LANDSCAPE
yesterday and today

PROJECT ERASMUS+: LANDSCAPE YESTERDAY AND TODAY

ATLAS OF LANDSCAPE

OF THE CZECH REPUBLIC, SWEDEN, ROMANIA AND PORTUGAL

Co-funded by the
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Project Erasmus+: Landscape yesterday and today
Staré Město, 2022

Content

About project Landscape yesterday and today

Landscape is an integral part of our lives. The landscape around us has changed a lot in last hundred years. Some species of plants have disappeared, and the number of insect species has decreased. On the other hand, some species of invasive plants, which had not been there before, appeared. The issue of the presence of water in the landscape has become more and more acute in a few last years. There is a connection between these changes and the activities of people. People have a great influence on the landscape – they have transformed the landscape a lot in last hundred years.
This project called „Landscape yesterday and today" is focused on researching the landscape around us, it tries to capture the changes which have happened in the landscape, and explain these changes from the historical, biological, geographical, and environmental point of view. We are going to explore these changes comprehensively, so the students can better realize that one small change can evoke a lot of other changes in the landscape.
We will use modern digital technologies when exploring and mapping the landscape – geographical information systems (GIS) and GPS devices. GIS, which is these days used in a lot of spheres of people's activities, will serve especially for mapping the landscape, and for capturing the changes of using soil in the landscape. It will be also used to create maps which will become a part of our most significant objective – Atlas of landscapes in chosen parts of Europe. In the Atlas, the current state of landscapes in the surrounding of our schools will be captured as well as its changes during last hundred years and its problems.
The schools from the Czech Republic, Romania, Sweden, and Portugal will be engaged in the project. All these schools will bring some extraordinary experiences (e.g. with managing the project or using ICT in different subjects). The Czech Republic, as the coordinator of the project, will take most responsibilities for the project. Nevertheless, in order to divide the responsibilities among all the states, each partner country will become a guarantor of one sphere of exploring the landscape – Romania of the historical point of view, Sweden of the geographical sphere, the Czech Republic of the environmental issues, and Portugal will be the guarantor of exploring the landscape from the biological point of view. At the same time, each partner school will be responsible for one mobility (its preparation, realization, accommodation, etc.), for publishing the materials, presentation of the project, the quality of materials, etc.

When arranging the mobility, the biggest emphasis is placed on the attractiveness of it, and on its benefits for both teachers and students. Before each mobility, the teams will explore the landscape from some point of view, they will make the presentations and worksheets, and they will prepare the workshop for all teachers and students. After these workshops, there will be lessons in a terrain where all the teams will explore chosen problems. After each mobility, the single chapters will be created and they will become parts of the Atlas of landscapes. These materials can be used anytime by whoever (not only by the teachers from partner schools but also by the wider public) as these materials will be available on the project's websites.

The main objective of the project will be the „Atlas of landscapes in chosen parts of Europe", which will be freely available to download on the project's website, on the schools' websites, and on Twinspace. Another output will be methodical materials for GIS, particularly for the program QGIS.
In this project, we will also focus on the work with different target groups of people – teachers and pupils of primary schools, the wider public, and our students' parents. For the primary schools' teachers and pupils, we will prepare terrain lessons focused on the landscape in the past and today. For the wider public, each partner school will prepare the meeting, and our students' parents will be informed about the project at the meeting, during the school's open days, via the project's websites, etc. Then the project will get a new dimension, because not only the teachers but also our students will be employed in the work with these target groups.

PROJECT COUNTRIES

Four European countries participated in the project; Czech Republic, Portugal, Romania and Sweden. As can be seen on the map, these are completely different states from a geographical, historical and political point of view. And that was a great asset to the project, because students and teachers were comparing completely different things.

CZECH REPUBLIC

Capital: Prague
Head of state: president Miloš Zeman
Area: 78 864 km²
Population: 10 535 000 (2022)
Highest point: Sněžka (1602 m)

Czech Republic, also called Czechia, country located in central Europe. It comprises the historical provinces of Bohemia and Moravia along with the southern tip of Silesia, collectively often called the Czech Lands. In 2016 the country adopted the name "Czechia" as a shortened, informal name for the Czech Republic.

The country is bordered by Poland to the north and northeast, Slovakia to the east, Austria to the south, and Germany to the west and northwest. The Bohemian Massif occupies the major portion of the Czech Republic. It consists of a large, roughly ovoid elevated basin (the Bohemian Plateau) encircled by mountains divided into six major groups. In the southwest are the Šumava Mountains, which include the Bohemian Forest (Böhmerwald). In the west are the Berounka River highlands. In the northwest, the Ore Mountains (Czech: Krušné hory; German: Erzgebirge) form the frontier with Germany. The point at which the Elbe (Labe) River breaches this range is the lowest in the country, with an elevation of 384 feet (117 metres). The so-called Sudeten system of mountains (a name never applied in the Czech language) in the northeast forms most of the border with Poland west of the city of Ostrava. The highest point in the Czech Republic, Mount Sněžka, with an elevation of 5,256 feet (1,602 metres), is found in the major segment of this system, the Giant Mountains (Czech: Krkonoše; German: Riesengebirge). Farther to the east is the Oder (Odra) River lowland, a small fringe along the Polish border. Finally, southeast of the Bohemian Plateau are the Bohemian-Moravian Highlands, which include the spectacular Moravian Karst.

In the east the Outer Carpathian Depressions, known to geographers as the Moravian-Silesian Beskids, include the valleys of the upper Oder and Morava rivers and the headstreams of the Dyje. Along the Czech-Slovak border rise the Little Carpathian (Bílé Karpaty) and Javorníky ranges, the westernmost of the Western Carpathian Mountains that dominate Slovakia.

