

### Background

Romania is a country of contradictions, challenges, and great beauty. After 30 years since the fall of communism and 12 years as a member of the European Union, Romania is still one of the poorest countries, with the second to last lowest GDP per capita in the union.

However, slow economic development has had a positive impact in helping preserve its natural beauty and cultural richness. More than 40% of the entire European population of wolves, bears, and lynx live here. The high peaks of the long Carpathian-Vatra mountains,

vast tracts of defragmented forest, and the Danube delta create a haven for great biodiversity of species, endemic plants found nowhere else in the world, and a rich heritage of rural culture and tradition recognized by UNESCO.

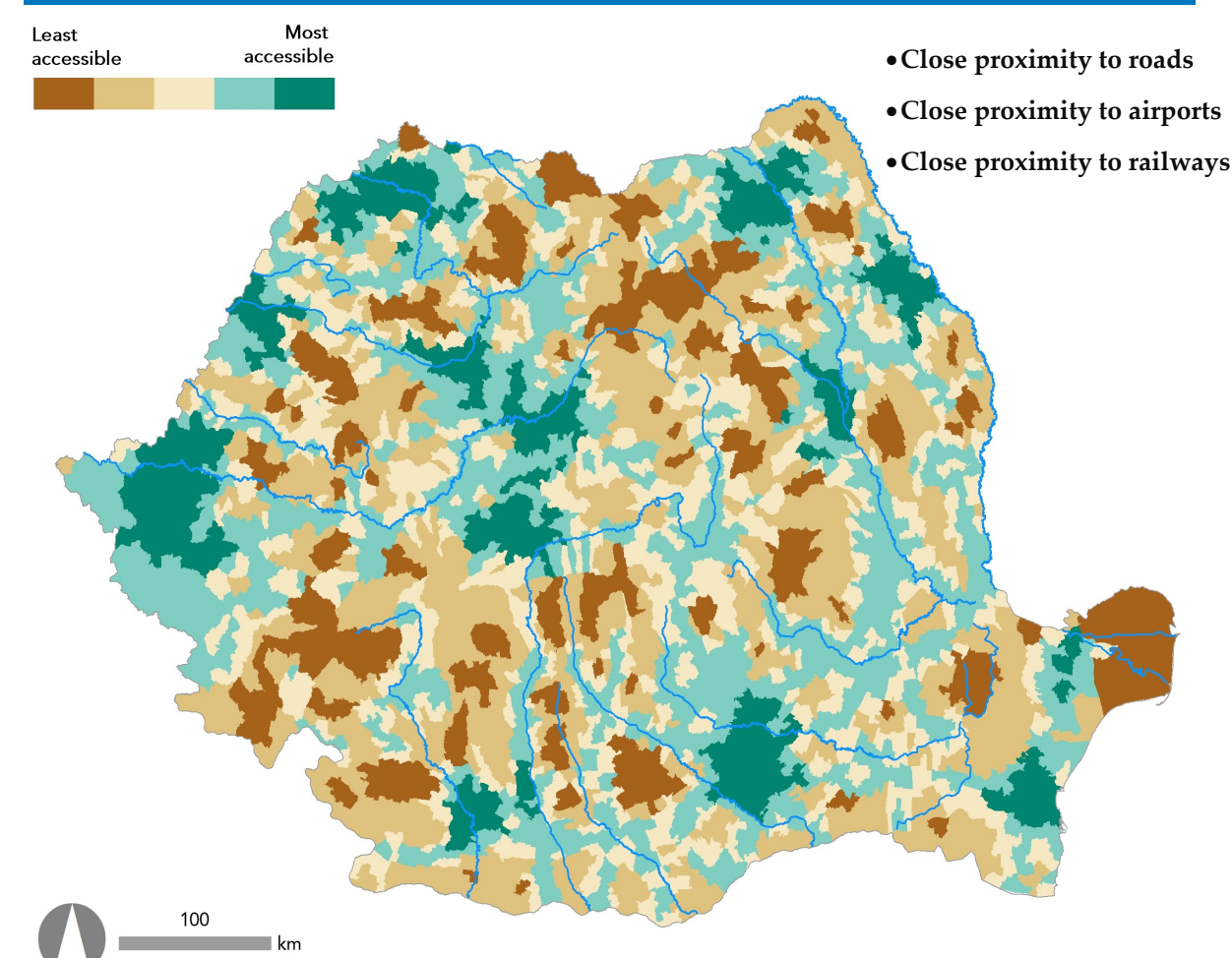


