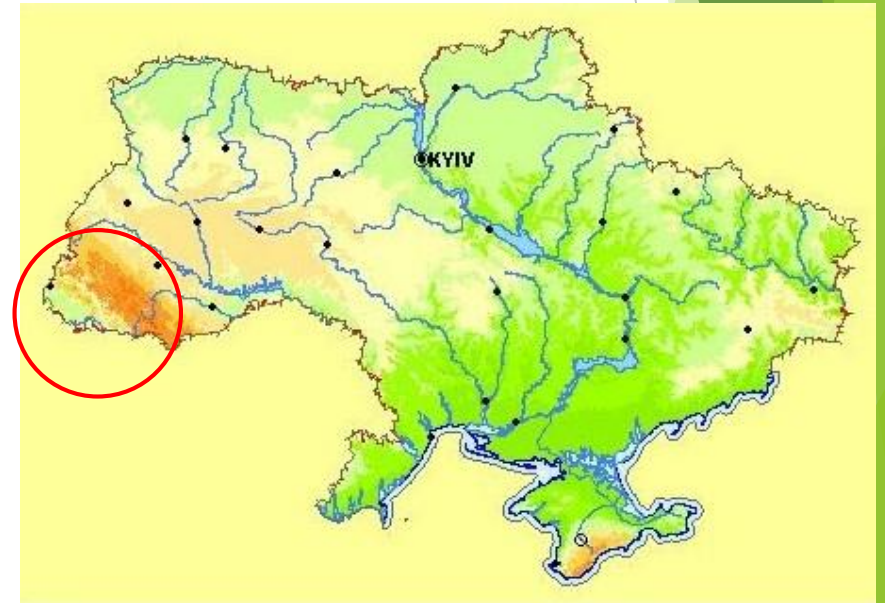
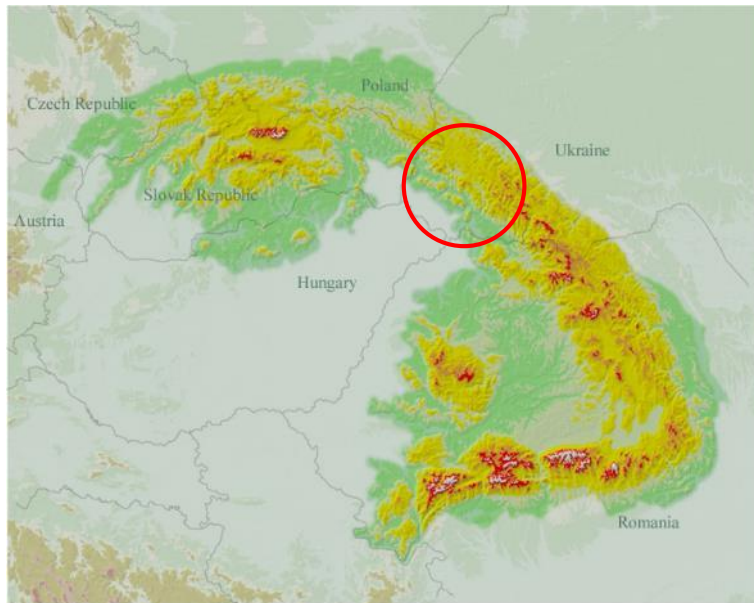


Acquaintance with the pilot area and the monitoring results of crossings for animals in Transcarpathia

A photograph of a two-lane road covered in snow, flanked by snow-laden trees. Two cars are visible on the road. A watermark 'MINOTE 9 PRO QUAD CAMERA' is visible in the bottom right corner of the image.

Andriy-Taras Bashta, expert on biodiversity , ecological corridors/ connectivity and wildlife monitoring

- ▶ The Transcarpathian region is located on the southwestern slopes of the Ukrainian Carpathians and the adjacent Transcarpathian lowlands and has an area of 12,780 km².
- ▶ This geographical position determines the variety of natural conditions: mountains, foothills, river valleys and lowlands - almost all the main landforms are found here.

