



# **Carpathian biosphere reserve**

## **About some ecological aspects of the pastoral polonyna farming in the Ukrainian Carpathians**

**(in the context of the implementation of the Protocol on  
Sustainable Development of Agriculture and Rural Areas to  
the Framework Convention on Protection and Sustainable  
Development of the Carpathians)**

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(Vatra Dornei, Romania **2023**)



**Polonyna** – is a highland treeless area (meadow) covered with grass, shrubs and moss-lichen vegetation, which is located at the altitudes of **1200-1300 m above sea level**, on the approaches to the highest mountain peaks (more than 2000 meters above sea level), and are part of the subalpine and alpine belts, which are the most ecologically vulnerable.



Polonynas are characterized by a cold and humid climate, a short and rainy vegetation period, and a long and snowy winter.



In the Beskydy, Svydovets, Chornohora and Maramorosh, **the crooked forest** (shrubs), which served as an outpost for mountain forests and played an important water-regulating function in the most overmoistened highland part of the Carpathians, was **almost completely destroyed and disturbed**.

When conducting a polonyna farming **the problem of human-wildlife conflict** with large predators, which belong to protected species, becomes acute.



Livestock overgrazing leads to the impoverishment of grass, the formation of large areas covered with low-yielding species like **matgrass** and **Rumex alpinus**.



*Nardus stricta*

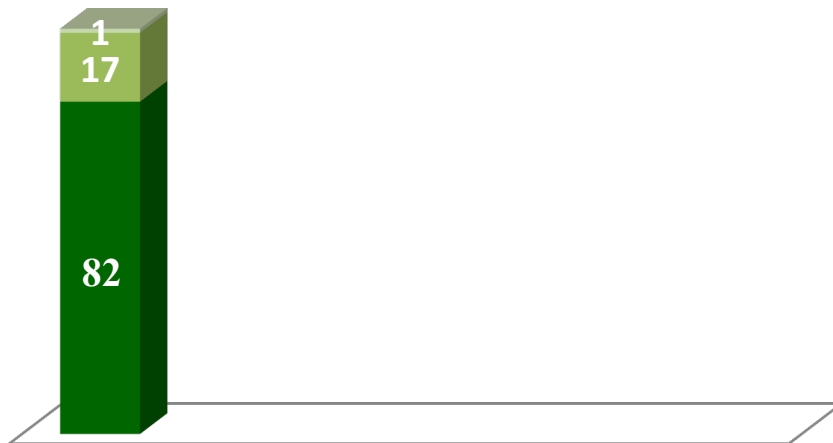
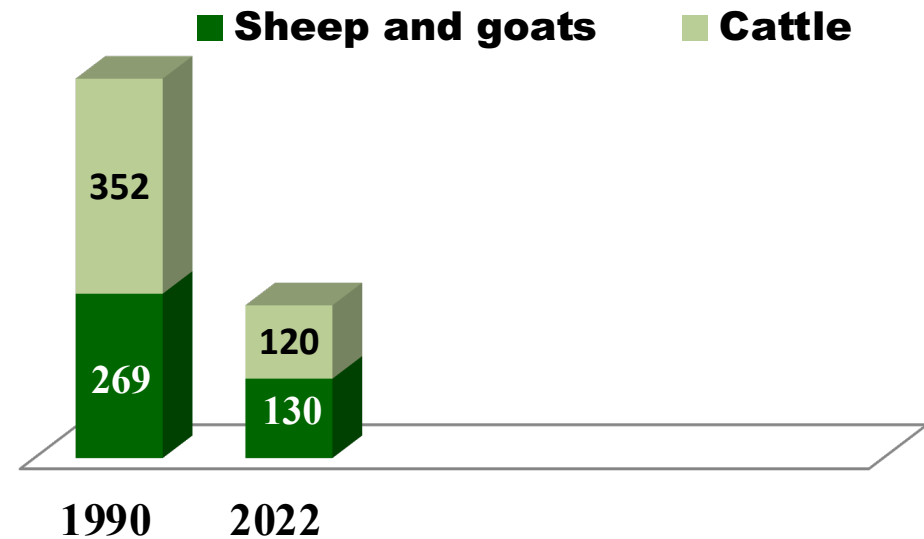