Source: Marco Cristofori / Robert Harding World Imagery / Universal Images Group

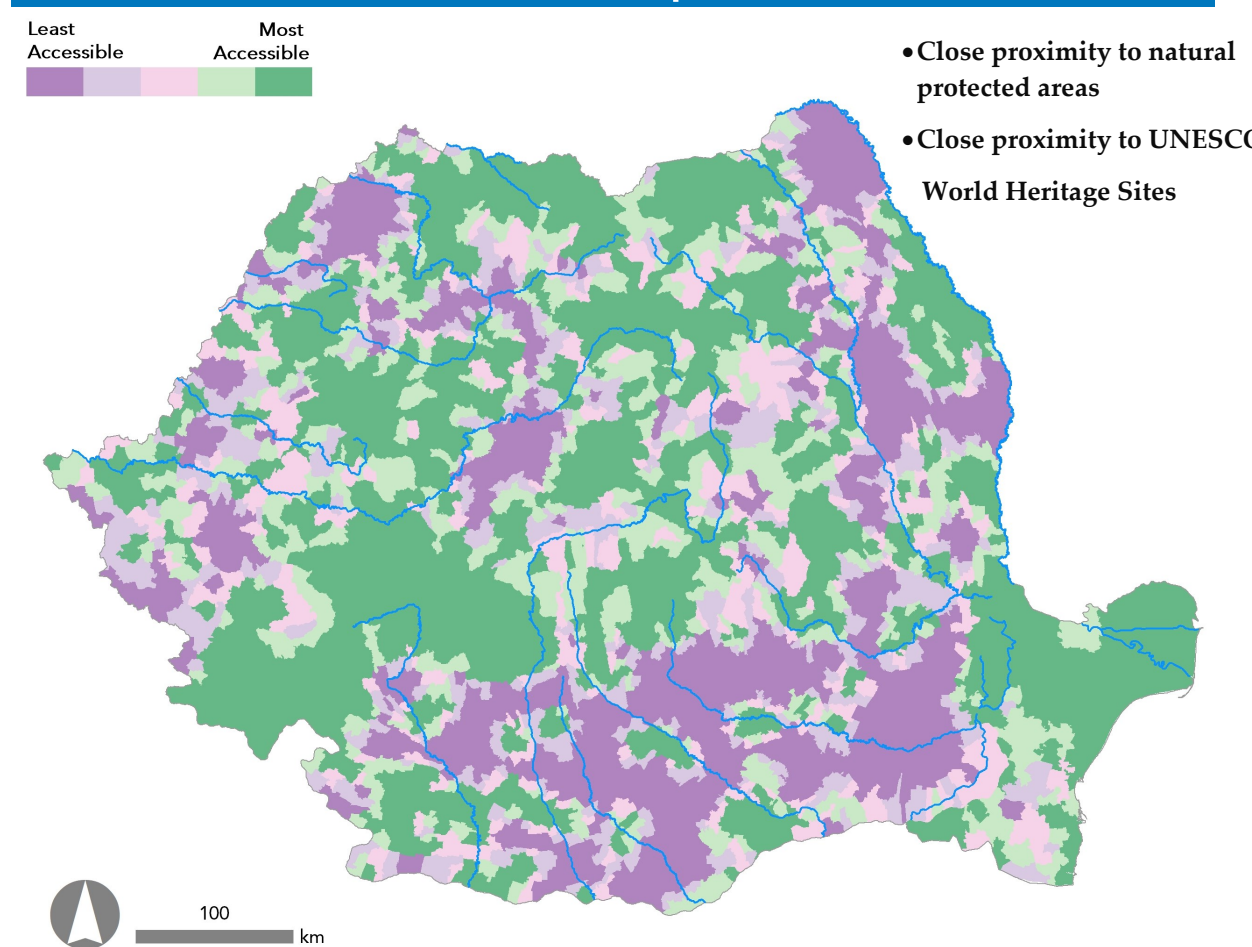
### Project and Spatial Questions

The first objective of this study was to investigate the potential for development of ecotourism activities in Romania, which given the country's endowment in cultural and natural assets, as an option to create sustainable development in the most poverty-stricken areas. Ecotourism, as an alternative form of tourism, involves visiting natural areas in order to learn, to study, or to carry out activities environmentally friendly, that is, a tourism based on the nature experience, which enables the economic and social development of local communities. Activities may include sports like rafting, canoeing; equestrian tourism on routes; skiing; bike trips on arranged paths; guided organized hikes; flo-

