Online environment as tool to push forward the research: an example for landscape disservices

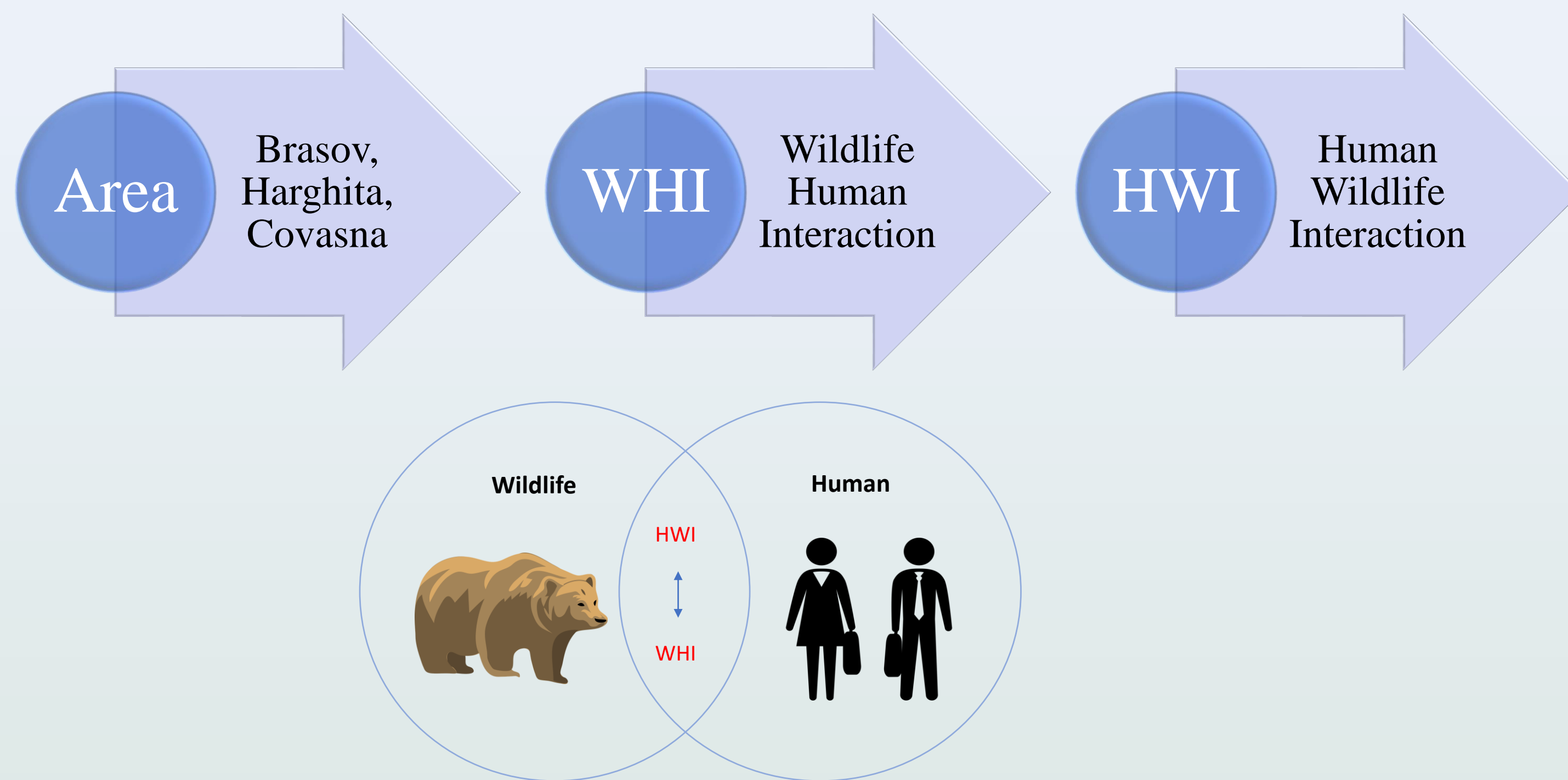Stupariu Ileana[1,2], Ionescu Andreea [3] ,Tudor Radu [4] , Clius Mioara [2] , Pleșoianu Alin [3]

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1. Introduction . Research objectives

Area — Brasov, Harghita, Covasna

WHI — Wildlife Human Interaction

HWI — Human Wildlife Interaction

Wildlife — HWI / WHI — Human

Our *hypothesis* is that the newspapers and magazines could provide valuable data.

How much data can we collect from local newspapers and magazines, local Facebook pages and groups regarding the HWI and WHI?

Can we design and build our research on these data?