SWEDEN

Capital: Stockholm
Head of state: king Carl XVI. Gustaf
Area: 450 295 km²
Population: 10 495 000 (2022)
Highest point: Kebnekaise (2111 m)

Sweden, country located on the Scandinavian Peninsula in northern Europe. The name Sweden was derived from the Svear, or Suiones, a people mentioned as early as 98 CE by the Roman author Tacitus. The country's ancient name was Svithiod. Stockholm has been the permanent capital since 1523. Sweden occupies the greater part of the Scandinavian Peninsula, which it shares with Norway. The land slopes gently from the high mountains along the Norwegian frontier eastward to the Baltic Sea. Geologically, it is one of the oldest and most stable parts of the Earth's crust. Its surface formations and soils were altered by the receding glaciers of the Pleistocene Epoch (about 2,600,000 to 11,700 years ago). Lakes dot the fairly flat landscape, and thousands of islands form archipelagoes along more than 1,300 miles (2,100 km) of jagged, rocky coastline. Like all of northwestern Europe, Sweden has a generally favourable climate relative to its northerly latitude owing to moderate southwesterly winds and the warm North Atlantic Current.The country has a 1,000-year-long continuous history as a sovereign state, but its territorial expanse changed often until 1809. Today it is a constitutional monarchy with a well-established parliamentary democracy that dates from 1917. Swedish society is ethnically and religiously very homogeneous, although recent immigration has created some social diversity. Historically, Sweden rose from backwardness and poverty into a highly developed postindustrial society and advanced welfare state with a standard of living and life expectancy that rank among the highest in the world.

PORTUGAL

Capital: Lisbon
Head of state: president Marcelo Rebelo de Sousa
Area: 92 090 km²
Population: 10 323 000 (2022)
Highest point: Ponta do Pico (Pico or Pico Alto) on Ilha do Pico in the Azores (2 351 m)

Portugal, officially Portuguese Republic, Portuguese República Portuguesa, country lying along the Atlantic coast of the Iberian Peninsula in southwestern Europe. Once continental Europe's greatest power, Portugal shares commonalities — geographic and cultural — with the countries of both northern Europe and the Mediterranean. Its cold, rocky northern coast and mountainous interior are sparsely settled, scenic, and wild, while the country's south, the Algarve, is warm and fertile. The rugged Estrela Mountains (Serra da Estrela, or "Star Mountain Range"), which lie between the Tagus and Mondego rivers, contain the highest point of mainland Portugal.

Portugal occupies one-sixth of the Iberian Peninsula at Europe's southwestern perimeter. To its north and east is Spain, which makes up the rest of the peninsula; to the south and the west is the Atlantic Ocean; and to the west and southwest lie the Azores (Açores) and the Madeira Islands, which are part of metropolitan Portugal. Portugal is not a large country, but it offers a great diversity of physical geography, ranging from low-lying coasts and plains to the Estrela Mountains, which rise to nearly 6,500 feet (2,000 metres).

With Spanish Galicia, northern Portugal comprises the mountainous border of the Meseta (the block of ancient rock that forms the core of the Iberian Peninsula); southern Portugal also contains extensive areas of limestone and other sedimentary strata, mostly plateaus or plains. Other physical features link Portugal with Spain: its major rivers—Douro, Tagus (Rio Tejo), Guadiana—rise in the central Meseta before draining west (or, in the case of the Guadiana, south) to the Atlantic, while the proximity of the Meseta affects the climate and increases the rainfall of the northern Portuguese interior, contributing to that region's verdant vegetation. Southern Portugal, however, is predominantly Mediterranean both in vegetation and in climate. Despite Portugal's remarkable scenic diversity, the essence of its relief and underlying geology can be described under three headings: the north, the northern interior, and the south. The old coastal provinces of Beira Litoral and Estremadura are transitional in cultural landscape, vegetation, and climate but southern in relief and geology.

ROMANIA

Capital: Bucharest
Head of state: president Klaus Iohannis
Area: 238 391 km²
Population: 18 991 000 (2022)
Highest point: Moldoveanu(2 544 m)