*Rumex alpinus*

Unsystematic management of the pastoral Polonyna farming in the past was also **one of the reasons for occurrence of catastrophic floods on mountain rivers.**



Over the last three decades in the Transcarpathian region (from 1990 to 2022) the **number of cattle decreased** from 352 to 120 thousand, **and sheep and goats from 269 to 130 thousand.**



According to statistics, in the mountainous natural territorial complexes of Chornohora **prevails sheep grazing**

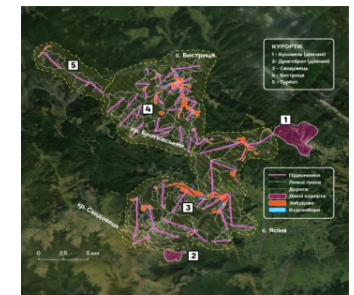
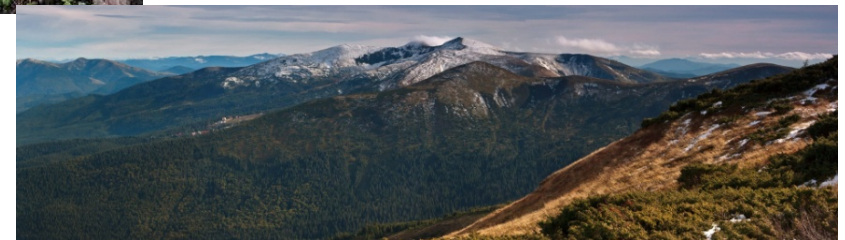
In the structure of livestock, sheep make up **82%**. The rest - 17% of the Polonyna livestock is accounted for by cattle (817 heads), and only 1% is horses (71 heads).

In recent years, the **uncontrolled, illegal massive collection of wild fruits and berries in the highlands**, especially blueberries, lingonberries (mountain cranberry), and rare medicinal plants (for example, great yellow Gentian (*Gentiana lutea*), Roseroot or Golden root (*Rhodiola rosea*), mountain arnica (*Arnica Montana*), Icelandic moss or true Iceland lichen (*Cetraria islandica*), and others) has become a big problem



**FREE SVYDOVETS**

The **construction projects of gigantic ski resorts in the Carpathian highlands**, for example in Svydovets, pose a significant threat to the conservation of wild nature and the traditional Polonyna farming in Ukraine





