RECREATION AND NATURE
CONSERVATION:
RESOLVING THE PROBLEM OF BALANCE

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National Park Losiny Ostrov, Moscow
National Park Losiny Ostrov and other green territories of Moscow agglomeration
Urbanized and green territories of Moscow agglomeration, km$^2$
<table>
<thead>
<tr>
<th>Taxon</th>
<th>Number of species found in the NP</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Regional Red Data Book</td>
<td>Having the NP as the only habitat</td>
<td></td>
</tr>
<tr>
<td>Mammals</td>
<td>45</td>
<td>13</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Birds</td>
<td>160</td>
<td>20</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Amphibians and reptiles</td>
<td>17</td>
<td>9</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Fishes</td>
<td>18</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Vascular plants</td>
<td>&gt;700</td>
<td>43</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Lichens</td>
<td>about 30</td>
<td>12</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Higher fungi</td>
<td>92</td>
<td>7</td>
<td>5</td>
<td></td>
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</tbody>
</table>
Intensively visited areas and corresponding calculated values of permissible and existing recreational loads, persons at a time.
Recreation cannot be limited because:

- in adjacent districts, there are no green territories capable of satisfying the demand for recreational resources;

- the NP has no legal mechanisms of influencing urban design and development along its boundaries.
Inscriptions say: National Park Losiny Ostrov, protected area...
Levels of the problem:

- **Fundamental:** complex landscape studies and planning
- **Organizational:**
  - Management and control institutions
  - Organization of the territory
- **Educational**
What was done: complex analysis

- Natural conditions (geology, hydrogeology, moisture regime dynamics, vegetation)
- Degree of ecosystem integrity/damage
- Landscape structure (comfort, visual properties)
- Recreational potential
- Urbanization impact
- Internal infrastructure of the NP
- Urban planning policy in Moscow and adjacent cities
Stability / instability of NP landscapes

- High stable
- Medium stable
- Minimally stable
- Minimally and medium unstable

Map: Obligatory recreation regulation, Forest rehabilitation, Stabilization of moisture regime
Visual structure of NP landscapes

Strictly protected zone closed for mass recreation
Examples of landscape types

- Closed, 88.5%
- Semi-open, 3.8%
- Open, 7.7%
Damaged landscapes, aesthetic and informational poverty of recreational zone
- prevent the visitors from understanding the real value of the national park, although the formation of a correct attitude to natural environment is among its most important tasks and
- make them to move deeper in the forest, together with all corresponding negative effects of increased recreation
Active pre-emptive recreational planning for three visitor categories:

1. Stationary recreants and short-distance walkers (80-90% of visitors)
2. Long-distance walkers (10-15% of visitors)
3. Excursionists (children, adults, students, specialists, etc.), 1%
What was done: ecological education

- No. of visitor centers
- No. of visitors* 1000
- Ecol. tracks, km

Graph showing the increase in visitor centers, visitors, and ecological tracks from 1993 to 2007.
What was done: organization and management

- Director
  - Forest guard
    - Forest control
    - Forestries
  - Forest management department
  - Research department
  - Department for ecological education and tourism
    - Recommendations
...To sacrifice a minor part and safe the whole
Thank you for your kind attention!