2. Data and Methods

HWI 44 online sources

WHI 24 online sources

The database was created following the collection of 44 HWI online data sources and 24 WHI data sources.

a. Collecting data from newspaper, magazines, Facebook is a method very often used in the social sciences (Wodak, 2008). This type of analysis involves choosing different types of newspapers according to several criteria. Considering the high frequency of HWI and WHI in the mountain cities - a very topical issue in Romania - we selected all the local newspapers which reported such events.

b. Cloud analysis. We used word cloud analysis, a visualization method that shows a trend chart with a word cloud (Cui et al.2010). The size of the word in our case indicates the number of articles on Facebook and in the local newspapers, about the two types of interaction, called wildlife-human-interactions (WHI) and human-wildlife-interactions (HWI).

c. GIS approach - *Heatmap* combines the representation of an effect and its statistical significance, but also it can show data ordered by effect of two sets of variables, both types aiding the recognition of significant models of associations (Benno Haarman et al., 2015). Heatmaps are often used to express the intensity of phenomena in related fields to geography, biology, economy.

3. Results

The size of the word in our case indicates the number of articles on Facebook and in local newspapers, about the two types of interaction – *WHI - HWI*.

HWI - car and rail accident, poaching (bear, deer, wild boar, black goat)

WHI - observation animals / human attacked or killed

Figure 1. Word cloud representations for HWI and WHI

