

CO-EXISTENCE OF NATURE TOURISM AND WILDLIFE IN LITHUANIA

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WILDLIFE

have significant formative role in forest communities as an inseparable part of forest biota. As a *biological diversity* is the term given to a variety of life on Earth and natural patterns it forms,

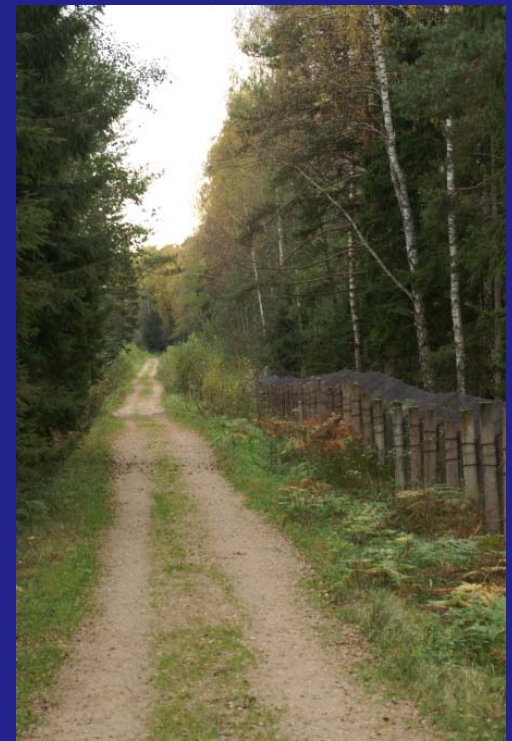
- wildlife populations are an important component of biodiversity.

Wild animals are not the passive consumers in forests.

They act the composition; dynamics, vitality and sustainability of forest ecosystems,

- and - undergo the responsive impact themselves.

OBJECTIVE = to determine the role of wildlife and their study in the development of **nature tourism** in Lithuania

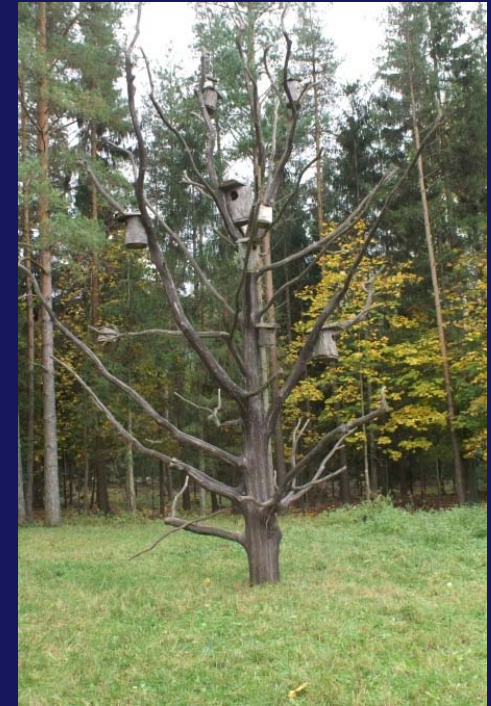


Human activities affect the **ability of game species to disperse, migrate, and adapt** to environmental change may ultimately be more important than some of the human activities that promote these changes.

Humans can disrupt responses of animal species to uncongenial environments in the short term by preventing species dispersal, migration and animal impact to the forest ecosystem.