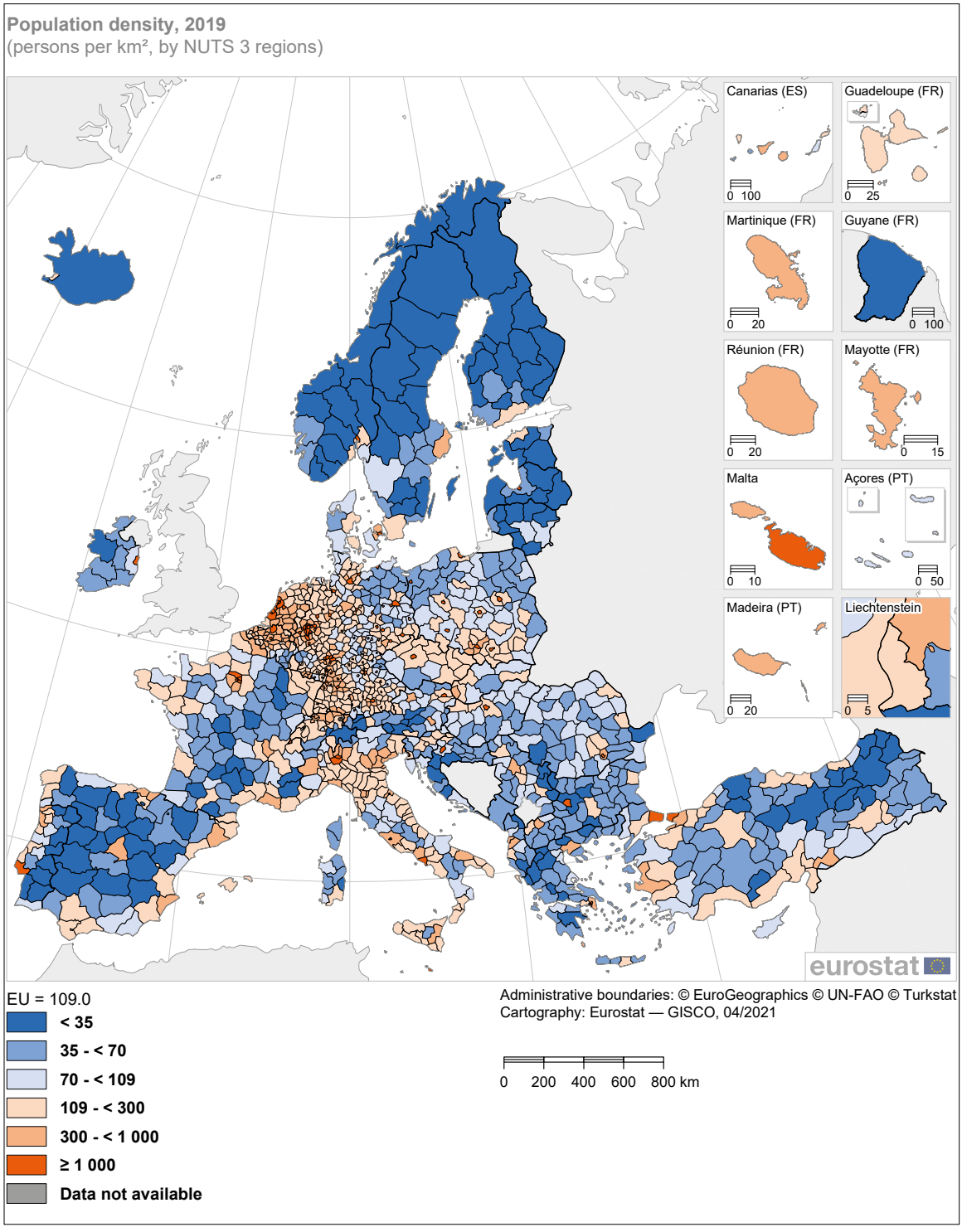
Romania, country of southeastern Europe. The national capital is Bucharest. Romania was occupied by Soviet troops in 1944 and became a satellite of the Union of Soviet Socialist Republics (U.S.S.R.) in 1948. The country was under communist rule from 1948 until 1989, when the regime of Romanian leader Nicolae Ceaușescu was overthrown. Free elections were held in 1990. In 2004 the country joined the North Atlantic Treaty Organization (NATO), and in 2007 it became a member of the European Union (EU).

The Romanian landscape is approximately one-third mountainous and one-third forested, with the remainder made up of hills and plains. The climate is temperate and marked by four distinct seasons. Romania enjoys a considerable wealth of natural resources: fertile land for agriculture; pastures for livestock; forests that provide hard and soft woods; petroleum reserves; metals, including gold and silver in the Apuseni Mountains; numerous rivers that supply hydroelectricity; and a Black Sea coastline that is the site of both ports and resorts.

Romania is bounded by Ukraine to the north, Moldova to the northeast, the Black Sea to the southeast, Bulgaria to the south, Serbia to the southwest, and Hungary to the west. There is a certain symmetry in the physical structure of Romania. The country forms a complex geographic unit centred on the Transylvanian Basin, around which the peaks of the Carpathian Mountains and their associated subranges and structural platforms form a series of crescents. Beyond this zone, the extensive plains of the south and east of the country, their potential increased by the Danube River and its tributaries, form a fertile outer crescent extending to the frontiers. There is great diversity in the topography, geology, climate, hydrology, flora, and fauna, and for millennia this natural environment has borne the imprint of a human population.

GEOGRAPHY AND LANDSCAPE

One of the project topics was a geographical view of the landscape. In the landscape atlas, we try to compare the landscape of four different states from the point of view of history, geography or economy. And that is why we have prepared together with the students maps that will present these 4 states from a geographical point of view. The use of the landscape is related to the population, its amount, distribution, etc. We compared these 4 states with each other.

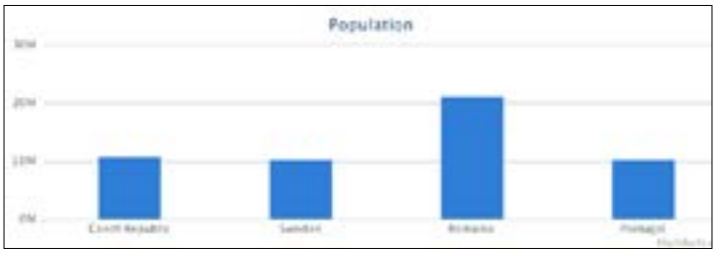


Population density

The map shows that there is a different population density in the project countries. In Sweden, we see that the climatic conditions of the harsh north have influenced the distribution of the population so that they are located more in the south of Sweden. The eastern borders of Portugal (i.e. places farther from the sea) also have a lower population density. In Romania, the distribution of the population is conditioned by the distribution of the Carpathian mountain massif and the Danube delta; these are locations where there are fewer residents. In the Czech Republic, there are not that big differences in population density; although population density decreases with increasing altitude, the difference is not as marked as in other states. Population distribution has a great influence on the landscape and its use.