# Carpathian biosphere reserve

**Date of designation:** November 12, 1968

**Status of UNESCO biosphere reserve:** February 15, 1993

**Status of biosphere reserve**

**according to UA legislation:** November 23, 1993

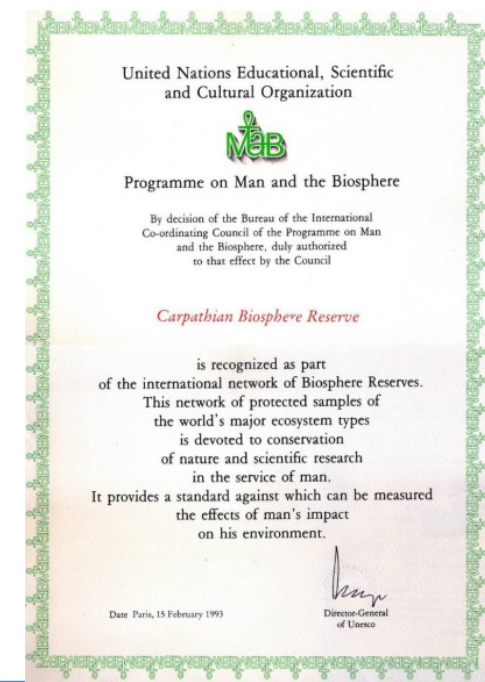
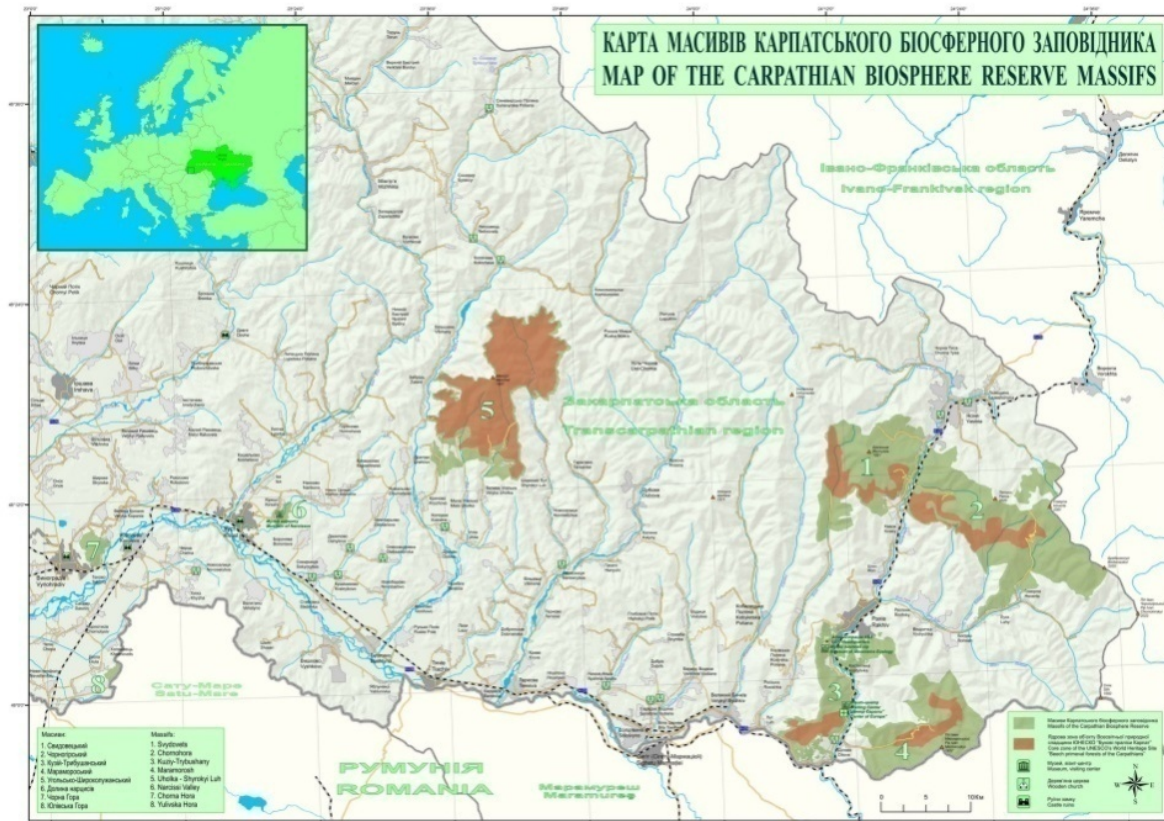
**European Diploma for PAs:** 1997, 2002, 2007, 2012, 2022

**UNESCO World Heritage Site:** June 28, 2007 (2011,2017,2021)

**Certified Wilderness areas according EWS:** 2016-2018

**Status of Ramsar wetlands:** March-April, 2019

**Total area:** 66 014 ha (comprising 8 isolated massifs (clusters))



## European Diploma

for the Carpathian Biosphere Reserve awarded by the Committee of Ministers of the Council of Europe

Whereas it is desirable to promote close co-operation between member countries of the Council of Europe, with a view to conserving and enhancing the natural environment of the peoples of Europe, or the material and spiritual well-being of present and future generations;

Whereas the Committee of Ministers has instituted to that effect a European Diploma of the Council of Europe to place under the sponsorship of the Council of Europe certain protected landscapes, reserves and natural features of European interest,

I, Daniel Tarschys, Secretary General of the Council of Europe, hereby certify that:  
The Committee of Ministers, Having regard to Resolution (65) 6 instituting the European Diploma; Having taken note of the proposal made by the Bureau of the Committee for the Activities of the Council of Europe in the field of Biological and Landscape Diversity; Having noted further the consent of the Government of Ukraine; Having deliberated thereon, Has, in its Resolution (97) 21, solemnly awarded the present diploma for the **CARPATHIAN BIOSPHERE RESERVE** to the **Ministry for Environmental Protection and Nuclear Safety of Ukraine**, thereby placing the said reserve under the sponsorship of the Council of Europe until 30 September 2002. In witness whereof I have hereto appended my signature and affixed the seal of the Council of Europe.  
Done at the seat of the Council of Europe this 30 September 1997,  
Signed: Daniel Tarschys  
Secretary General



