Improving the Utility of Human Dimensions Information for Wildlife Management through Geographically-Based Approaches

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The Many Challenges of Wildlife Management
A Rise in Social Conflict

- Multiple stakeholders with differing preferences and views of conservation

- Emerging public interests and demand for different uses:
  - Declines in hunting
  - 66 million wildlife viewers, spend $38 billion annually in U.S.

- Public involvement and opposition to management actions

- Ethical concerns about treatment of animals
Foundation for Conflict: Public Values Toward Wildlife
Wildlife value orientations are...

Enduring beliefs regarding wildlife

Wildlife Value Orientations

- World View “Ideal World”
- Principles for Wildlife Treatment
Utilitarian

Ideal World

Wildlife exists for human use & enjoyment

Abundance of wildlife for hunting & fishing

Principles

Manage wildlife so that humans benefit

Needs of humans take priority over wildlife

Ideology: Domination/Human Mastery
Mutualism

Ideal World
Humans and wildlife live side by side without fear
All living things part of one big family
Emotional bonding and companionship
No animal suffering

Principles
Animals should have rights like humans
Take care of wildlife
Prevent cruelty to animals

Ideology: Egalitarianism
Percent classified as Utilitarians

- Alaska: 50.4%
- Hawaii: 25.4%

Other states and their percentages are as follows:
- 32.8%
- 32.9%
- 32.2%
- 38.8%
- 41.6%
- 43.8%
- 44.1%
- 47.4%
- 46.1%
- 49.9%
- 49.1%
- 37.6%
- 35.2%
Percent classified as Mutualists
Percent of wildlife value orientation type finding actions acceptable when “bears are getting into trash and pet food containers” (nuisance situation)

<table>
<thead>
<tr>
<th>ACTION 1 - Do nothing to control bear populations</th>
<th>ACTION 2 - Provide more recreational opportunities to hunt bears</th>
<th>ACTION 3 - Conduct controlled hunts using trained agency staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilitarian</td>
<td>Pluralist</td>
<td>Mutualist</td>
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<tr>
<td>Percent Acceptable</td>
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New Directions: The Need for Greater Specificity in Human Dimensions Research

- Current approaches frequently employ broad-based surveys that lack geographic specificity

- Information about values, attitudes, & behaviors needed at more local levels

- Exploring the spatial context of human-wildlife relationships and management problems

- Integrated approaches to help with identifying potential conflict “hotspots”
Understanding People in Places: A Demonstration Project on the Utility of Geographically-Based Human Dimensions Information

Project conducted in collaboration with:

- Washington Department of FISH and WILDLIFE
- Western Association of Fish & Wildlife Agencies
- Colorado State University
- Arizona Game & Fish
- South Dakota Department of Natural Resources
Exploring WVO’s and the potential for social conflict across the landscape
Anticipating public response to local-level management strategies
Wolves in Washington

74% accepting of WDFW moving wolves to help establish new populations
Linking geographically-displayed social information with other GIS and resource data to improve utility (e.g., habitat suitability maps, conflict incident points)
Most preferred Mountain lion management action

- **Educate public**
- **Educate and relocate**
- **Relocate the lion**
- **Destroy the lion**

- **M. lion habitat**
- **Survey block**
- **Reduced returns**
- **Highways, roads**
- **National forest**
- **State boundaries**

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Kilometers

Nebraska
Other potential uses of a spatially-explicit approach?
Conclusions

• Information about values and attitudes is helpful for understanding the social context of wildlife management

• Information can be more useful when collected at finer degrees of resolution

• When coupled with biological data (e.g., species distributions), findings offer a tool for managers attempting to deal with conservation challenges and public education at more local levels