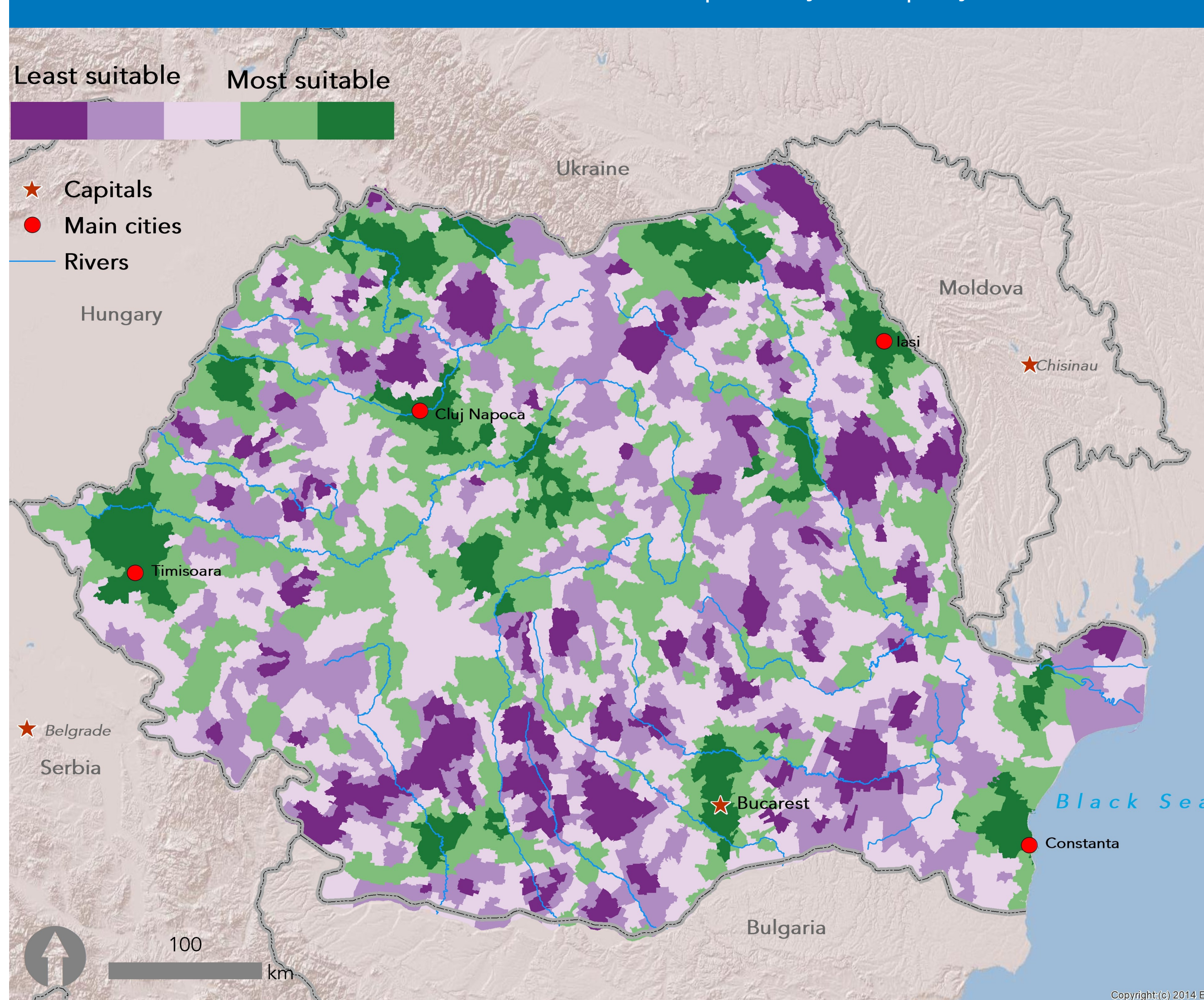
#### Accessibility to Transportation Infrastructure by Municipality



