers

- Identified key messages
  - Biology and ecology
  - Extent of the infestation
  - Management strategies
  - Potential impacts

- Citizen concerns
  - Management impacts on environment (water quality, wildlife), tourism and recreation
  - Timber grab
  - Uninformed, quick decisions
Number of editorials, opinions, letters to editors expressing concerns

Source: Romanowski 2009
Where do residents get MPB information?

- Media (87%)
- Provincial government (54%)
- Federal government (37%)
- Forest industry (34%)
- Universities (11%)
- ENGOs (10%)
Public’s Experience with MPB

- **on my property**
  - Seen small patches: 5.5%
  - Seen large patches: 11.5%
- **areas in BC**
  - Seen small patches: 63.3%
  - Seen large patches: 79.0%
  - Percent of areas seen: 85.3%
- **seen large patches**
  - Percent of areas seen: 73.0%
- **seen small patches**
  - Percent of areas seen: 68.6%

Legend:
- **Southwest**
- **West-central**
- **Northwest**
Awareness of MPB Management in their Region

Percent with moderate knowledge

- Southwest: 55%
- West-central: 51%
- Northwest: 49%
MPB Knowledge

Mean knowledge score

Southwest: 4.5
West-central: 4.1
Northwest: 3.8

Number correct

Southwest West-central Northwest
Public and Land Manager Surveys

This survey is being conducted by the Foothills Research Institute in collaboration with researchers at Natural Resources Canada. The purpose of the survey is to help forest managers understand the public’s views of the mountain pine beetle, expectations for managing the beetle, and their information needs. All of your responses will be kept confidential. Your name never appears with your answers. Only a summary of everyone’s answers will be used in reports and presentations.

Please try to answer all of the questions. If there are any questions you do not wish to answer, leave them blank and move to the next one.

Please return your completed questionnaire in the postage paid envelope provided. Thank you for taking the time to complete this questionnaire.

If you have any questions regarding this survey please contact Bonita McFarlane by phone at 780-435-7383 or email Bonita.McFarlane@nrcan.gc.ca

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Perceived Impacts

- **Forests**
  - Southwest: 30.0
  - West-central: 21.5
  - Northwest: 40.8

- **Community**
  - Southwest: 9.9
  - West-central: 9.3
  - Northwest: 20.2

- **Personal**
  - Southwest: 11.6
  - West-central: 10.7
  - Northwest: 14.5
Concern about MPB Impacts

- Economic losses
- Scenic quality
- Wildlife habitat
- Forest recreation

Great concern (%)

- Southwest
- West-central
- Northwest
- Managers
Attitude towards MPB

- Helps ensure forests are healthy
  - Southwest: 13.4%
  - West-central: 14.8%
  - Northwest: 25.2%
  - Managers: 41.5%

- Rejuvenates forests
  - Southwest: 15.7%
  - West-central: 19.8%
  - Northwest: 25.5%
  - Managers: 43.9%

- Threat to biodiversity
  - Southwest: 51.4%
  - West-central: 62.6%
  - Northwest: 73.7%
  - Managers: 73.3%

- Ecological disaster
  - Southwest: 52.2%
  - West-central: 57.5%
  - Northwest: 71.6%
  - Managers: 67.8%
What approach to take on Crown land?

- **do all that can be done**: Southwest 45.6%, West-central 59.6%, Northwest 57.3%, Managers 70.0%
- **susceptible areas**: Southwest 22.5%, West-central 21.0%, Northwest 21.9%, Managers 26.4%
- **attacked areas**: Southwest 7.5%, West-central 15.1%, Northwest 18.2%, Managers 18.2%
- **no intervention**: Southwest 4.4%, West-central 2.7%, Northwest 7.6%, Managers 0.0%

Percent range: 0.0 - 80.0
Acceptable Management Options

- Harvesting activities
  - salvage logging (90%), adjusting harvest plans (77%), harvesting infested areas (76%), thinning healthy forests (70%)
- Prescribed burning infested areas (79%); non-infested areas (36%)
- Cut & burn (77%)
- Pheromones (73%)
- Chemical control (carbaryl) (56%)
Acceptance: Managers and the Public