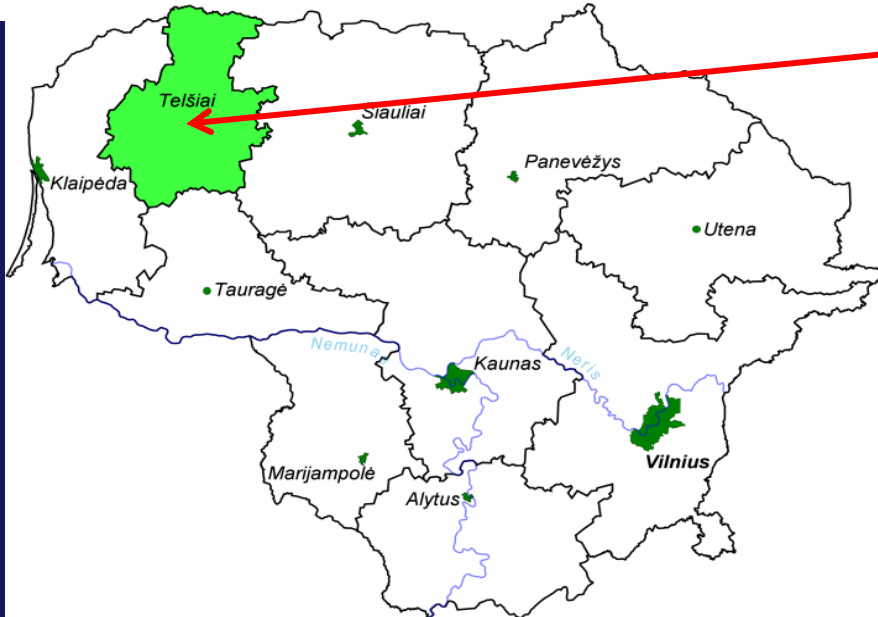
Knowledge of wild animals should be **the guideline** dealing with problem of wildlife and human society. Foresters, enthusiasts try to introduce the society

with those that are near humans as wild animals.





56° 09' 40
 22° 03' 30'' Telšiai district 22° 44' 10''
 55° 39' 30''



The main research object - Forest District Eigirdžiai (Ubiškės) on the territory of Telšiai Forest Enterprise (North Western Lithuania)

The study territory is situated **75 km to the northeast of the Baltic seashore** in the **Žemaitija highlands region**).

The area distinguished by **high and uneven precipitation rates** that on average makes up **788 mm** while something reached **1012 mm**.

There are near **27%** of the winters with **unstable snow cover** and share of thaws reached **45%**
The typical changeability of winter conditions is unfavourable for more animal species.

The area belongs to the category of **mixed spruce – deciduous forests of the southern taiga of geobotanical complex**

The forests comprises near **49%** of the territory

However, the fertility of the land is lower than the average for the country as a whole, and agriculture is not very profitable for the farmers here. The Country tourism is in great demand
 Foresters implement the great task of the environmental education at the same time.

The status of study area is motivated by the striving of ecologically, economically and socially based forest management including

- ⇒ maintaining of sustainable forestry,
- ⇒ landscape, key habitats and species protection,
- ⇒ their diversity as well as
- ⇒ protection and sustainable use of game resources.

<i>District</i>	<i>Moose</i>	<i>Red deer</i>	<i>Roe deer</i>	<i>Wild boar</i>	<i>Badger</i>	<i>Wolf</i>
Telšiai district	84	194	1,512	699	127	9
<i>In total in the country</i>	4,825	15,912	91,949	35,935	3,697	352
Animal % on the research area	1.7	1.2	1.7	2.0	3.4	2.6

The main wildlife populations are not very numerous on the study territory in comparison with the all country, however, the density of ungulates reached the ecological densities (roe deer, red deer, wild boar), and moose number depends on the season and climatic conditions. Thus, ungulates animals are usual for humans and acceptable for observation in their natural habitats. Unfortunately, most species of wild animals are secretive and wary of people (esp. red deer, lynx, wolf).





As usual, Zoos claim to educate people about animals, but small enclosures or cages do not allow animals to display their natural behaviours, and signs typically tell visitors little more than the names of the animals, where they can be found, and what they eat.

Animals at zoos lack privacy and have little opportunity for mental stimulation or physical exercise. These conditions cause them to exhibit abnormal, self-destructive behaviors called zoochosis.

One of the main point of nature tourism becomes **Wildlife tourism** related to observation of wildlife in natural and semi-natural environment and preferably their native habitat. Wildlife tourism involves wild and non- domesticated animals and can encompass free-ranging and captive circumstances.

The enclosure for ungulate species comprises 14.7 ha

- Roe deer (*Capreolus capreolus*) (n=1)
- Moose (*Alces alces*) (n=1)
- Fallow deer (*Cervus dama*) (n=8)
- Moufflon (*Ovis gmelini musimon*) (n=9)
- Wild boar (*Sus scrofa*) (n=2)

for carnivores:

2.4 ha (wolves *Canis lupus*),

0.18 ha (lynx *Felis lynx*, n=7, for observation)

and 1 ha (separate enclosure for breeding)

Cage for Pine marten (*Marten marten*) (n=3)

brown bear (*Ursus arctos*)

(special temporal cage; the enclosure is establishing yet).