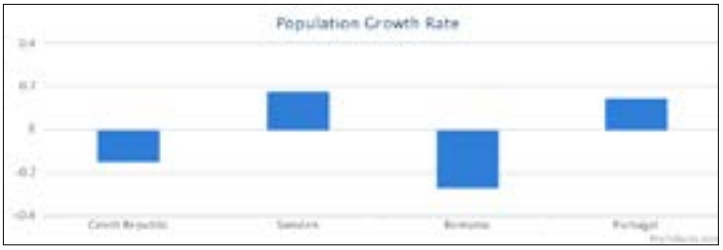
Population

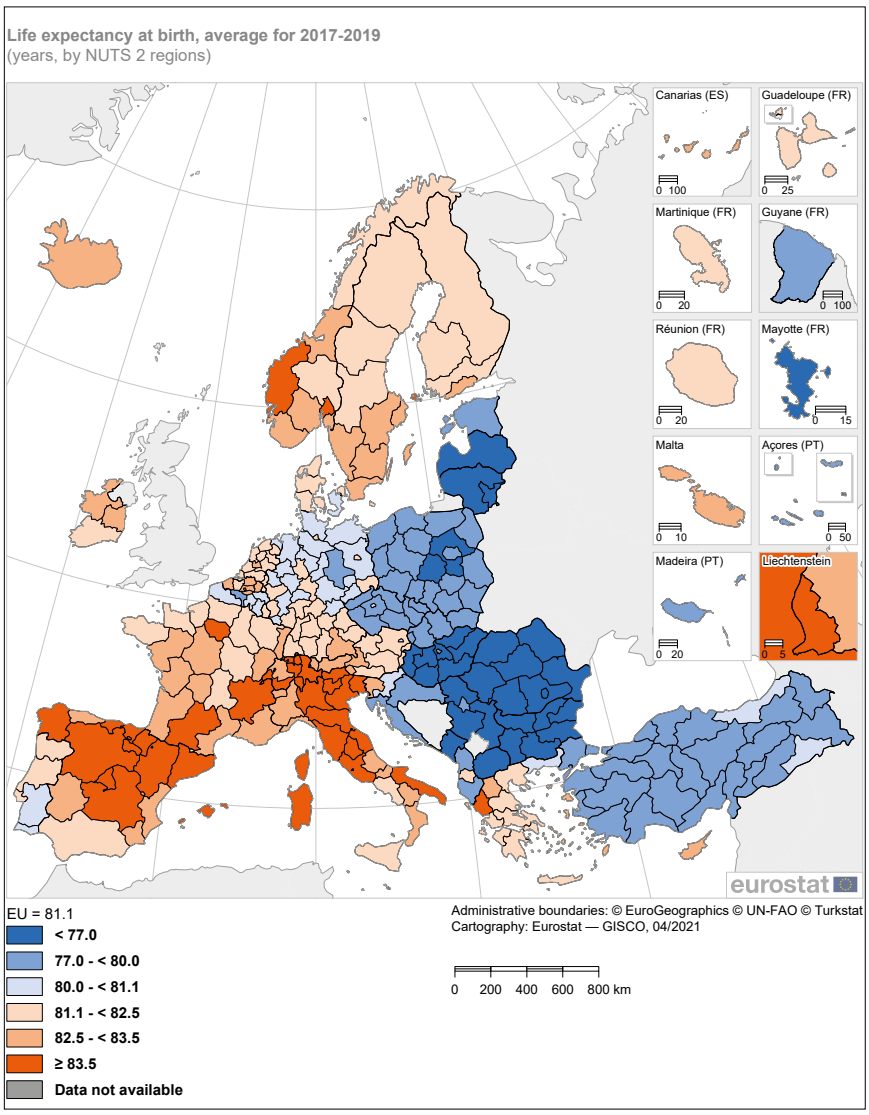
If we compare all four project countries, we find out that they have a similar population (with the exception of Romania, which has twice the population of the rest of the countries).



Population growth

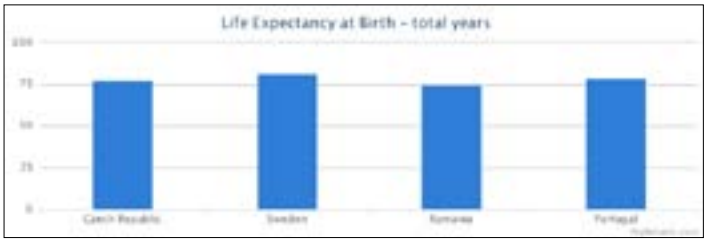
It is also interesting to see whether the population is increasing or decreasing. As can be seen from the table, we can see an increase in the population of Sweden and Portugal, while a drop in the population of the Czech Republic and Romania is noticeable.





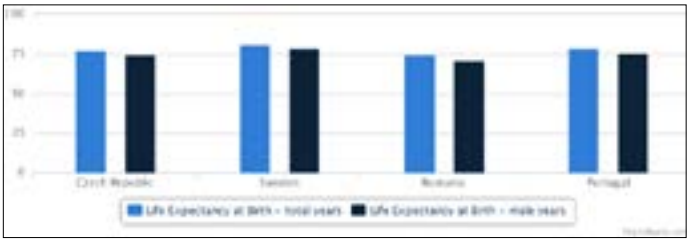
Life expectancy at birth

Thanks to the quality healthcare, life expectancy is relatively high and very similar. The only country that did not get over 75 is Romania, which is also due to worse economic conditions and the country's health system.



Life expectance at birth (male and female)

Women usually live longer than men. It is not surprising that Nordic Sweden and Southern Portugal are beating Central European Czechia and Romania in their hopes of longer lige. Men in Romania have the lowest life expectancy.



