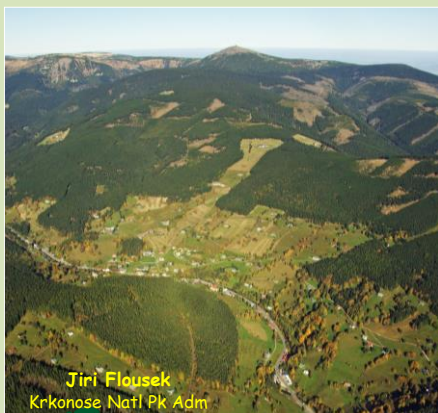


Effectiveness evaluation in the Krkonose NP and Tusheti PL (Czech Republic/Georgia)



(ECRAN Workshop on the PA Management - Istanbul, 3 Dec 2015)

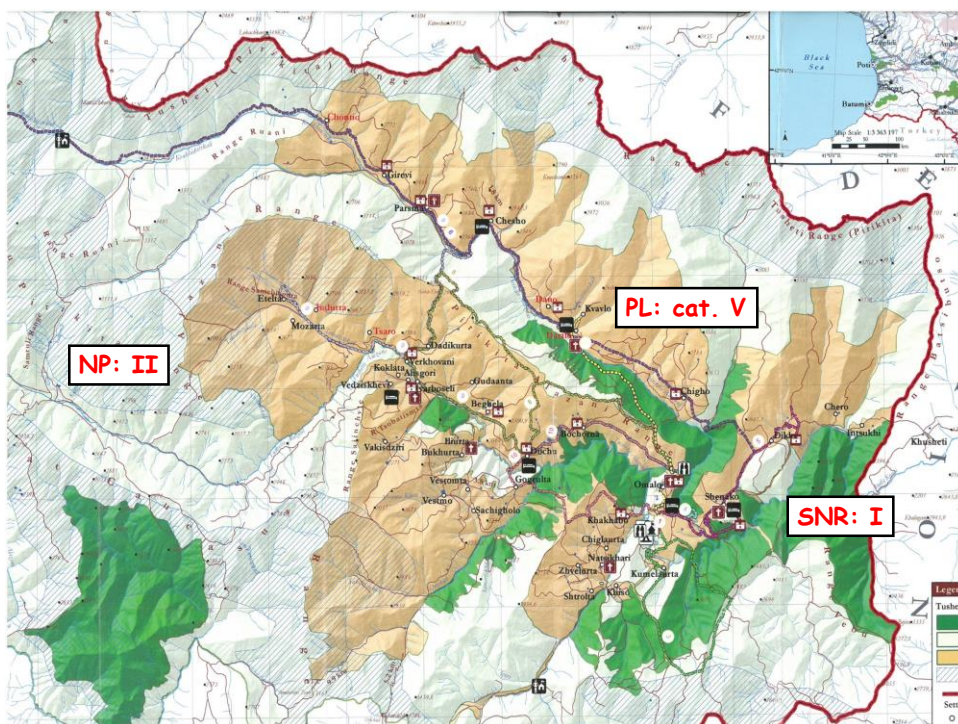
Tusheti Protected Areas

- N slopes of the Great Caucasus
- altitude 1540-4275 m
- est. 2003, 1137 km²



- mosaic of State Nature Reserve and NP (managed by MoE/APA), and Protected Landscape (managed by regional council)





Tusheti Protected Landscape

- altitude 1540-3470 m, 315 km²
- **historical settlement** (4 main valleys - 4 temis)
 - for centuries ca 10,000 inh. all year round
 - border protection against Chechnya and Dagestan
 - mainly sheep breeding and agriculture
 - seasonal migration to winter pastures in lowlands
 - increasing number of people wintering in lowlands
 - complete change of traditions during the Soviet era



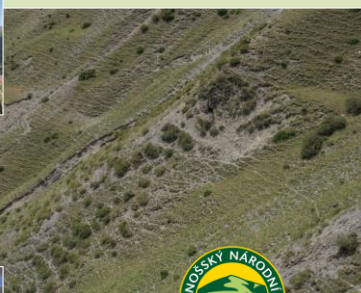
Tusheti PL

- **recent settlement** (48 villages)
 - summer: ca 2500 inh. (sheep and cattle breeding; tourist services increasing: new guest-houses, ca 10,000 visitors/year)
 - winter: 15-20 inh. (cattle, construction activities)

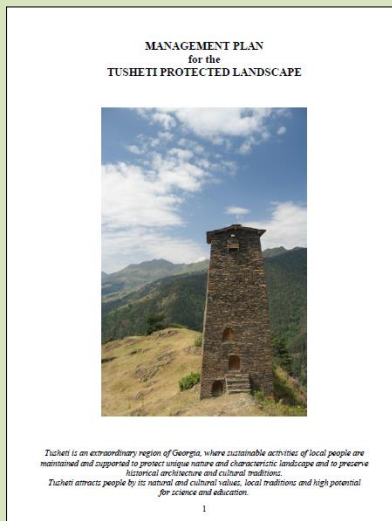
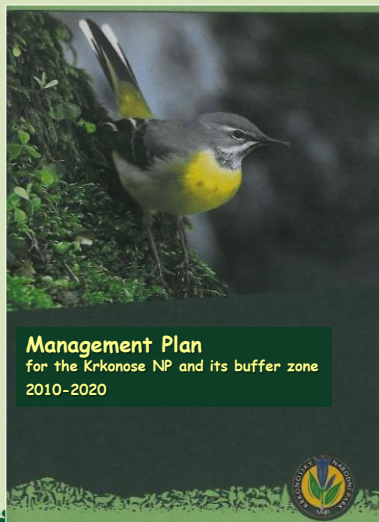