The heatmap was created by precisely vectorizing the locations mentioned in the database articles, showing the intensity of the phenomena locally. Thus, we can visualize the hot points of affected county. Land utilization data and forests data from the Corine Land Cover 2018 and limits of the protected areas (official site of Ministry of the Environment, Waters, Forests) were added, in order to display related factors which directly influence the density of both interactions.
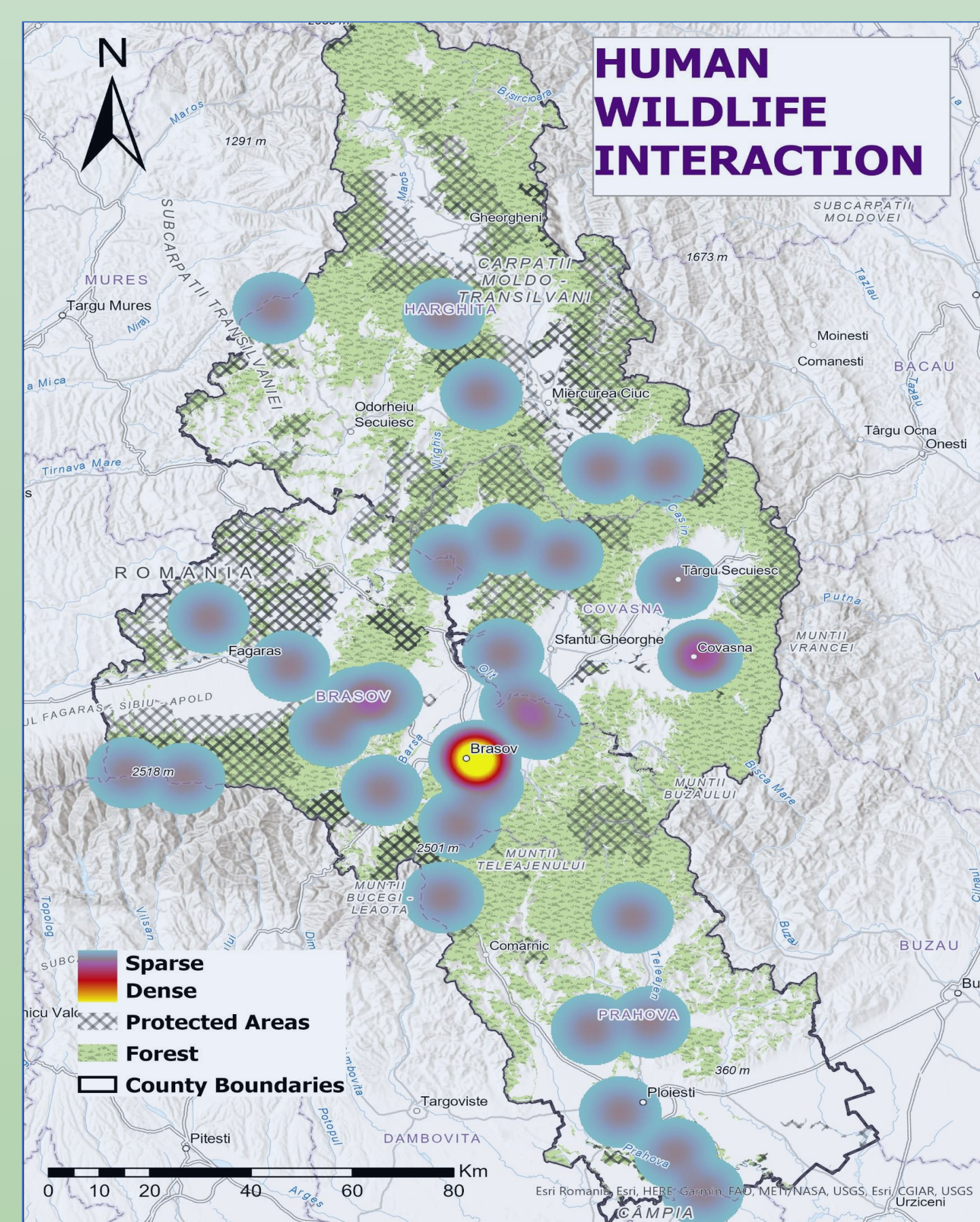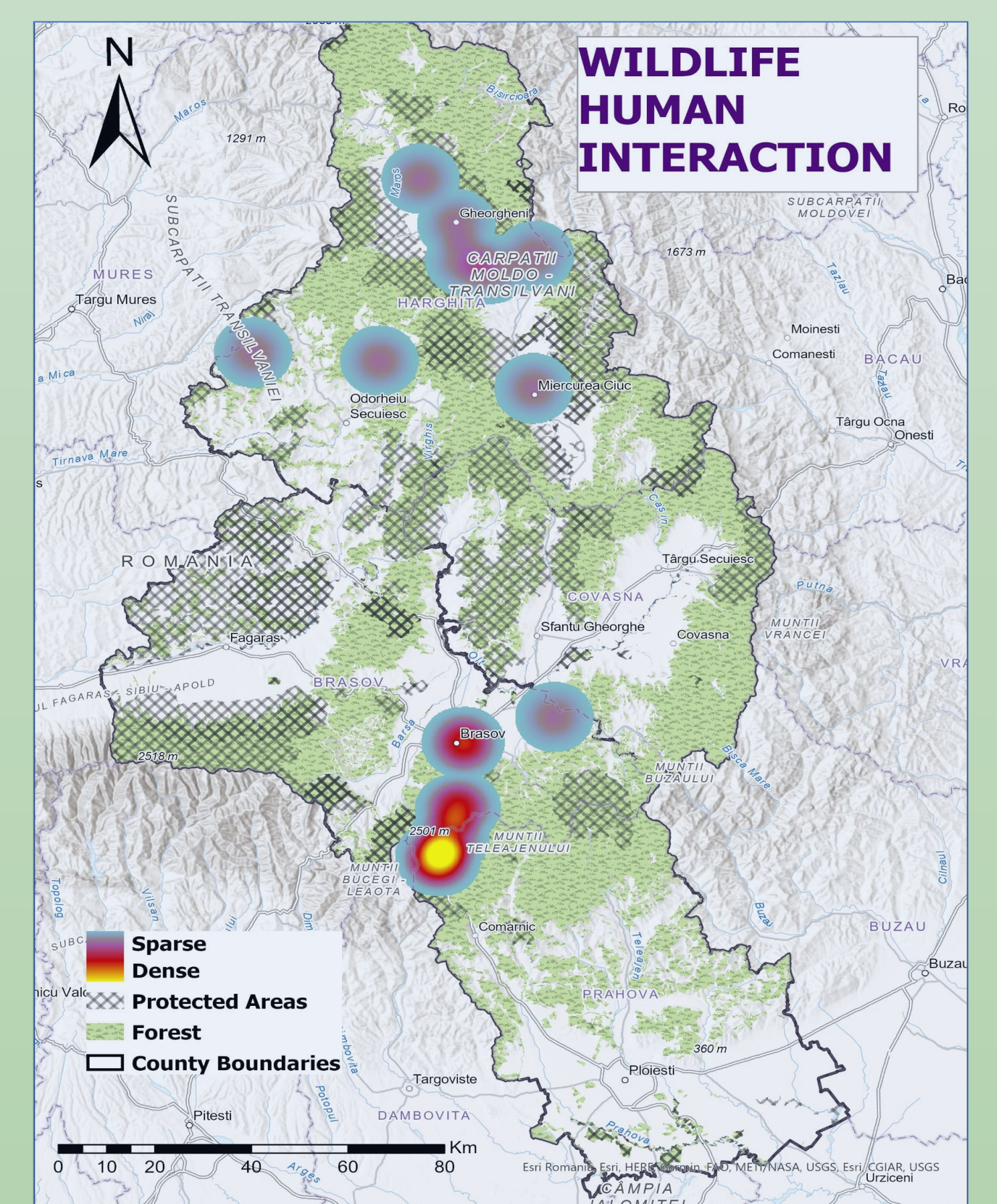

Fig. 2 Heatmap of Human Wildlife Interaction

Fig. 3 Heatmap of Wildlife Human Interaction

The graphic representation of interactions (WHI, HWI) shows the areas with most cases: Prahova Valley (where the busiest mountain resorts are located) and Brasov area, which is the biggest mountain city in Romania. Also, a great number of cases are found within range of counties Harghita and Covasna, which own large forests and forestry facilities.

4. Conclusion

It can be seen that most of the time, from these interactions – HWI – WHI, animals have suffered more than humans. In the category of human deaths is only one case, while the number of animals killed is 16.

The interaction of any kind between human and animal is most probable in agglomerated mountain cities or in areas with widespread forests.

Advantages / Disadvantages

Newspaper, magazines

Information about poaching or rescuing animals is easier to obtain from online sources

Easier identification of measures and solutions for HWI-WHI, such as: relocation of animals or fines for poaching.

The number of quantitative (binary) data you needed to collect to perform an accurate statistical analysis.

The analysis should take place over a longer period of time.

References

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