EUROPE

S2GLC Land Cover Map

S2GLC - Sentinel-2 Global Land Cover
http://s2glc.cbk.waw.pl

Copyright: Contains modified Copernicus Sentinel data Processed by CBK PAN

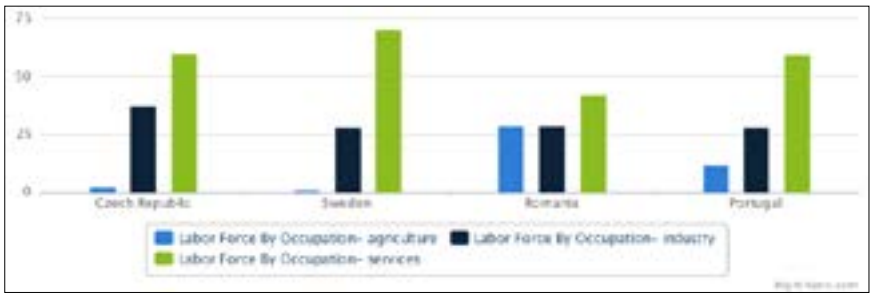
Projection: ETRS89 / LAEA Europe, EPSG:3035

Legend

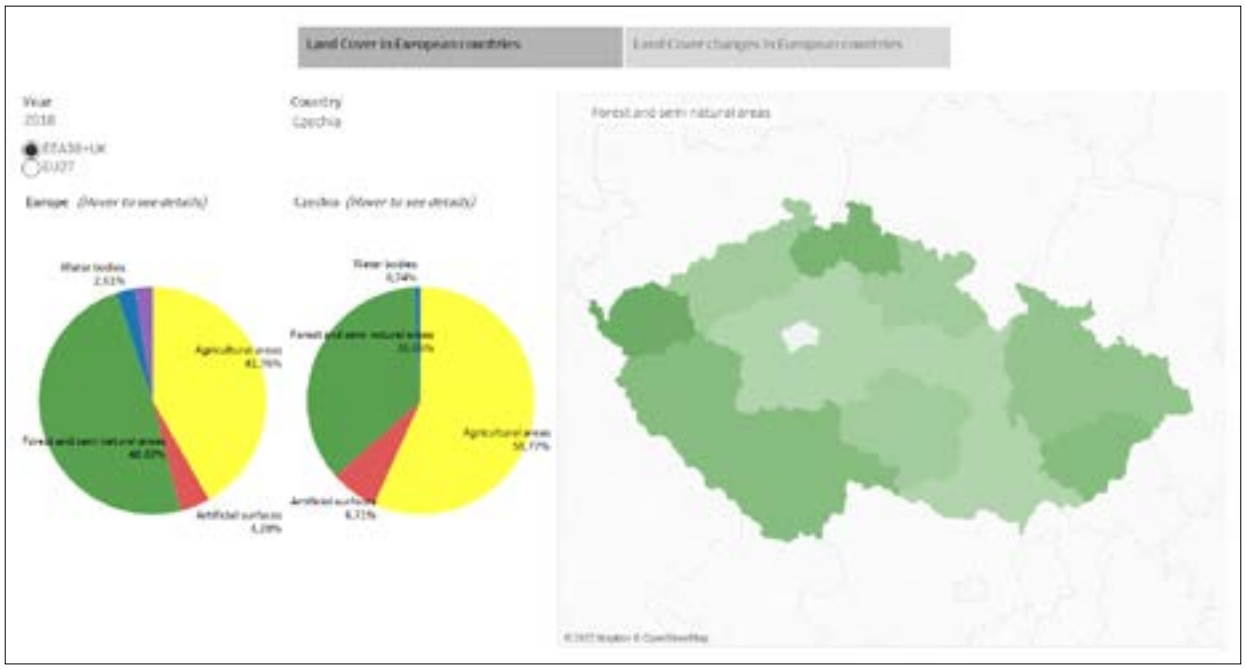
- Clouds
- Artificial surfaces and constructions
- Cultivated areas
- Vineyards
- Broadleaf tree cover
- Coniferous tree cover
- Herbaceous vegetation
- Moors and Heathland
- Sclerophyllous vegetation
- Marshes
- Peatbogs
- Natural material surfaces
- Permanent snow covered surfaces
- Water bodies

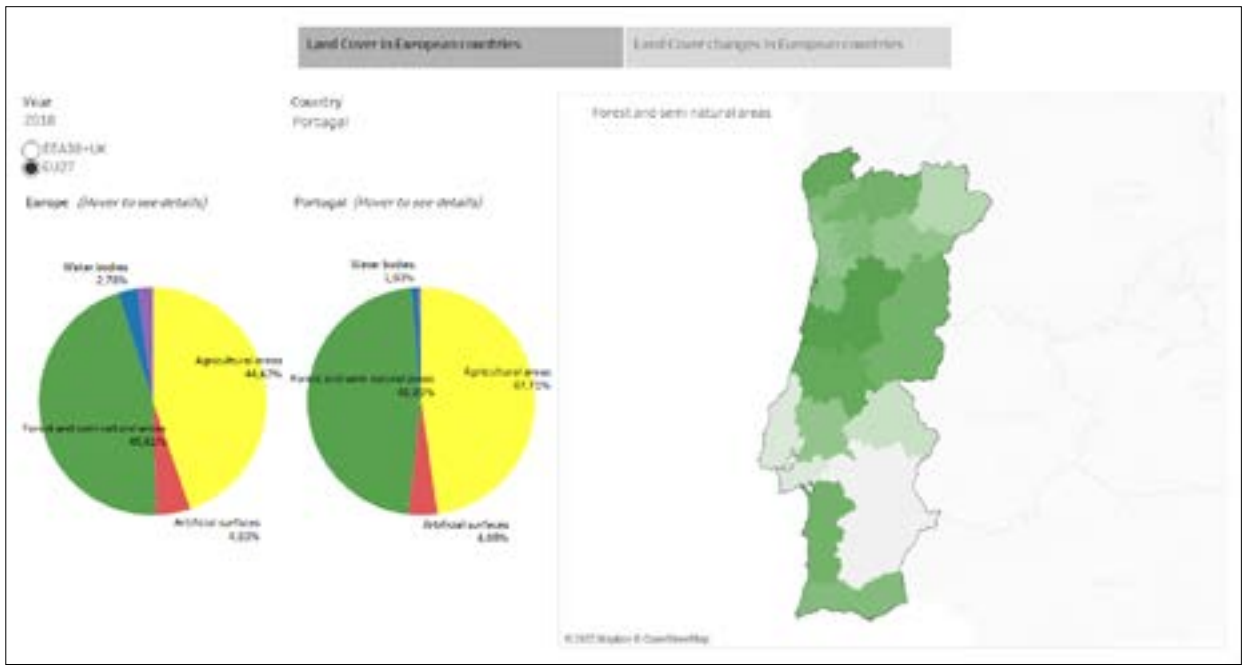
GDP per capita and laber force by occupation

