Brightening Conflict Analysis using PCI

Kathryn Mazaika
School for Conflict Analysis & Resolution
George Mason University
Interest & Motivation for Project

• Supplement Qualitative Interviews

• Introduce PCI Toolset to Conflict Analysis

• Encourage PCI’s Use & Invite Feedback
Roadmap for Presentation

• Introduce Background Survey Information
• Using Three Examples
  – Background Survey Results
  – Significance Testing Results
  – Transition to the Discussion of PCI
• What is PCI?
• PCI Results
• PCI Difference Test Results
• Conclusions & Benefits of PCI in Conflict Analysis
Background

• Dissertation Research
  – Mixed Methods Research Design
    Partially Mixed Concurrent Dominant Status
    (Leech, 2009)
• Semi-structured Interviews & Background Survey
• Conducted Concurrently
• Analyzed & Interpreted Separately
Survey Focus & Structure

• Ideas about Animals & Black Bears

• Black Bear Management

• Community & Community Decision-making

• Community Decision-making Processes & Important Conditions
### Background Survey Results

#### Black Bear Management Decisions

<table>
<thead>
<tr>
<th>Final decisions about how to deal with a black bear that has become a problem should rest with the wildlife management agency.</th>
<th>Strongly Agree</th>
<th>Moderate Agree</th>
<th>Slightly Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Slightly Disagree</th>
<th>Moderate Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>40.7</td>
<td>28.8</td>
<td>7.6</td>
<td>7.6</td>
<td>2.5</td>
<td>5.9</td>
<td>6.8</td>
<td></td>
</tr>
</tbody>
</table>
## Background Survey Results

### Important Conditions in Community Problem Solving

<table>
<thead>
<tr>
<th></th>
<th>Very Important</th>
<th>Important</th>
<th>Moderately Important</th>
<th>Slightly Important</th>
<th>Not Important at All</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>An impartial facilitator should lead the community process.</td>
<td><strong>30.3</strong></td>
<td>26.1</td>
<td>16.0</td>
<td>12.6</td>
<td>10.1</td>
<td>5.0</td>
</tr>
<tr>
<td>A successful community process explores all non-lethal approaches to manage black bears.</td>
<td><strong>53.0</strong></td>
<td>24.8</td>
<td>11.1</td>
<td>7.7</td>
<td>3.4</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Significance Testing Results

• Independent samples t-test
  – Impartial Facilitator: Gender

• One-way ANOVAs
  – Impartial Facilitator: Age, Residency

• Kruskal Wallis ANOVAs/ Mann-Whitney U
  – Black Bear Management Decisions Affiliation: Residents & Public Agency Employees-
  – Success & Non-Lethal Approaches: Education
What is PCI?

• Developed by CSU to enhance understanding of natural resource management research and results
• Calculate, Graph & Compare PCIs
• PCIs range from 0 to 1 and indicate levels of consensus or dissensus.
• Web Accessible
  
  www.warnercnr.colostate.edu/~jerryv/PCI2/index.htm
## Surveywide PCI Results

<table>
<thead>
<tr>
<th>Opinions About Wildlife, Black Bears And Black Bear Management</th>
<th>Potential Conflict Index PCI&lt;sub&gt;2&lt;/sub&gt;</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humans should manage wildlife populations so that humans benefit</td>
<td>0.46</td>
<td>-0.45</td>
</tr>
<tr>
<td>Animals should have rights similar to the rights of humans</td>
<td>0.59</td>
<td>0.22</td>
</tr>
<tr>
<td>Hunting is cruel and inhumane to the animals</td>
<td>0.53</td>
<td>-0.43</td>
</tr>
<tr>
<td>Black bears are dangerous to humans.</td>
<td>0.38</td>
<td>-1.17</td>
</tr>
<tr>
<td>It is acceptable to destroy a black bear that has threatened a person with bodily harm.</td>
<td>0.56</td>
<td>0.73</td>
</tr>
<tr>
<td>It is acceptable to destroy a black bear that has damaged property.</td>
<td>0.54</td>
<td>-0.57</td>
</tr>
<tr>
<td>Final decisions about how to deal with a black bear that has become a problem should rest with the wildlife management agency.</td>
<td>0.37</td>
<td>1.53</td>
</tr>
</tbody>
</table>
## Surveywide PCI Results

### Community Decision-making & Important Conditions

<table>
<thead>
<tr>
<th>Community Decision-making Processes &amp; Important Conditions</th>
<th>Potential Conflict Index</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>An impartial facilitator should lead the community process.</td>
<td>0.74</td>
<td>3.57</td>
</tr>
<tr>
<td>Efforts to manage black bears should seek ideas from all parties in the community.</td>
<td>0.49</td>
<td>4.22</td>
</tr>
<tr>
<td>Black bear management decisions should invite the input of all community members.</td>
<td>0.61</td>
<td>4.01</td>
</tr>
<tr>
<td>A successful community process explores all non-lethal approaches to manage black bears.</td>
<td>0.55</td>
<td>4.16</td>
</tr>
</tbody>
</table>
PCI$_{2}$ Results
Black Bear Management Decisions

• **Affiliation**
  – Resident: Mean (0.96)  PCI (0.54)
  – Public Agency: Mean (2.17) PCI (0.25)
  – Vacation Visitors: Mean (1.68) PCI (0.16)

• **Residency**
  – Resident: Mean (1.38)  PCI (0.51)
  – Vacation Visitors: Mean (1.68) PCI (0.16)
PCI$_2$ Results
Importance of Impartial Facilitator

- **Gender**
  - Males: Mean (3.20) PCI (0.80)
  - Females: Mean (3.91) PCI (0.61)

- **Residency**
  - Part-time: Mean (3.09) PCI (0.87)
  - Vacation Visitor: Mean (4.17) PCI (0.55)

- **Age**
  - 40s: Mean (4.17) PCI (0.54)
  - 70+: Mean (3.00) PCI (0.89)
PCI₂ Results
Success & Non-lethal Approaches

• Education

  – Some College: Mean (4.42) PCI (0.45) & Grad-Professional: Mean (3.69) PCI (0.68)

  – Some Graduate: Mean (4.50) PCI (0.41) & Grad-Professional: Mean (3.69) PCI (0.68)
PCI Difference Test Results

- **Black Bear Management Decisions**
  - Residents (Full-time & Vacation Visitors) $d = 2.22$
  - Affiliation (Residents & Vacation Visitors) $d = 2.96$
  - Age (20s/30s & 50s) $d = 1.99$

- **Impartial Facilitator**
  - Gender $d = 2.41$
  - Residency (Part-time & Vacation Visitors) $d = 2.21$
  - Affiliation (Residents & Vacation Visitors) $d = 2.05$
  - Age (40s & 70+) $d = 2.61$ and (50s & 70+) $d = 2.48$

- **Success & Non-lethal Approaches**
  - Education (Bachelors & Graduate/Professional) $d = 2.42$
Benefits of Using PCI to Brighten a Conflict Analysis

- Clarifies/Corrects Assumptions from Interviews
- Identifies Areas of Cohesiveness & Disparities between Parties
- Provides Insights for Planning Multi-party Gatherings
- Creates Opportunities for Building Understanding between Parties & Within Communities
Contact Information

Kathryn Mazaika
kmazaika@comcast.net
George Mason University
School for Conflict
Analysis & Resolution
www.scar.gmu.edu