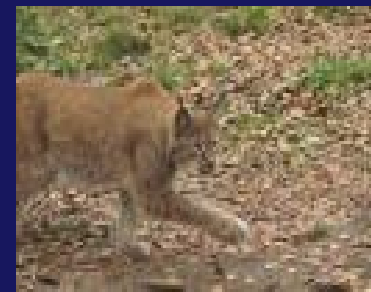
Considering the requirements of valid legal acts and wildlife research, the living conditions that are adequate to animal species requirements were established in the enclosures :

= territorial,

= behavioural ,

= physiological (reproduction, feeding, comfort behaviour).

The study of the hybridization possible in nature (wolf x dog) was conducted



In the instance where animals are kept in the enclosures that are similar to animal natural habitat, visitors have possibility to know more about animal behaviour and their habitat. That is attractive to visitors.

Additionally, we have established the wildlife monitoring network in their natural habitats on the territory of Telšiai Forest Enterprise.

We considered that the knowledge of

= **game population parameters,**

= **distribution and its reasons, and**

= **habitat conditions**

is necessary to keep wildlife in captivity and further development of wildlife tourism and dissemination of the information

Total number of permanent sample plots = **155**

Total length of the route = **15,000** metres.

* number of animals,

* their density, and

* other population parameters = were determined yearly

We used the indirect and direct research methods estimating game distribution, abundance, sex and age structure of local populations. Study was conducted within the network of transects and sample plots where we evaluated each transect unit of 4 x 100 m and counted all animal mark. Sex and age of deer species were estimated considering their prevailing pellet form. Additional survey method by animal tracks in snow was used to compare with mentioned estimating. The direct observation method was used in places of animal presence. The accuracy of given methods was determined on the ground of comparative analysis. We recorded the data of the local weather station for estimation of the duration of non-vegetative period. Protective regimes of the different functional zones were considered.

The results reflected the distribution of the different animal species and their preferred habitats. That allows to create similar conditions in the enclosures, and will help us to implement the rare species restoration



The most attractive object is Lynx enclosures (55% of priority), wolf enclosures (40%) (the main reason of less priority was wolf secrecy)

The initial and main task was an environmental education as special nature school for children



Recent and prestigious goal is the development and implementation of sustainable nature tourism for the general public including children.

The total number of visitors – 7 thousand per year „Žvėrinčius“ attracts the larger number of visitors and takes third place in the country.





Wildlife watching tower and facilities for children



'Habitat of Fallow deer, moufflon and wild boar (and moose)'



Our nearest goal is to establish the Information Centre and Lynx Breeding and Reintroduction Centre.

Information Centre will implement the major principles of nature tourism, esp. education about wildlife species and their habitats, importance of the sustainable use of natural resources and avoidance of their degradation. The nature lessons are associated with the main recreational objects of the Telšiai Forest Enterprise (30 camping and resting sites, cognitive and educational trails and routes including commercial camping sites) and development of links with local communities





Wolves



Beaver sites in the surroundings of 'Žverinčius'



Addition

Shortly about other inseparable part of the forest recreation that directly related to wildlife - **Recreational Hunting** – as a conservation tool that becomes a significant partner in global wildlife conservation.

Recreational hunting is an essential component of effective wildlife management by

- reducing conflicts between people and wildlife; and
- providing incentives for the conservation of wildlife, their habitats and ecosystems on which wildlife depend.

A number of international environmental conventions (CITES, the Convention on Biological Diversity) and conservation organizations (e.g., WWF and IUCN) recognize that regulated sustainable use of wildlife resources can provide economic incentives that contribute to biodiversity conservation and cultural sustainability.



The total common area of production, or hunting area constitutes 4,178,362 hectares including 1,931,651 hectares of the forest area

The total hunting area involves 897 hunting units, where are more than 30,000 hunters – users of game resources.

The area of production some decreases in comparison with last hunting seasons owing to the changes in an area of the new-formed and re-formed hunting units.