The share of employees in individual sectors is also a reflection of GDP at PPP. We see that the most developed Sweden and the Czech Republic have the fewest inhabitants employed in agriculture; while Romania (whose GDP is very low compared to other countries) has a share of employment in agriculture almost as high as the share of employment in manufacturing.



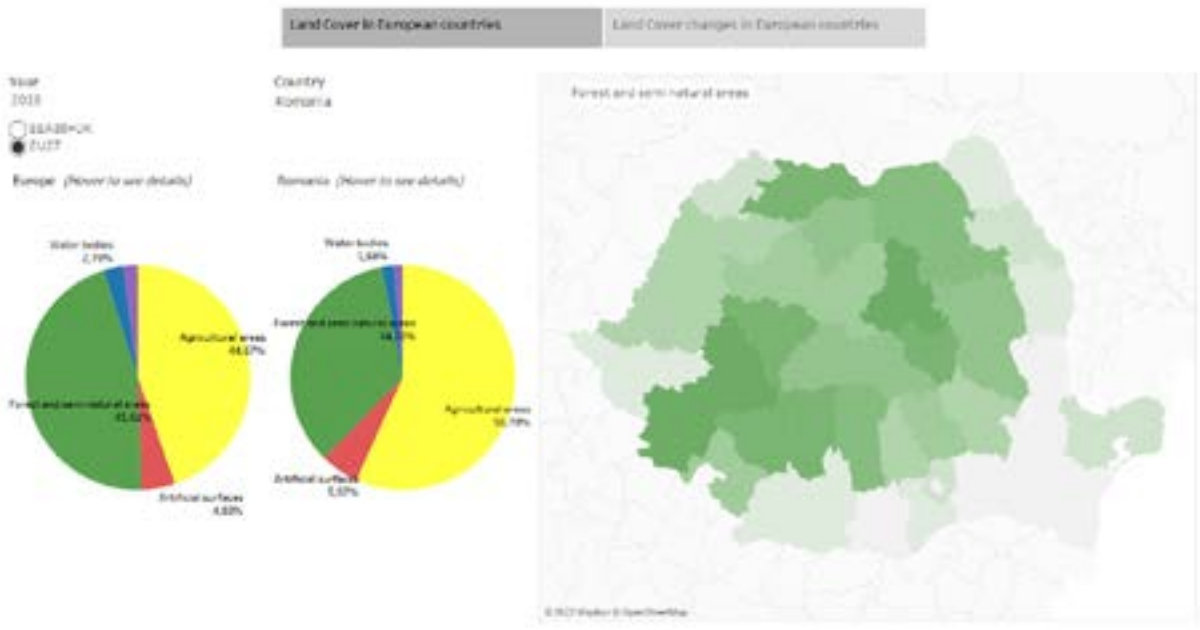
Land cover and its comparison in individual states compared to Europe