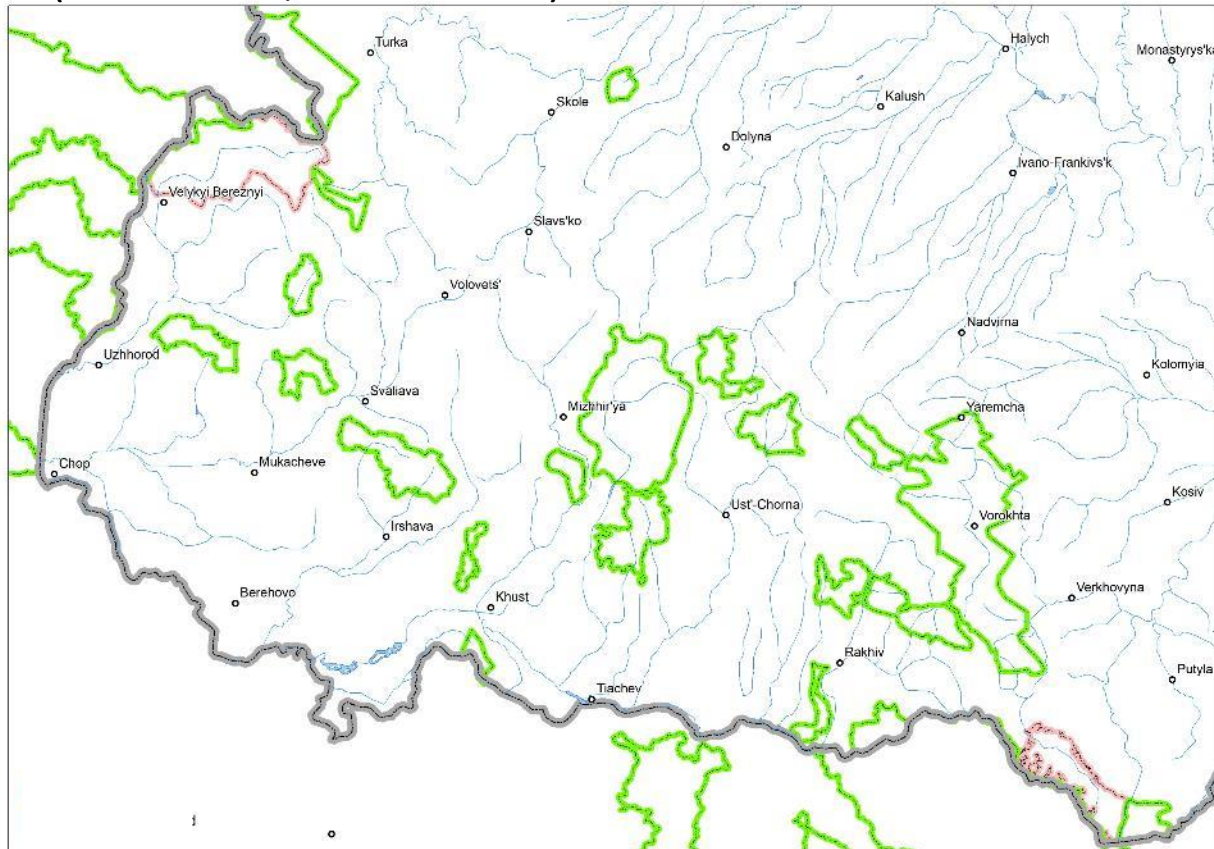


- ▶ The mountainous part of the Transcarpathian region occupies 80% of its area and includes three groups of asymmetric ridges with steep southwestern slopes cut by numerous valleys of mountain rivers.
- ▶ All rivers and streams formed in mountain valleys, and there are more than 9,000 of them in Transcarpathian region, belong to the Tysa basin and are its tributaries.
- ▶ The most valuable treasure of the region is its forests, which occupy more than half of its territory.
- ▶ The lowland part of the region is densely populated, and natural and semi-natural ecosystems are dominated in the mountains , which are subject to much less anthropogenic pressure.

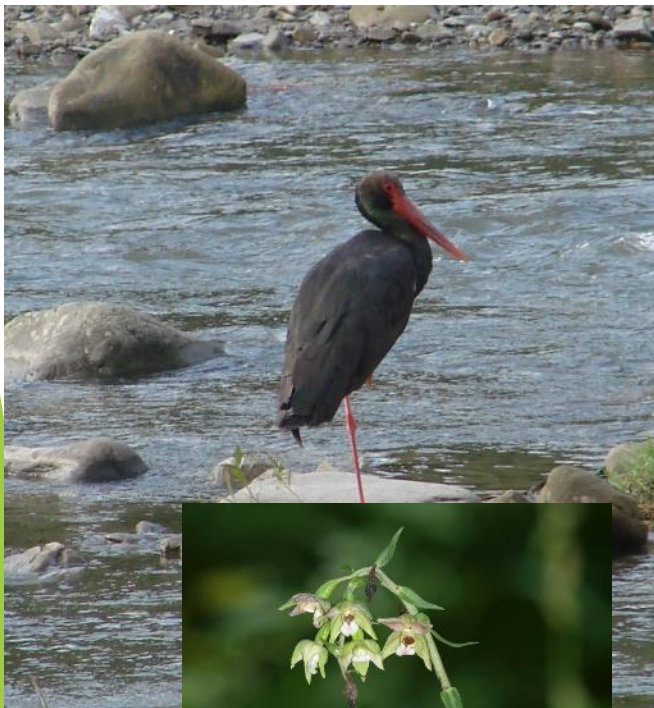
Network of Nature Reserve Fund Objects

183,496 hectares (14.2% of the total area) of protected areas were established in the territory of Transcarpathian region.

34 protected areas (area of 160,000 hectares) have state status.