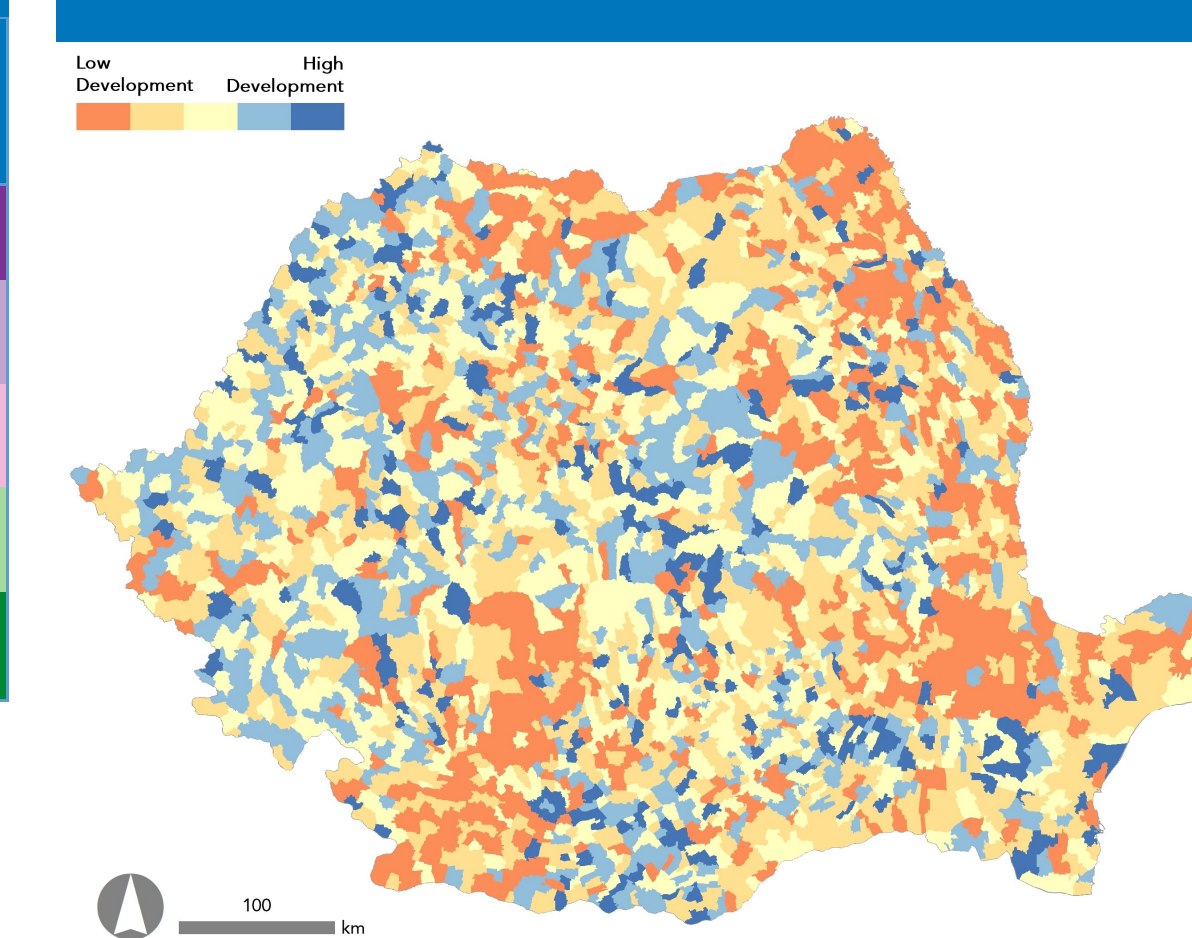
#### Accessibility to Natural and Cultural Assets by Municipality