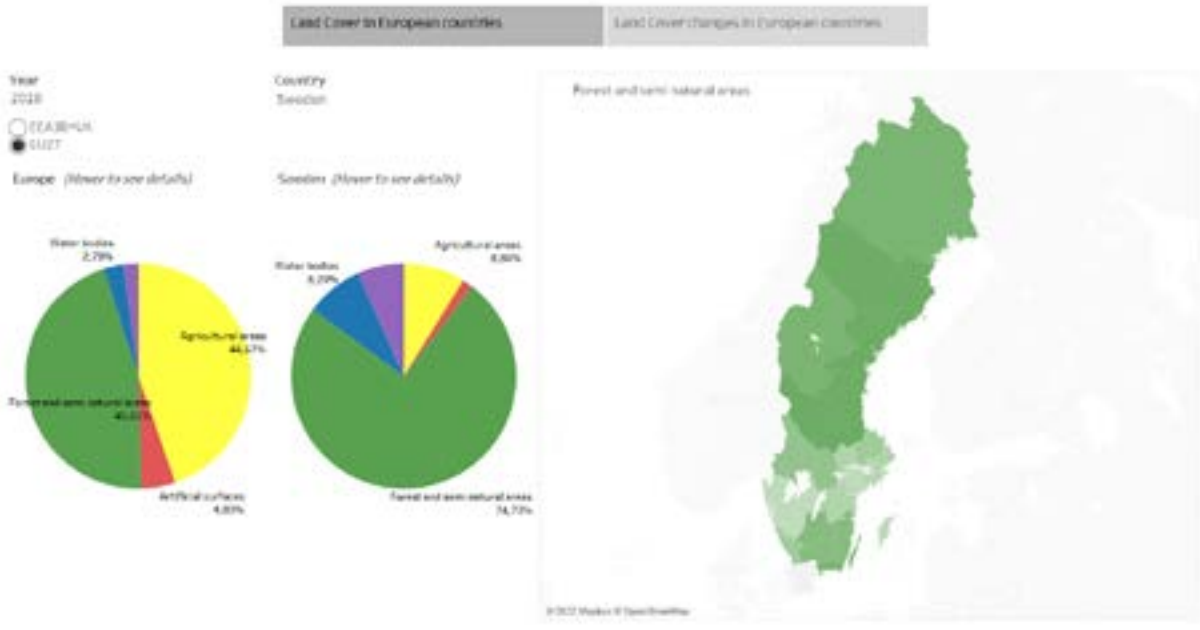




Land cover and its comparison in individual states compared to Europe

On the graphs, we can compare individual states in terms of land cover with each other and on the one hand in relation to Europe (specifically the EU). The previous information (number of employees in individual sectors and GDP per capita) is beautifully reflected in the pie chart. In the cartogram, we can then compare the level of afforestation in individual states. It is probably not surprising that Sweden has the largest forest area.