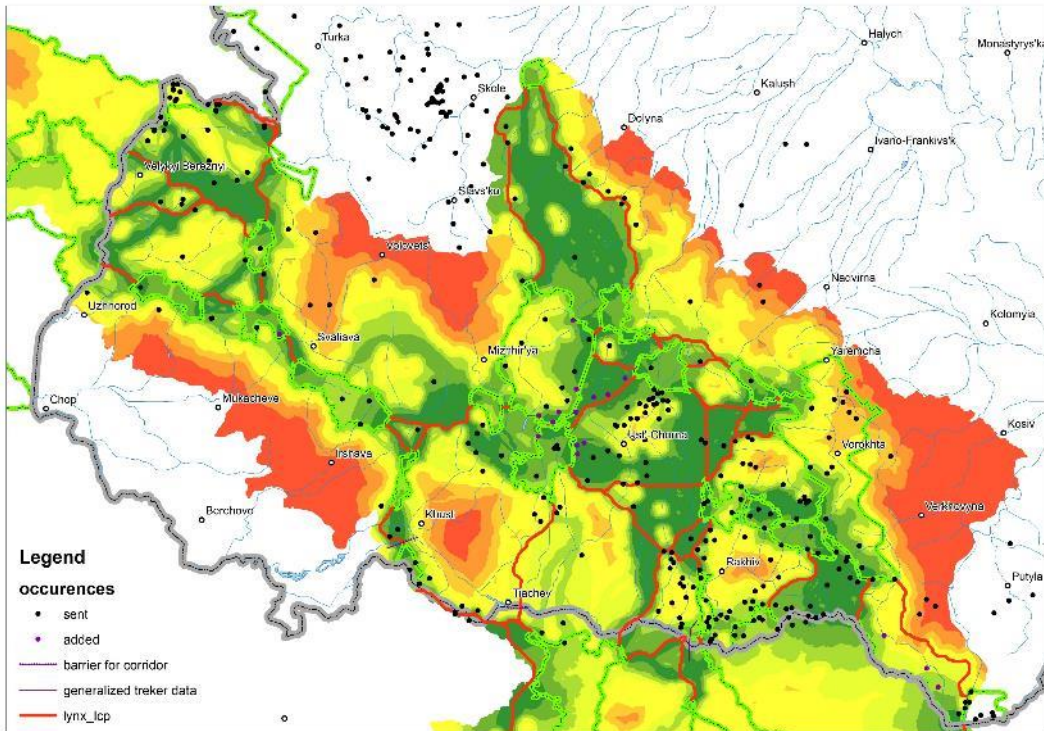
A significant number of species listed in the Red Book of Ukraine are common in Transcarpathian region: about 27% of animals and about 30% of plants (of all those listed in the RBU).



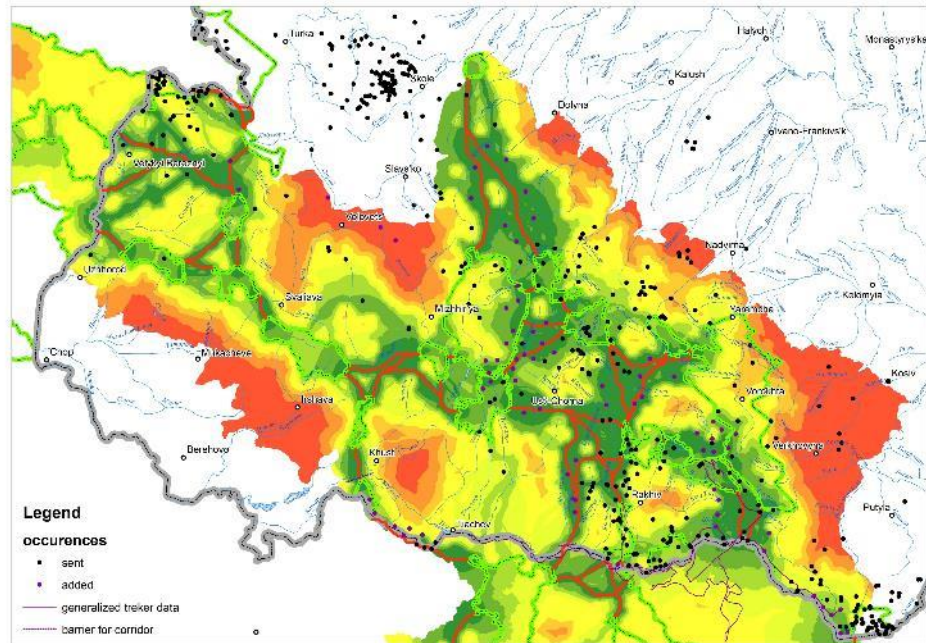
- ▶ RBU: among large mammals, the forest cat *Felis silvestris* belongs to the vulnerable category, the lynx *Lynx lynx* belongs to the rare category, and the brown bear *Ursus arctos* belongs to the endangered category in Ukraine.
- ▶ wolf *Canis lupus* does not have any protection category.



Lynx



Brown bear



- ✓ There is no systematic monitoring of animal migrations in the region. However, available observations indicate that large mammals mainly migrate through the mountains, avoiding densely populated lowlands.
- ✓ The M06 road, one of the busiest in Ukraine, passes through Transcarpathian region.
- ✓ The road crosses the Carpathian ridge and forms a barrier for animal migrations between the Western and Southern Carpathians, as well as for their local migrations within the pilot area.
- ✓ Although there are no special wildlife crossings on the road, preliminary surveys have revealed that the animals may use the Latorytsia River bridges as underpasses.

The criteria for selecting monitoring sites were as follows:

- ✓ The bridges and culverts selected for monitoring are identified as potential migration passages under the E-50 and H-09 highways (based on previous inspections and data from other studies).
- ✓ Monitoring sites are located outside populated areas (important for large mammals) in mountainous terrain.
- ✓ The transect along the Tysa River is located at the end of the border fence, which creates favorable conditions for the migration of large mammals (potential migration corridor).