- **salvage**: 73.0% by Managers, 70.7% by Public
- **adjust plans**: 82.9% by Managers, 50.0% by Public
- **harvesting**: 82.5% by Managers, 57.1% by Public
- **cut & burn**: 62.5% by Managers, 41.5% by Public
- **pheromones**: 65.0% by Managers, 46.3% by Public
- **burn non-infested**: 14.7% by Managers, 0.0% by Public
- **burn infested**: 61.0% by Managers, 44.3% by Public

Percent very acceptable

- Public
- Managers
Effectiveness in Controlling MPB

- Adjust plans: 85.0% effective (PUBLIC: 70.7%, MANAGERS: 70.7%)
- Harvesting: 82.9% effective (PUBLIC: 75.4%, MANAGERS: 75.4%)
- Cut & burn: 71.5% effective (PUBLIC: 70.7%, MANAGERS: 70.7%)
- Pheromones: 65.2% effective (PUBLIC: 62.5%, MANAGERS: 62.5%)
- Burn non-infested: 63.4% effective (PUBLIC: 43.5%, MANAGERS: 63.4%)
- Burn infested: 76.6% effective (PUBLIC: 56.2%, MANAGERS: 56.2%)

Percent effective/very effective

PUBLIC
MANAGERS
Stop MPB Spread Within 5 years?

Southwest: 38.5% Unlikely, 15.2% Very Unlikely
West-central: 35.2% Unlikely, 11.2% Very Unlikely
Northwest: 34.8% Unlikely, 14.4% Very Unlikely
Managers: 36.6% Unlikely, 31.7% Very Unlikely
Satisfaction with the Response

<table>
<thead>
<tr>
<th>Region</th>
<th>Somewhat satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southwest</td>
<td>47.2</td>
<td>8.1</td>
</tr>
<tr>
<td>West-central</td>
<td>45.1</td>
<td>8.9</td>
</tr>
<tr>
<td>Northwest</td>
<td>40.5</td>
<td>7.8</td>
</tr>
<tr>
<td>Managers</td>
<td>24.4</td>
<td>24.4</td>
</tr>
</tbody>
</table>

Legend:
- Red: Somewhat satisfied
- White: Very satisfied
Trust: openness of government

- **information about its activities**
  - Southwest: 47.1%
  - West-central: 45.5%
  - Northwest: 41.0%
  - Managers: 75.5%

- **too influenced by industry**
  - Southwest: 36.3%
  - West-central: 41.0%
  - Northwest: 32.7%
  - Managers: 72.5%

- **open to new ideas**
  - Southwest: 39.5%
  - West-central: 42.9%
  - Northwest: 32.7%
  - Managers: 72.5%

- **biased information**
  - Southwest: 25.2%
  - West-central: 25.2%
  - Northwest: 25.3%
  - Managers: 20.0%

Legend:
- Yellow: Southwest
- Green: West-central
- Blue: Northwest
- Red: Managers
Trust: competency & commitment

Percent agree/strongly agree

- best interest of ABs
- is committed
- has expertise
- response reflects my values/opinions

*Southwest*  *West-central*  *Northwest*  *Managers*
Trust in the Forest Industry

- Trust to adjust practices to minimize impacts:
  - Southwest: 49.6%
  - West-central: 51.6%
  - Northwest: 39.5%
  - Managers: 60.9%

- Doing a good job of managing to prevent spread:
  - Southwest: 34.0%
  - West-central: 43.0%
  - Northwest: 24.1%
  - Managers: 63.4%
Conclusions

- Public is not well informed
- The MPB is viewed as a threat that should be controlled
- High level of acceptance and perceived effectiveness for controls (except prescribed burning non-infested areas)
- A varied response among the regions
- Many similarities and some differences between managers & public
Implications

- Educate the public
- A varied and dynamic response by partnering with communities to incorporate local values and concerns
Thank you

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• People who responded to the survey