Hunting traditions and further game management

have built through the centuries since earliest inhabitants have settled in present-day Lithuania 10,000 BC. Afterwards, archaeological remains, historic metrics and folklore all proclaim the honour-founded relations of the ancient Lithuanian people with nature including wildlife.

The historic formation of game management encompasses seven main stages .

After independence was restored in 1990, the changes had a profound effect on forest ownership and access to resources.

Game management becomes important for household economy and private forest owners not only as additional and fancy food but also as benefits from development of **ecological tourism and recreational hunting.**

Development of game management and changes in landowners' rights on the territory of Lithuania

<u>Development stage/precedence</u>	<u>Character</u>	<u>Landowners' rights</u>	<u>Legal basis</u>	<u>Notes</u>
I. Initial: Game management/hunting:	substantial, spiritual	<i>before social stratification</i>	<i>nothing</i>	<i>* Pre-civilization, Pleistocene E.</i>
II. Game management/ hunting - game management in embryo:	additional food source, defence of lands; soldieri training	<i>traces of proprietary rights</i>	<i>indeterminate</i>	<i>*Cooper Age and later; husbandry</i>
III. Game management/ hunting:	additional food, pleasure, leisure, recreation	<i>proprietary rights</i>	<i>Casimieras's Statute-Book, Valakai Law, Lithuanian Statutes</i>	<i>first sanctuaries; defence of large landowners' rights; large game under State property; start of licence hunting</i>
IV. Game management:	luxury, leisure, recreation household economy	<i>proprietary rights</i>	<i>Hunting Law, 1892;</i>	<i>Game under property of prosperous landowners Russian Empire period</i>
V. Game management :	recreation, leisure, food industry, household economy	<i>proprietary rights, leasehold</i>	<i>Hunting Law, 1925, 1935 Hunting rules, 1937</i>	<i>Hunting Fund, CIC membership</i>
VI. Game management :	leisure, recreation, addition for food industry	<i>state property</i>	<i>Hunting rules 1947; Law of Nature Protection 1959; etc</i>	<i>Soviet period, Soviet legal acts. No private property</i>
VII. Game management:	recreation, leisure, addition for food industry hunting tourism, ecological tourism	state property rights; large landowners' rights;	Hunting Law 2002, Hunting rules 2002, Law of Wildlife 2001, etc	<i>Post-soviet period, EU membership. By Constitution, game res nullus; By Hunting law game are under state property</i>

GAME MANAGEMENT AND GAME RESOURCES

The topic of use and protection of game resources is closely linked with forest and recreational hunting and environment protection.

**Hunting pressure can cause the impoverishment of species.
Humans are the main threat to game**

Well-regulated use of these valuable resources has proven on many occasions to be a better conservation tool than a total ban. Usually a blanket prohibition encourages use less sustainable forms because of the absence of a link to the socio-economic aspects.

Game number decreases or overpopulates not only because of their direct elimination or regardless of game population parameters through the hunting.

Even if game are hunted intensively, the important reason of undesirable changes in their populations is mistakes related to an impoverishment and destruction of game habitats and food sources, their disturbance through expansive recreation and settlement activities. 95% of problems arose because of these reasons.

Habitat destruction, escalation of the inter-competition for the vital limiting sources cause essential changes in the interaction between game and environment including a property of forest owners.

The Goals of Today are

- **the management of game populations;**
- **determination of their existing, permissible and ecological density;**
- **assessment of the interaction between game and forest vegetation;**
- **assessment of the carrying capacity and improvement of game habitats;**
- **restoration and maintaining of the balance between game and environment components;**
- **delineation of the territory for game.**
- **implementation of the selective hunting methods that help to keep a healthy wildlife populations**

Sustainable use of game resources is not only hunting (recreational or commercial) and maintaining of the permanent level of use.

That is also the increase of endangered, rare and protected species, and decrease of the overabundant species or harmful to environment and human society.

The solution of questions of the optimisation of game management is given trouble because of

- **changes in property forms,**
- **collision between consumer's and non-consumer's standpoints to game resources,**
- **misunderstandings in the game legislation**
- **purposes of the hunting to increase numbers of some species up to their overabundance while the conflict between man and game increases.**





***Thank you
for your kind attention***