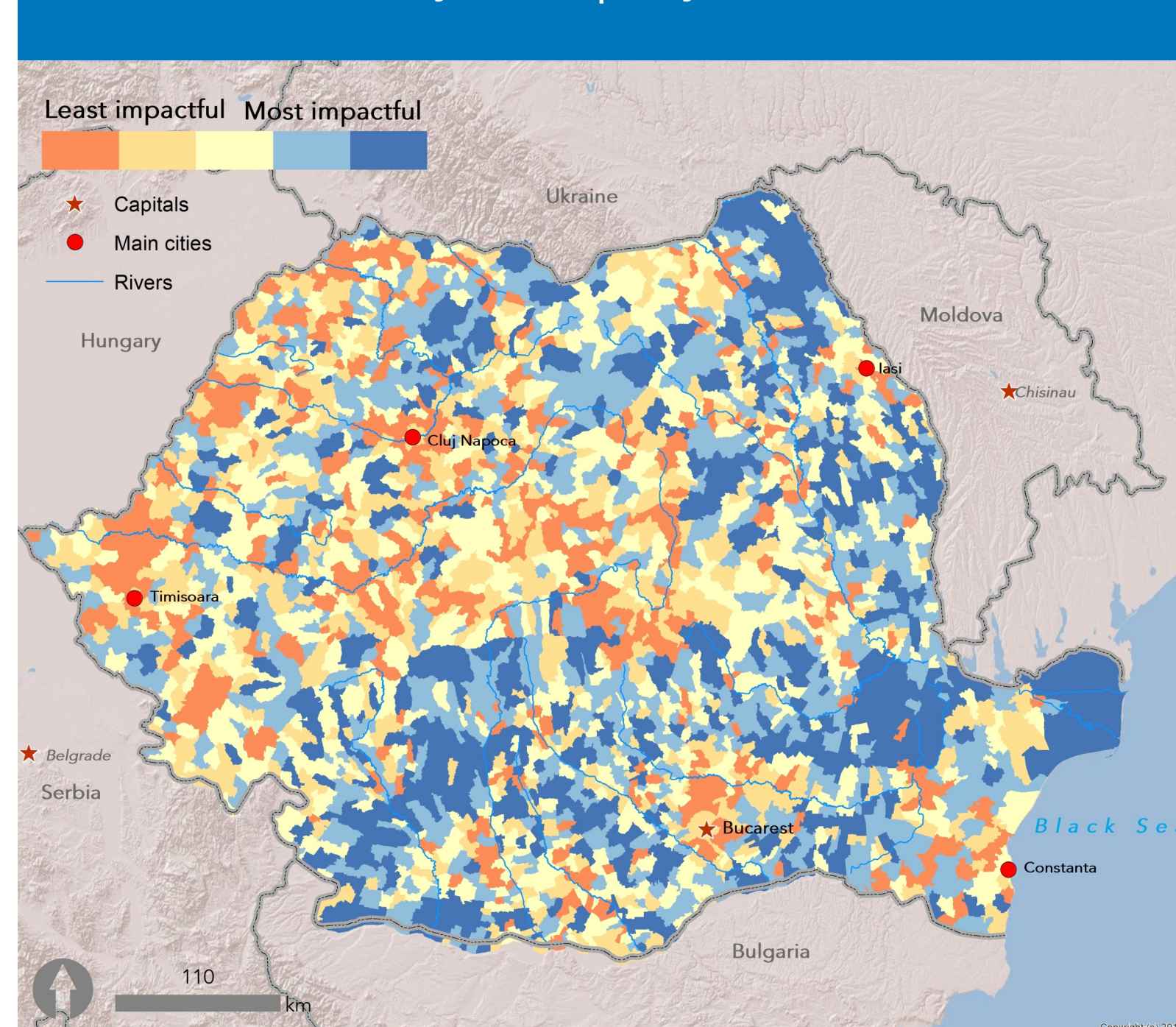
#### Potential Areas for Ecotourism Development by Municipality



#### Socioeconomic Indicators by Municipality, 2011



#### Potential Socioeconomic Impact of Ecotourism Development by Municipality, 2020



### Methodology

The first component to produce the ecotourism suitability analysis was to make a survey of the transportation infrastructure in Romania, a key element to be able to receive visitors. The data used included major airports, rail, and roads to calculate the distance from the different municipalities to the infrastructure. The second component meas-

ured the distance from each municipality to the 8 UNESCO World Heritage Sites in the country and the major Natural Protected Areas. By overlaying these two components, a suitability analysis was produced to locate the municipalities that have high accessibility to ecotourism assets, natural and cultural, and also have close proximity to transportation infrastructure, hence, facilitating the creation of new economic opportunities.



Source: Wild Wonders of Europe / Derr / Nature Picture Library / Universal Images Group

The second part of the analysis used census data for household access to electricity, central heating and basic cooking and sanitation as a proxy for economic development as income per capita by municipality data was not available. The geographic analysis of this data was overlaid with the product of the previous component to pinpoint the specific areas of the country where potential investment in ecotourism would have the biggest impact to improve human development.

### Results

The final maps demonstrate that the areas more suitable for the development of ecotourism are located in the north of the country in the Carpathian mountains and two WHS and in the west close to the city of Timisoara. However, the areas most in need are located in the NE, E and center of the country.

#### Potential Population Impacted by Ecotourism by class

5	653,807
4	3'251,039
3	17'559,644
2	2'796,292
1	1'136,310

### Limitations

WorldPop dataset assumes 5 million more people than real estimates

Romania census and geographic agencies are archaic

### Information

Cartographer: Sebastian Uribe Correa

DPH 207 GIS for International Applications

Professor: Patrick Florance

Projection: Stereo 70

Sources: ESRI, GADM, GfK, National Institute of Statistics, OSM, WWF, UNESCO, WorldPop

Date: May 5, 2020