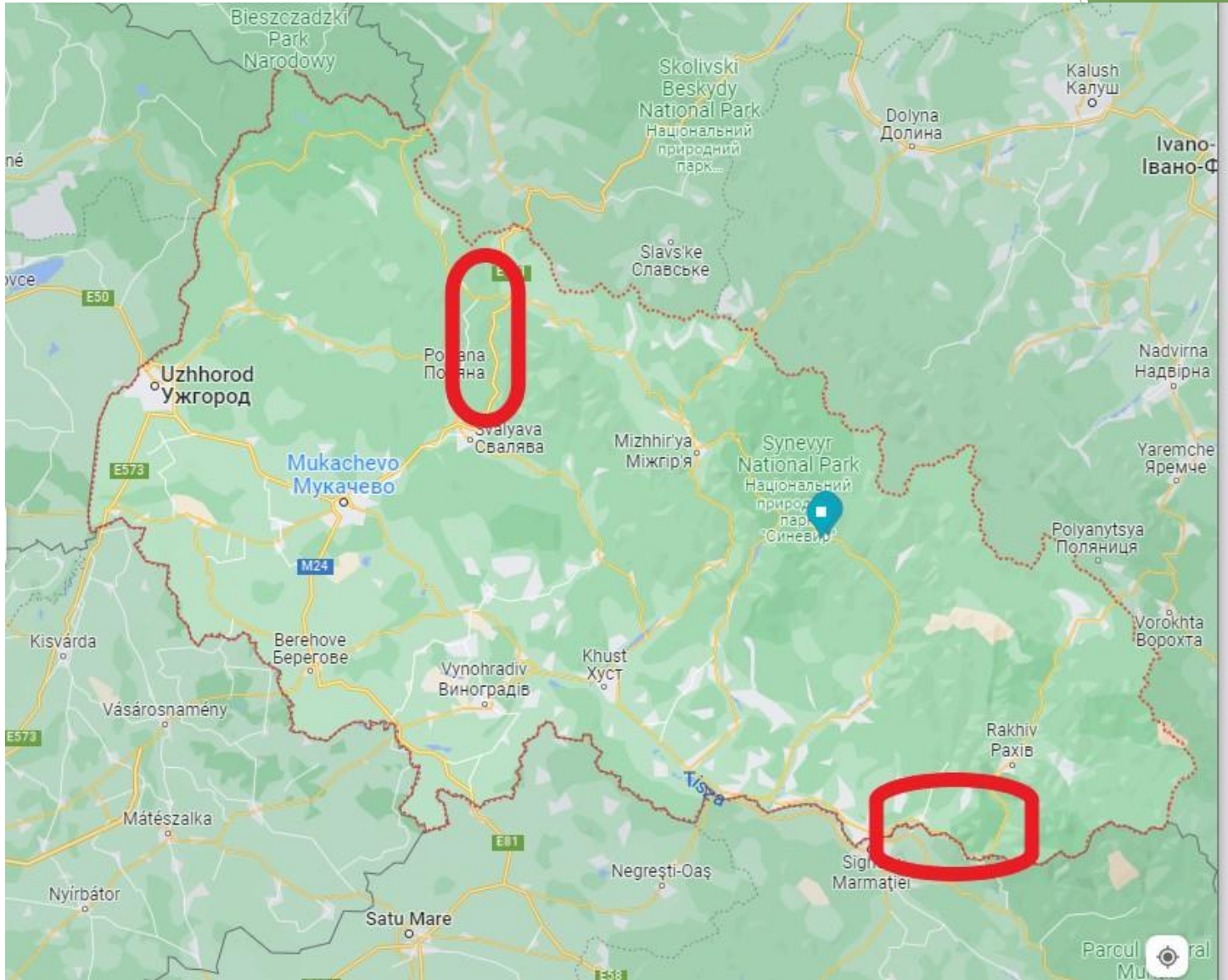
Monitoring was carried out at ten objects/sites .

Main methods:

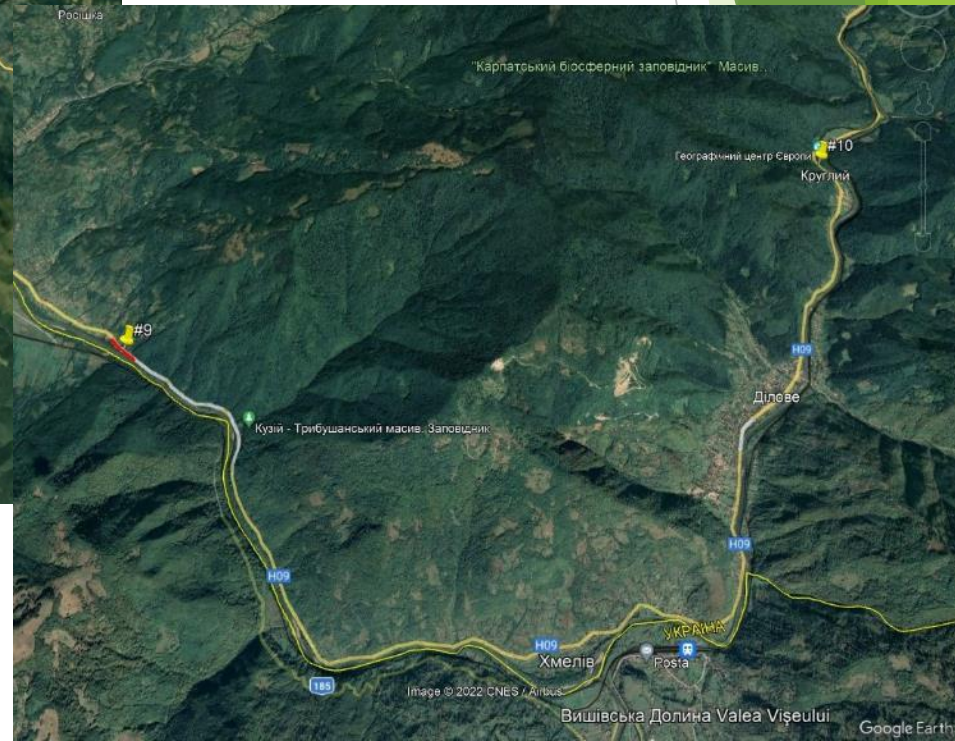
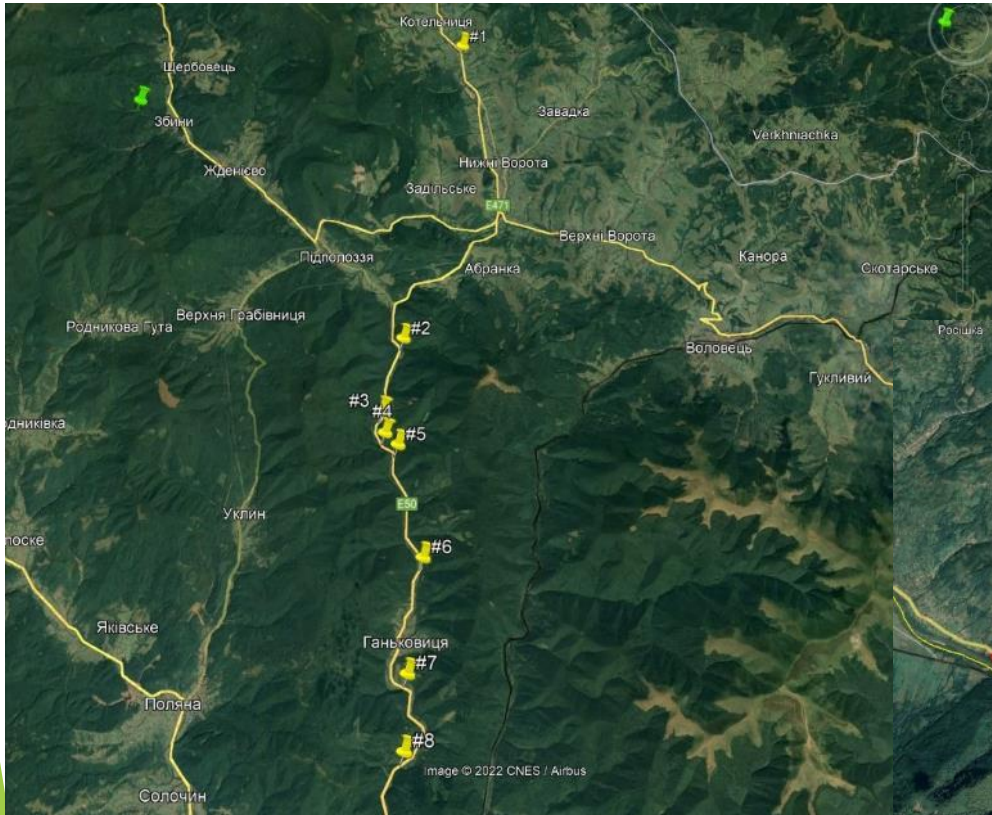
- ✓ searching for signs of animal activity, mainly tracks on snow, sand, wet soil;
- ✓ using sensor camera traps.

During the monitoring process, the Qfield program was used to describe the monitored objects, as well as to record the traces found, record their coordinates and other characteristics.





General map of the location of monitoring sites



- ▶ Monitoring object No. 1 :
- ▶ **General description:** the underpass (bridge over the Latorytsia River) near the village of Tyshiv is a critical section on the E50 highway .
- ▶ Identified species : Red fox



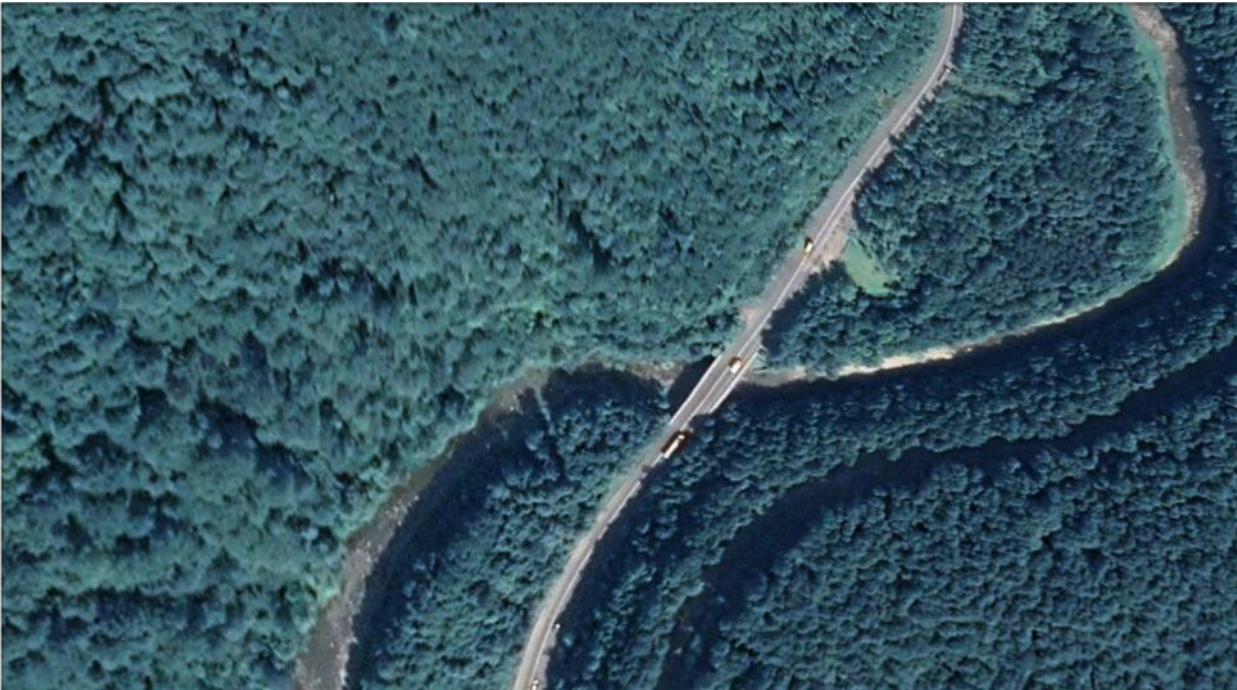
► Monitoring object No. 2 :