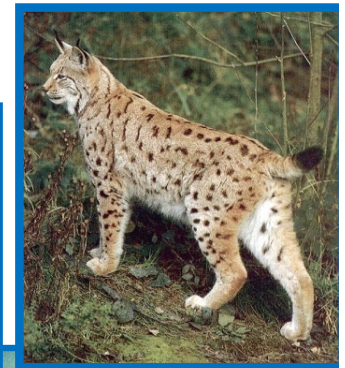
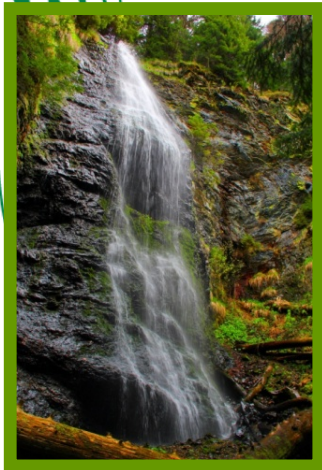
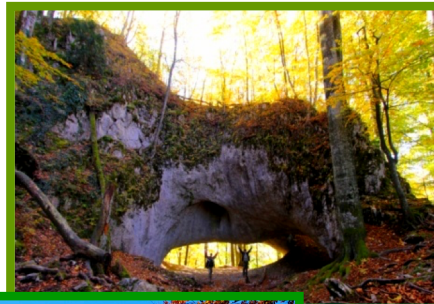
## Location and natural values

