Wilderness areas: images, perceptions and expectations of the public

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Background

• Changes in traditional cultural landscape: decline of agriculture and forestry

• Environmental NGOs lobbying for new protected areas (the „wilderness areas“)

• Decisions influenced by the attitudes towards nature and attitudes towards wilderness and „rewilding“
Main questions

• How does the public define „wilderness“ and „wilderness areas“?

• Which attitudes do people have towards nature and wilderness/“rewilding“?

• What does the public expect from „wilderness areas“? How should „wilderness areas“ be managed and designed?
Wilderness

All kinds of uninfluenced nature (Broggi, 1999):

• Wilderness: pristine state of nature

• „rewilding“: derelict lands

• Restorated environments
Questionnaire survey

- Random sample of 4000 households in Switzerland
- Three language groups (proportionally accounted for)
- Response rate: 40%
<table>
<thead>
<tr>
<th></th>
<th>Wilderness-survey</th>
<th>Statistical yearbook</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-64 years</td>
<td>49.9%</td>
<td>40.4%</td>
</tr>
<tr>
<td><strong>gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>43.3%</td>
<td>51.2%</td>
</tr>
<tr>
<td>male</td>
<td>56.7%</td>
<td>48.8%</td>
</tr>
<tr>
<td><strong>Place of residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>town/suburb</td>
<td>57.5%</td>
<td>70%</td>
</tr>
<tr>
<td>countryside</td>
<td>42.5%</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Member of environmental NGO</strong></td>
<td>22.4%</td>
<td>5-10%</td>
</tr>
</tbody>
</table>
Definition of wilderness

- Untouched by human influence:
  - Yes: 90%
  - Undetermined: 10%
  - No: 0%

- Abandoned land:
  - Yes: 60%
  - Undetermined: 20%
  - No: 20%

- Restored areas:
  - Yes: 40%
  - Undetermined: 30%
  - No: 30%
Characteristics of wilderness

- Absence of economic exploitation: Yes (90), Undetermined (10), No (0)
- Absence of control: Yes (70), Undetermined (30), No (10)
- Absence of influence: Yes (80), Undetermined (20), No (0)

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Human-nature relationship

Attitudes towards nature

Cluster analysis (Ward)

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Typology of human-nature relationship

- **nature-connected user**: 31.7%
- **nature controller**: 27.3%
- **nature sympathiser**: 18.2%
- **nature lover**: 22.8%
Sociodemographic characteristics

Results of ANOVA

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>F(3, 1227)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>17.54***</td>
<td></td>
</tr>
<tr>
<td>Provenance (rural)</td>
<td>14.43***</td>
<td></td>
</tr>
<tr>
<td>Residence (rural)</td>
<td>4.73**</td>
<td></td>
</tr>
<tr>
<td>Environmental NGO</td>
<td>27.46***</td>
<td></td>
</tr>
<tr>
<td>Profession nature</td>
<td>2.35 n.s.</td>
<td></td>
</tr>
<tr>
<td>Language German</td>
<td>21.88***</td>
<td></td>
</tr>
<tr>
<td>Language French</td>
<td>7.34***</td>
<td></td>
</tr>
<tr>
<td>Language Italian</td>
<td>22.72***</td>
<td></td>
</tr>
</tbody>
</table>

* * p < .05, ** p < .01, *** p < .001.
Nature-connected users (27.3%)

- Grown up at countryside, few members of env. NGO
- Utilitarian attitude towards nature
- Attached to nature
- Conservation traits: wish nature to remain unchanged
- Spend much leisure time in nature
Nature controllers (22.8%)

- Urban dwellers, Italian speaking people
- Conservative political/protection ideas concerning the appearance of nature
- Value the usefulness of nature
- Like to influence and design nature: nature should please people
Nature sympathisers (18.2%)

- Urban dwellers, members of environmental NGO
- Usability of nature for leisure or business irrelevant
- Biophilia attitudes: diversity of nature important, nature does not have to please humans
- Distanced emotional attitude
- Spent little time in nature
Nature lovers (31.7%)

- Urban residents, members of environmental NGOs, German speaking people
- Diversity and pristine character of nature are important
- Idea of reducing the human influence in nature
- Feel as being part of nature
# Attitudes towards wilderness