- **General description:** the underpass (bridge over the Latorytsia River) is a critical section on the E50 highway .
- Identified species : Red fox and Eurasian otter



► Monitoring object No. 3 :

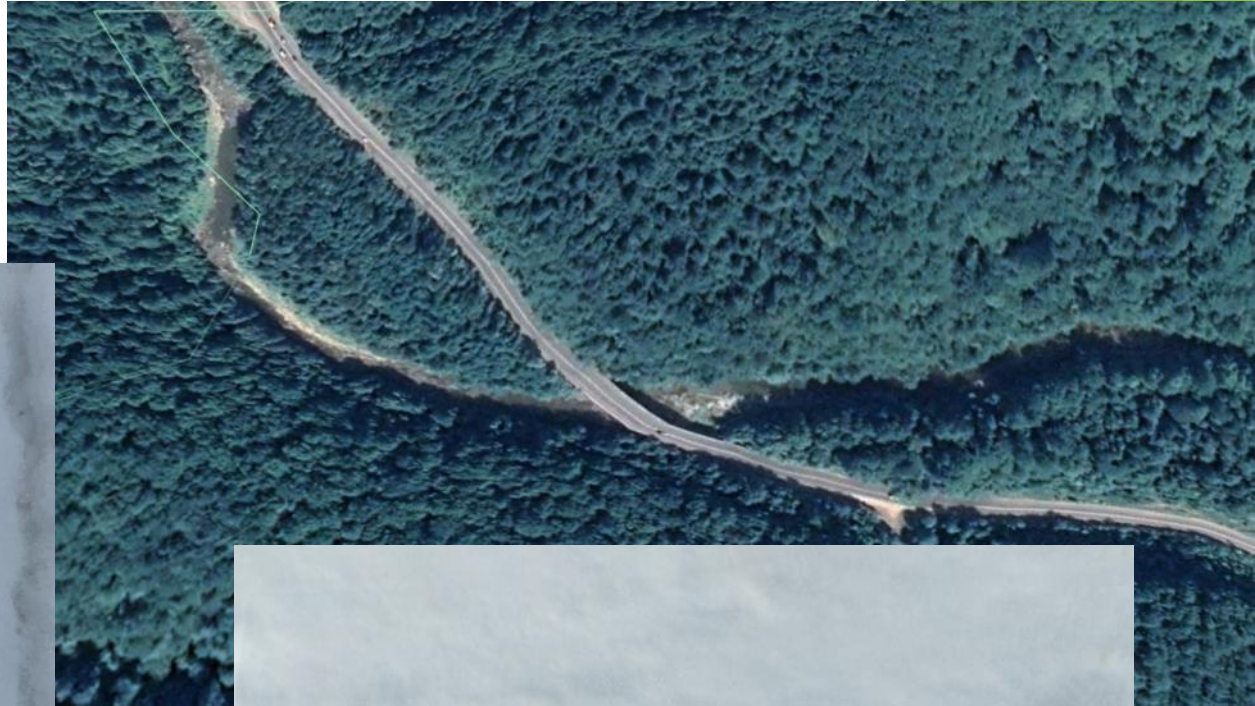
- **General description:** the underpass (bridge over the Latorytsia River) is a critical section on the E50 highway .
- Identified species : European roe deer (4)



Monitoring object No. 4 : _

General description: the underpass (bridge over the Latorytsia River) is a critical section on the E50 highway .