**Location:** southern macroslope of the main Ukrainian Carpathians watershed

**Altitudes:** 180 – 2061 m. asl.

### NATURAL VALUES

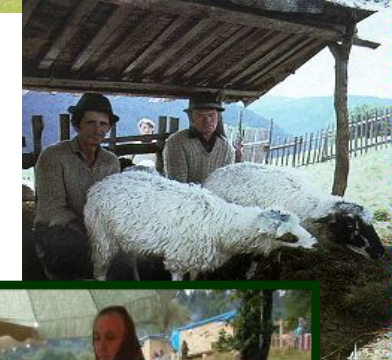
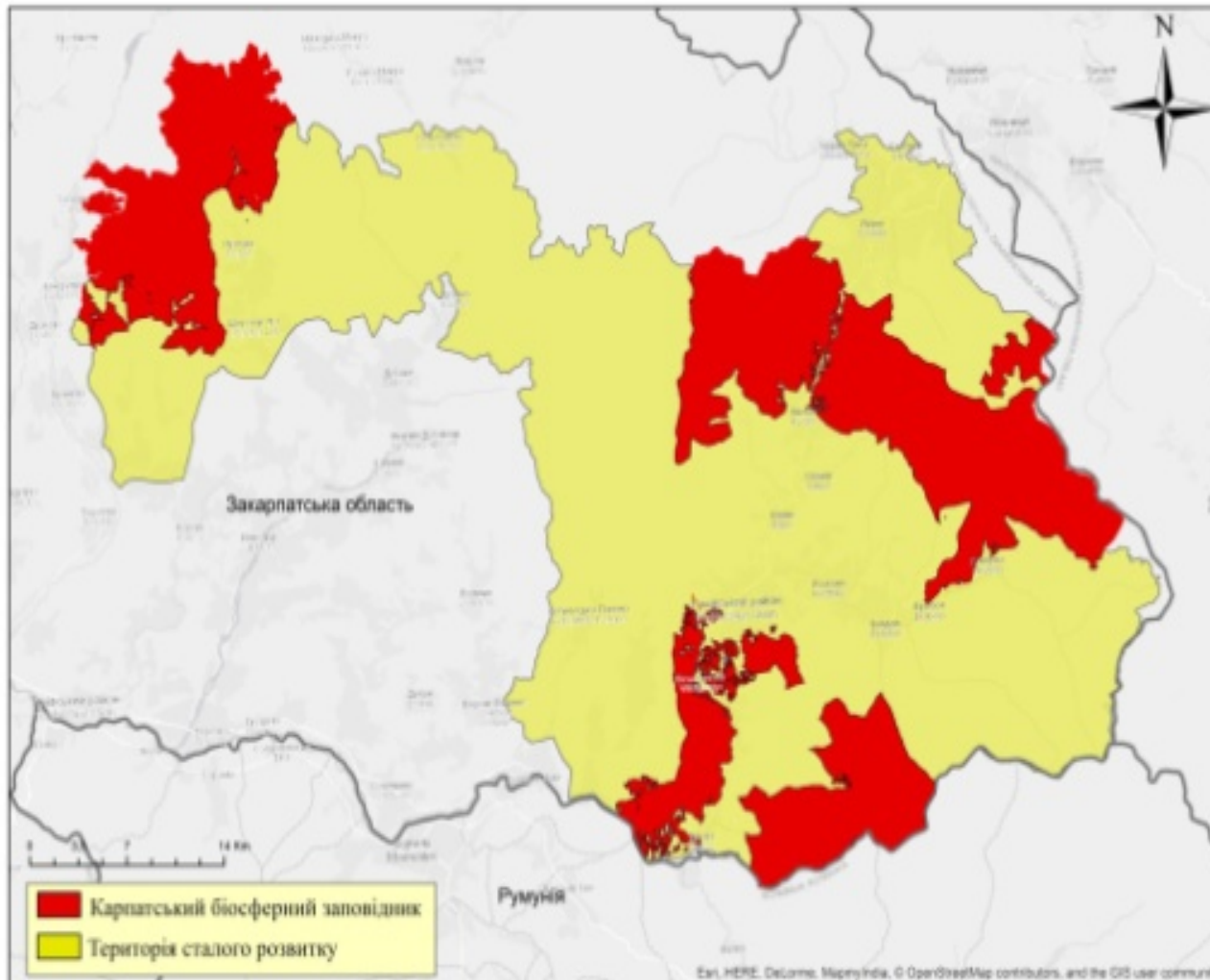
- European biggest primeval forests: beech, mixed and spruce;
- Practically undisturbed alpine landscapes;
- Viable populations of large mammals (lynx, wolf, brown bear);
- Winter colonies of bats biggest in Ukraine;
- Postglacial alpine lakes;
- Unique biodiversity;
- Largest lowland population of a mountain species *Narcissus angustifolium*;
- Karst limestone caves with endemic troglobiont species;
- Limestone cliffs with rare calcifilous flora.





# UNESCO Biosphere Reserve

- Established **transition area** of the Carpathian Biosphere Reserve (CBR) of UNESCO type with a total area of **about 140 thousand hectares**;
- 20 settlements, with population of 100 thousand people. All surrounding settlements are included in the transition zone.



## Economic activity in the context of sustainable development:

About 30% of the Carpathian Biosphere Reserve territory is used to provide resource needs of local territorial communities.

Carpathian Biosphere Reserve provides in average 6,000 m<sup>3</sup> of commercial timber and firewood to supply more than 700 households in the area of its activity.

Haymaking and animal grazing still remain among the main types of traditional nature management in the Ukrainian Carpathians. In particular, hay is harvested on the total area of 240 hectares.