<table>
<thead>
<tr>
<th></th>
<th>concern threat</th>
<th>evaluation of wilderness</th>
<th>fascination admiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>threat</td>
<td>.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>concern</td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>abandoned nature</td>
<td>.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>danger for mankind</td>
<td>.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>research field</td>
<td>.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>support w. areas</td>
<td></td>
<td>-.65</td>
<td></td>
</tr>
<tr>
<td>accept predators</td>
<td></td>
<td>-.64</td>
<td></td>
</tr>
<tr>
<td>changes in landscape</td>
<td></td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>habitat</td>
<td></td>
<td>.47</td>
<td></td>
</tr>
<tr>
<td>well-being</td>
<td></td>
<td></td>
<td>.79</td>
</tr>
<tr>
<td>fascination</td>
<td></td>
<td></td>
<td>.76</td>
</tr>
<tr>
<td>self-experience</td>
<td></td>
<td></td>
<td>.58</td>
</tr>
<tr>
<td>Eigenvalues</td>
<td>3.71</td>
<td>1.46</td>
<td>1.10</td>
</tr>
<tr>
<td>% of variance</td>
<td>30.92</td>
<td>12.23</td>
<td>9.18</td>
</tr>
</tbody>
</table>

PCA, Varimax-rotation, N=1328
# Attitudes towards wilderness

## Results of ANOVA

<table>
<thead>
<tr>
<th>Attitude</th>
<th>F(3, 1229)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concern and threat</td>
<td>62.54***</td>
</tr>
<tr>
<td>Fascination and admiration</td>
<td>92.40***</td>
</tr>
<tr>
<td>Evaluation of wilderness and rewilding</td>
<td>13.20***</td>
</tr>
</tbody>
</table>

*p < .05, ** p < .01, *** p < .001.*
Concern and threat

positive

negative

nature use

nature controller

nature sympathiser

nature love

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Fascination and admiration

![Bar chart showing attitudes towards nature]

- Positive:
  - Nature use
  - Nature controller
  - Nature sympathiser
  - Nature love

- Negative:
Evaluation of wilderness

positive

negative

nature use
nature controller
nature sympathiser
nature love

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Attitudes towards rules

Which of the following rules should apply in „wilderness areas“?

<table>
<thead>
<tr>
<th>Rule</th>
<th>F(3, 1264)</th>
<th>F(3, 1263)</th>
<th>F(3, 1265)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No access</td>
<td>5.82**</td>
<td>22.12***</td>
<td>9.57***</td>
</tr>
<tr>
<td>Unrestricted access</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventions/rules</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sports forbidden</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dogs on leash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lighting fire forbidden</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leaving trail forbidden</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p < .05, ** p < .01, *** p < .001.

Note: „wilderness areas“ are areas where nature is not or no longer influenced.
Forbidding of fire

![Bar chart showing approval levels for different groups.

- **Nature user**
- **Nature controller**
- **Nature sympathiser**
- **Nature lover**

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Forbidding of sports

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Use of leashes for dogs

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Use of pathways

Nature user
Nature controller
Nature sympathiser
Nature lover

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Attitudes towards infrastructure

Which of the following infrastructure would you like to find in „wilderness areas“^1?

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>F(df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signs, markers</td>
<td>F(3, 1266) = 6.877 ***</td>
</tr>
<tr>
<td>System of pathways</td>
<td>F(3, 1267) = 1.434 n.s.</td>
</tr>
<tr>
<td>Parking lots</td>
<td>F(3, 1265) = 5.568 **</td>
</tr>
<tr>
<td>Picnic areas</td>
<td>F(3, 1269) = 7.090 ***</td>
</tr>
</tbody>
</table>

p < .05, ** p < .01, *** p < .001.

Note: ^1 „wilderness areas“ are areas where nature is not or no longer influenced.
System of pathways

Nature use
Nature control
Nature sympathise
Nature love

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Signs

appro\(\text{ve}\)

\begin{center}
\begin{tabular}{c}
\hline
appro\(\text{ve}\)  \\
\hline
\end{tabular}
\end{center}
Car parks

Approve

disapprove

nature use  nature controller  nature sympathiser  nature love

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Picnic areas

Nature use, nature control, nature sympathise, nature love
Characteristics of wilderness

- Absence of economic exploitation
- Absence of control
- Absence of influence

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Conclusions

1) Discrepancy between definition of wilderness and the expectations towards wilderness areas
Conclusions

1) Discrepancy between definition of wilderness and the expectations towards wilderness areas

2) Four types of human-nature relationship: two types in favour of and two opposed to wilderness and „rewilding“

Different profiles:
Nature users - feel threatened
Nature controllers - don’t feel fascinated

different strategies to foster acceptance of wilderness
Conclusions

3) Differences between the clusters concerning the expected rules and the amount of infrastructure

Commonalities between wilderness opponents and the wilderness proponents
Conclusions

3) Differences between the clusters concerning the expected rules and the amount of infrastructure

Commonalities between wilderness opponents and the wilderness proponents

starting point for participatory designation of wilderness areas
4) Zoning of wilderness areas

- Core area
- Buffer zone
- Transition zone
Thank you...