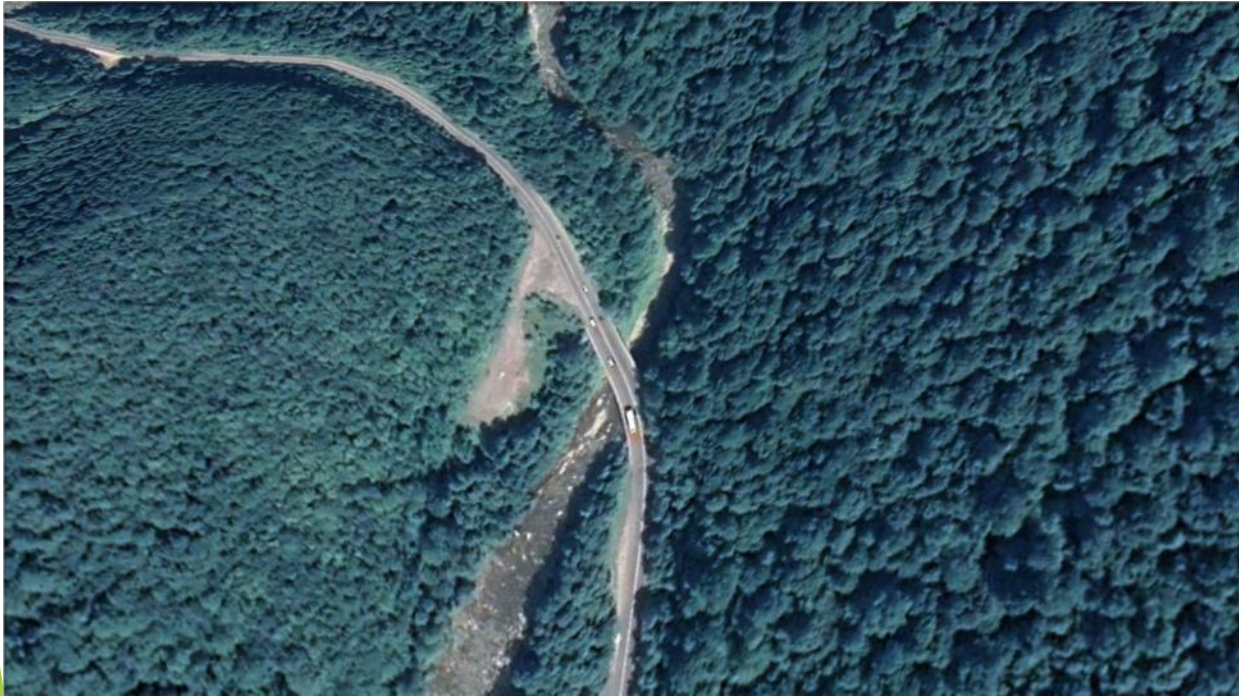
Identified species : Red fox (2), wolf, European roe deer



Monitoring object No. 5:

General description: underpass (bridge over the Latorytsia River)
- a critical section on the E50 highway .

Identified species : Red fox, gray hare, European roe deer



Monitoring object No. 6 : _

General description: the underpass (bridge over the Latorytsia River) is a critical section on the E50 highway .

Identified species : Red fox, forest cat



Monitoring object No. 7 :

General description: underpass (bridge over the Latorytsia River)

- a critical section on the E50 highway .

Identified species : Red fox, European roe deer



Monitoring object No. 8 :

General description: two underpasses (bridges over the Latorytsia River) - a critical section on the E50 highway.

Identified species : Red fox(2), European roe deer (2), red deer, badger, forest cat, Eurasian otter, American mink, European pine marten



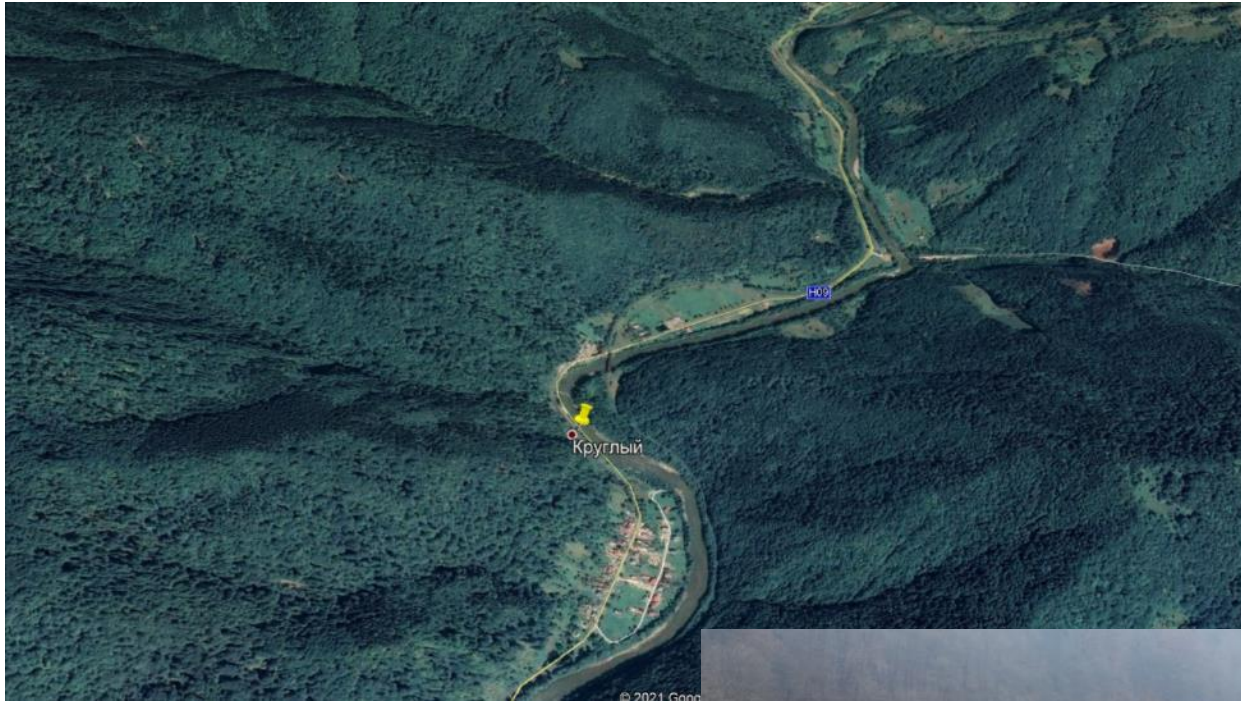
Monitoring object No. 9 : _

General description: the transect along the Tysa River and the state border with Romania is a critical section on the H09 highway. The transect includes a transnational ecological corridor. The distance of the transect is limited by: i) a razor wire fence at the state border, and ii) the village infrastructure.