Major problems

- **overgrazing and erosion**
- **waste and waste water management absent**
- **loss of traditions** (sheep breeding, architecture)
- **tourism and recreation development**



Effectiveness of the MP



Management Plan Tusheti Protected Landscape

- 1st MP: 2014-2019
- IUCN guidelines for PAs
(Phillips 2002, Thomas & Middleton 2003)
- ☺ Chapter 8 – Indicators



Indicators

To evaluate effectiveness of the MP
each important objective supplemented
by at least one indicator:

- **quantitative** (e.g. area of hay meadows mown, area of eroded pastures revitalised, population numbers of key species, length of trails marked)
- **qualitative/descriptive** (e.g. steps achieved to support overwintering families, results of community meetings, monitoring of protection rules)



However, still just a theory ...

Objective: Sustainable hay making

Quantitative indicator:

- area of annually mowed meadows

Qualitative indicator:

- progress in mapping of hay meadows using phytosociological and management categorization and characteristics (species composition, density, ownership, historical and current management practices)
- management subplan for the best preserved meadow segments based on ecological demands of defined target species is developed

Objective: Close-to-nature forest management

Qualitative indicator:

- progress in forest management and forest protection against fire and bark beetle infestation
- state of a forest management plan elaboration
- state of preparation and implementation of rules for timber and firewood use
- functional register of logging for local purposes is developed

Objective: Maintenance of land cultivation

Quantitative indicator:

- area of arable land

Qualitative indicator:

- spectrum of crop varieties planted in fields (with special regard to agrobiodiversity)

Objective: Functional urban and spatial planning

Quantitative indicator:

- number of development/urban plans elaborated

Qualitative indicator:

- progress in developing rules for building and reconstruction, rate of observance of these rules

Objective: Sustainable life in Tachet (settlement development)

Quantitative indicators:

- number of inhabited villages/houses
- number of seasonal inhabitants, number of inhabitants staying during the winter season

Qualitative indicators:

- steps related to support families staying in Tachet throughout the year
- progress in infrastructure development
- progress in supporting traditional way of generating income for households (market with local products, sheep slaughtering and wool processing facilities, solar energy panels, etc.)
- evaluation of income generated by traditional activities (sheep breeding, handicrafts, cheese, etc.)

Objective: Functional waste management

Quantitative indicators:

- amount of waste deposited outside common dumps, amount of waste produced by households, greenhouses and campsites
- amount of waste transported out of the PL

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Qualitative indicators:

- projects prepared on waste management activities
- progress in waste management

Objective: Tourist infrastructure and facilities developed

Quantitative indicators:

- number of kilometers of marked trails maintained
- number of signposts
- number of visitors (roads, changes)
- number of guesthouses and beds (roads, changes)
- statistics of services provided for visitors by local people and associations

Qualitative indicator:

- progress in development of tourist infrastructure (bridges, guided tours, maps, etc.) and its basic assessment

Objective: Income from tourism ensured

Quantitative indicator:

- amount of income generated by tourism (entrance fee, fines, services of providers, etc.)

Qualitative indicator:

- steps achieved leading to assurance of income from tourists, and tools for its effective utilization

Objective: Protection of water courses

Quantitative indicators:

- number of planned or realized hydropower stations
- amount of extracted gravel

Qualitative indicators:

- evaluation of impacts on water courses
- changes in distribution and state (species composition) of alluvial habitats

Objective: Favourable status of selected species and habitats

Quantitative indicator:

- population numbers (or area) for selected "umbrella" species and habitats

Qualitative indicators:

- description of status of selected "umbrella" species and habitats
- progress in active management of the most vulnerable segments of nature environment (fencing of spruces and meadows, cutting trees overgrowing flower-rich meadows, mowing of abandoned meadows, planting of solitary trees on eroded pastures, etc.)

Objective: Monitoring and research

Quantitative indicator:

- number of diploma works and results of scientific research and monitoring

Qualitative indicators:

- state of monitoring schemes proposed and applied (bark beetle monitoring, monitoring of habitats and species, permanent plots, etc.)
- available results of monitoring of key nature phenomena (the beaver post, fire, bark beetle, weather), incl. photo-documentation outputs

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Management Plan Krkonose National Park

☹ No indicators explicitly given in the MP...

... but many activities done provide
useful indicators
(esp. for Natura 2000 target habitats and
species)



Natura 2000 habitats (1)

Recent area of the most impacted montane
meadows (6230*, 6510, 6520):

- original area known for every municipality cadastre
- subtracking of areas destroyed/damaged
- limits for each habitat based on its priority, total area, quality and representativeness etc.
(from 1 to 9 % „tolerated“ to be damaged)
- if limit reached, no development allowed



Natura 2000 habitats (2)

Effectiveness of montane meadow management:

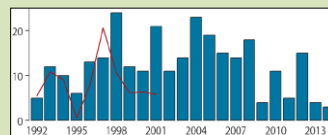
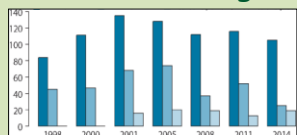
- different management approaches used to conserve biodiversity of flower-rich meadows
- monitoring of diagnostic plant species (mainly groups of species)
- monitoring of animal indication taxa (e.g. butterflies, grasshoppers)



Natura 2000 species

Conservation measures for SPA target species mentioned in the MP:

- lekking sites for the black grouse created (census of lekking males: where and how many)



- nesting opportunities for the Tengmalms owl improved (number of occupied nest boxes)