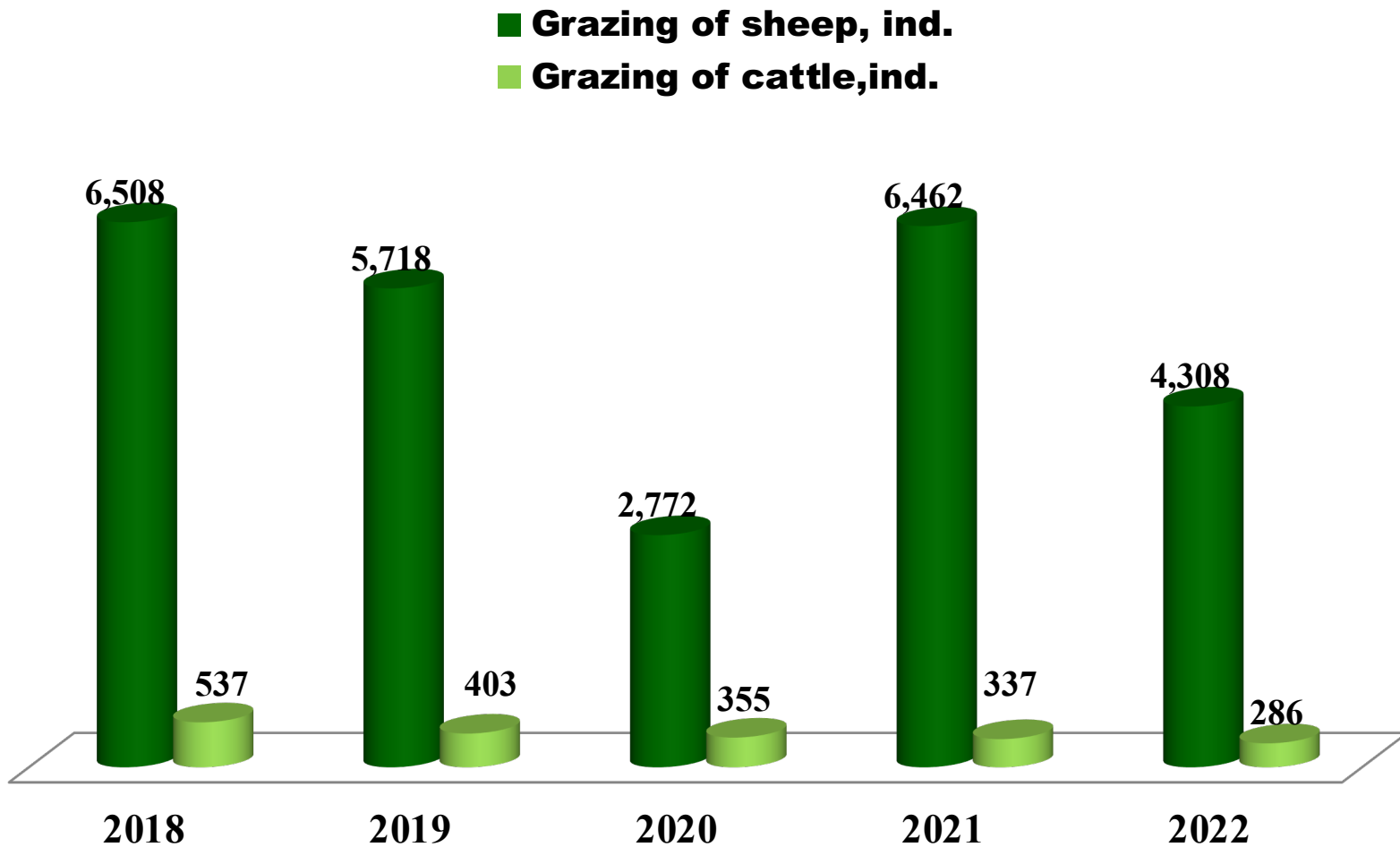
Animal grazing within the reserve is done on highland pastures on an area of over 4 thousand hectares. In total, in the protected area are grazed about 400 individuals of cattle and 6,000 sheep.

In CBR is allowed controlled harvesting of wild berries (blueberries, raspberries, blackberries, etc.) and mushrooms for the needs of local population.



6.4 thousand individuals of sheep, goats and several hundred individuals of cattle are grazed annually on the **highland meadows** that are part of **the CBR (about 3.6 thousand hectares).**

Grazing statistics in CBR during 2018-2022pp.



Successful examples of activity is the achievements of the Yasinia Territorial Community, Rakhiv district.



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# Carpathian biosphere reserve

**THANK YOU FOR YOUR  
ATTENTION**

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**Web page:** <http://cbr.nature.org.ua>

**Facebook page:**

*Карпатський біосферний заповідник //Carpathian  
Biosphere Reserve*

and

*Туристично-інформаційні центри Карпатського  
біосферного заповідника*

**Instagram Page:**

[https://www.instagram.com/crpathian br/z](https://www.instagram.com/crpathian_br/z)