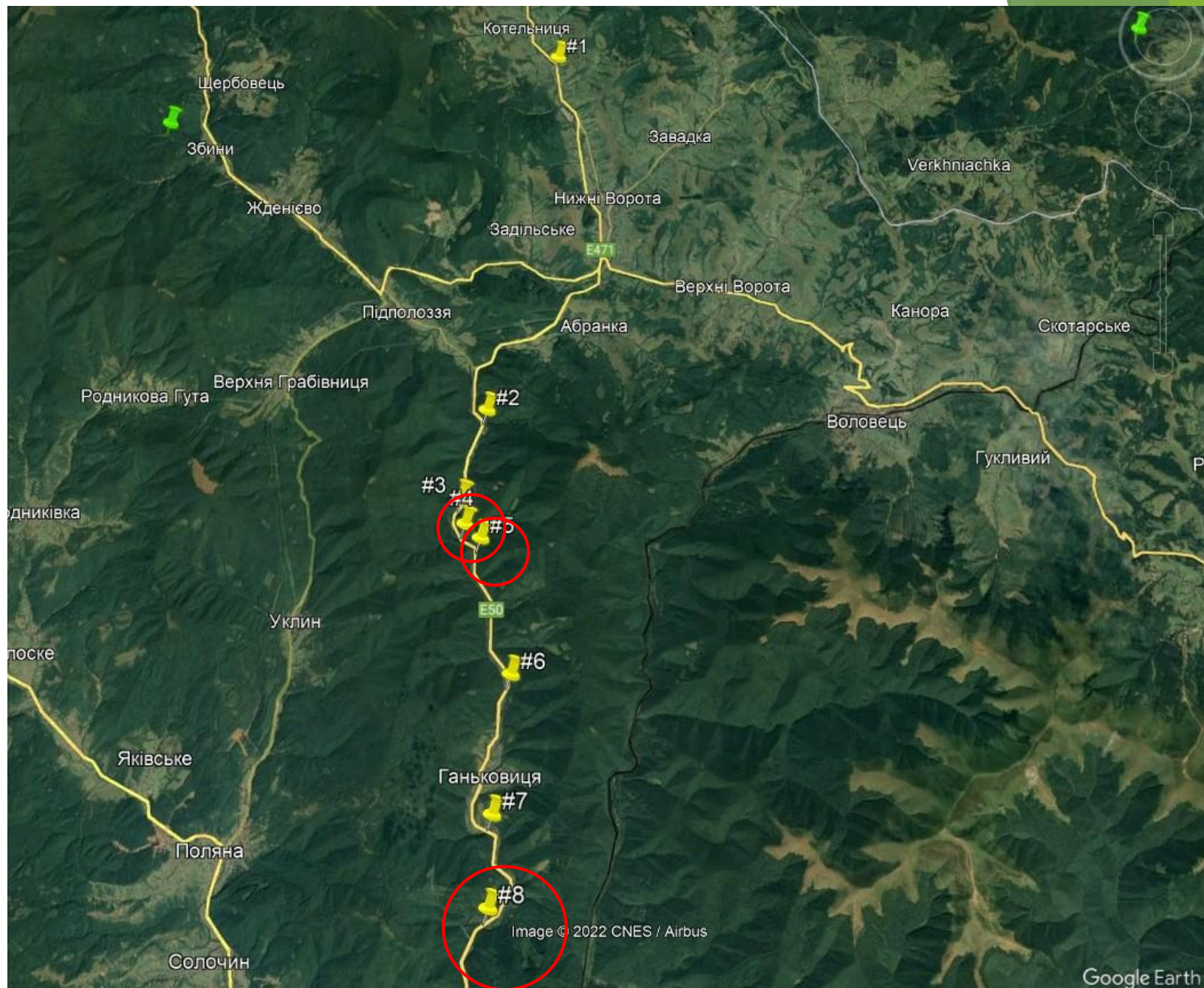
► Monitoring object No. 10 : _

- **General description:** an underpass and a section without road barriers - a critical section on the H09 highway along the Tysa River.



List of species

- ▶ Red fox(7)
- ▶ European roe deer (5)
- ▶ Forest cat (2)
- ▶ Eurasian otter (2)
- ▶ Red deer (1)
- ▶ Wolf (1)
- ▶ Gray hare (1)
- ▶ European pine marten (1)
- ▶ Badger (1)
- ▶ American mink (1)



Котельниця #1

Щербовець

Збини

Жденієво

Завадка

Нижні Ворота

Задільське

E471

Верхні Ворота

Verkhniachka

Підполоззя

Абранка

Канора

Скотарське

Родникова Гута

Верхня Грабівниця

#2

Воловець

Гукливий

Родниківка

#3

#4

#5

E50

Уклин

#6

Поске

Яківське

Ганьковиця

#7

Поляна

#8

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Солочин

Google Earth

**Thank you
for your
attention !**