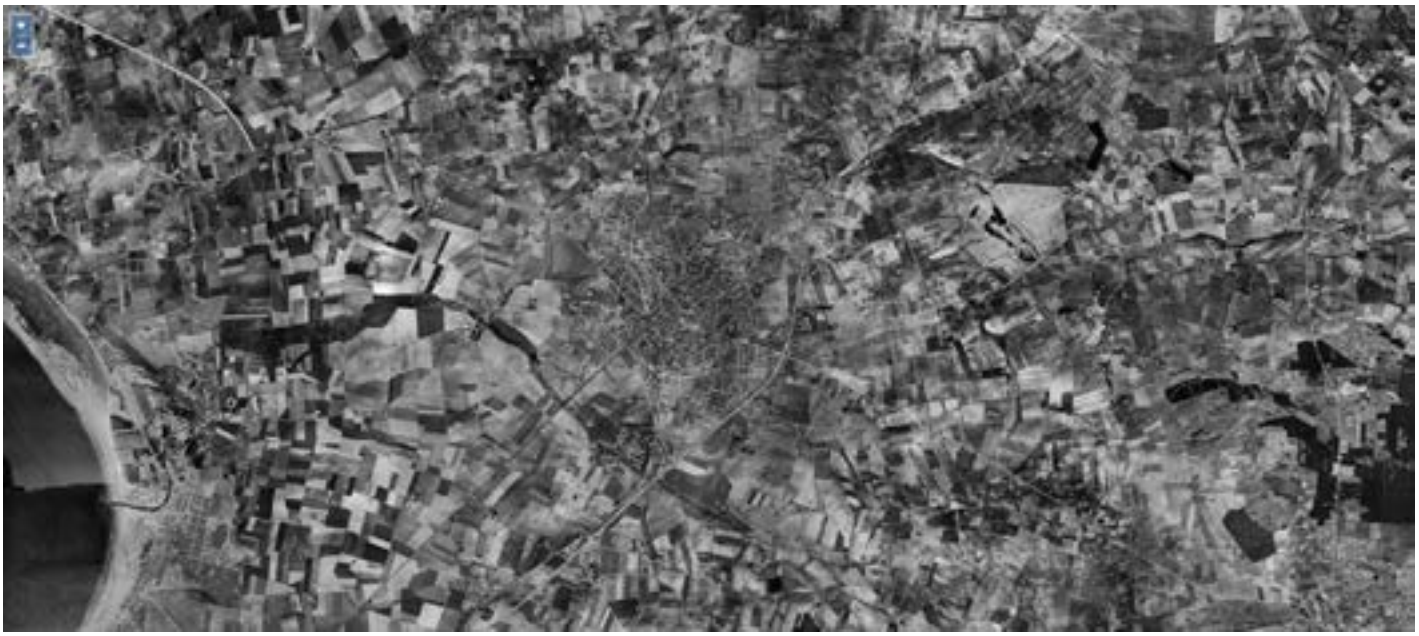


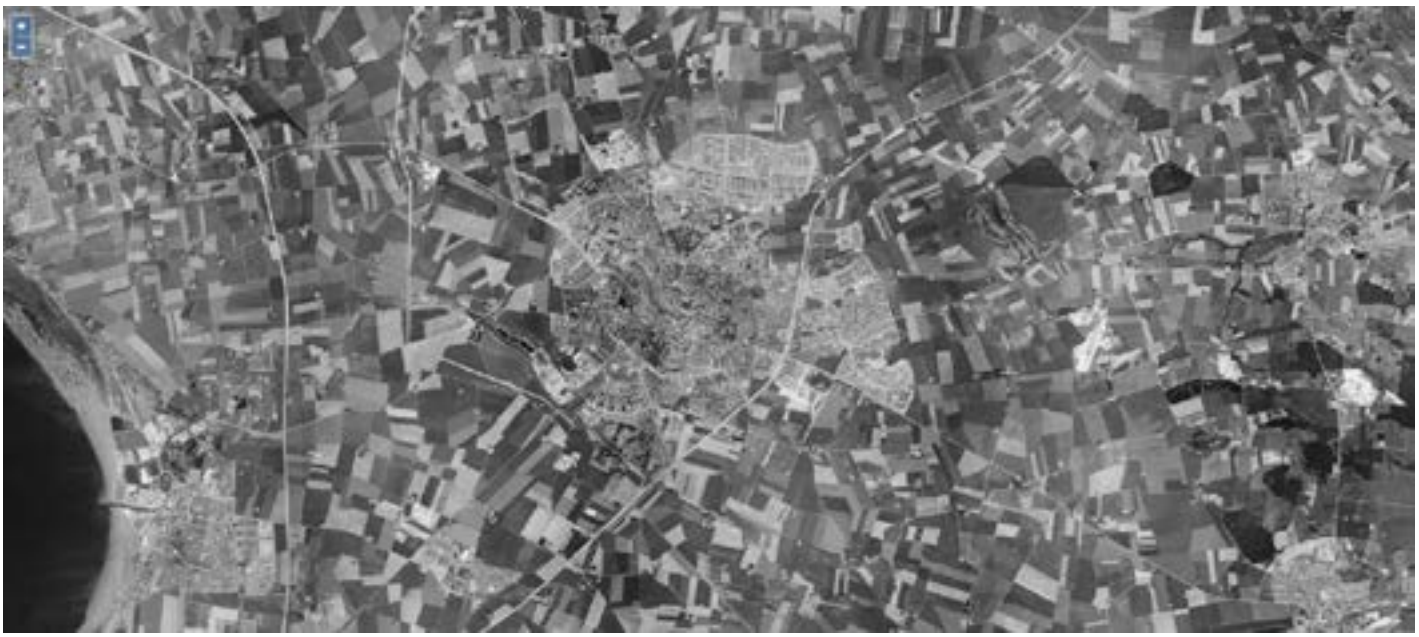


HISTORY AND LANDSCAPE

What did the landscape look like in the past? What contributed to the change in the appearance of the landscape? Could the political events in individual states have influenced the way the landscape looks like in these states? These were the questions that we asked ourselves together with the students and tried to find out the answers to these questions.

Maps of Lund, Sweden (ortophotomaps from 1960, 1975, 2021 and topographic map)





Maps of Loulé, Portugal (ortophotomaps from 1960 to present times)

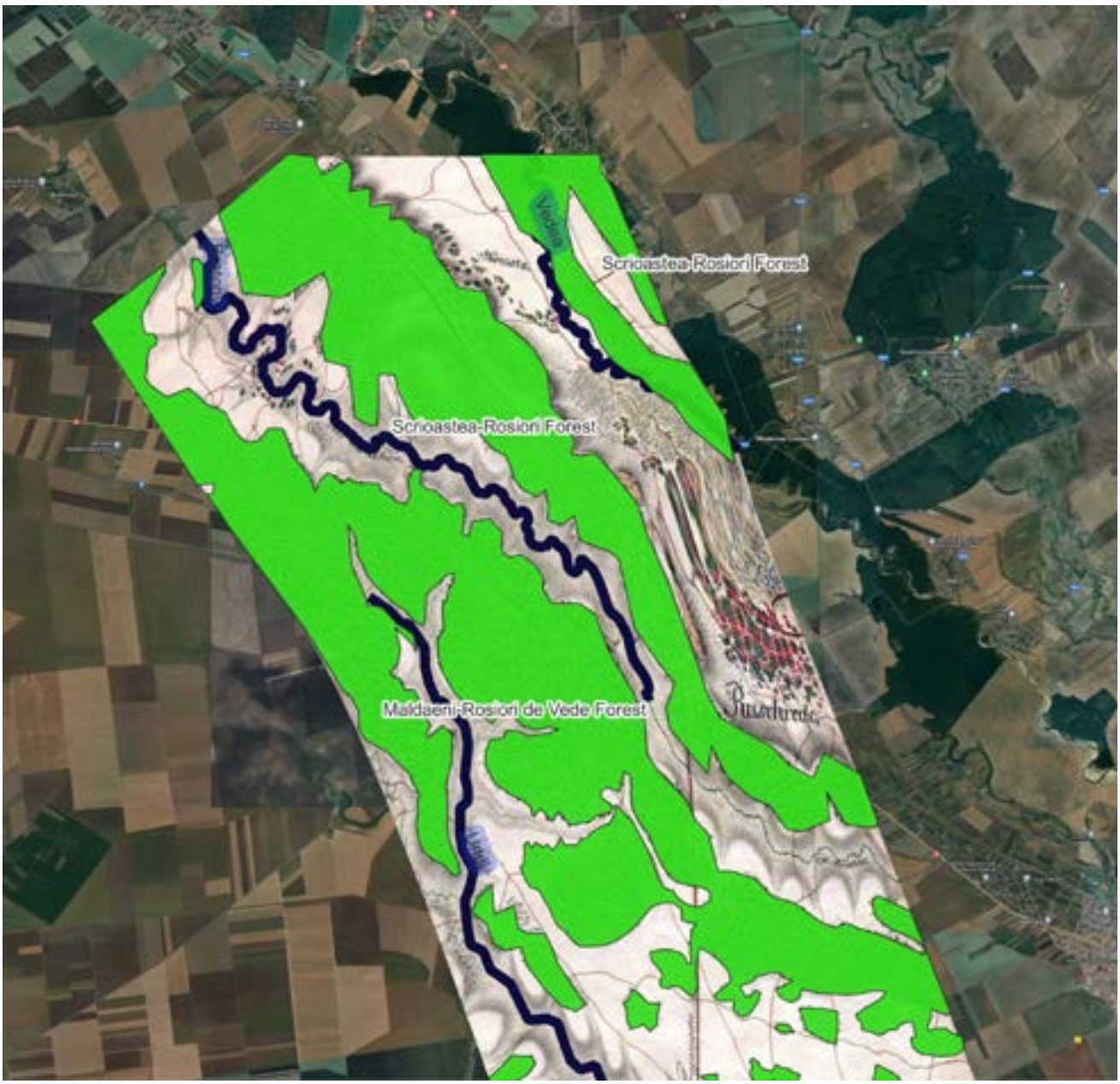






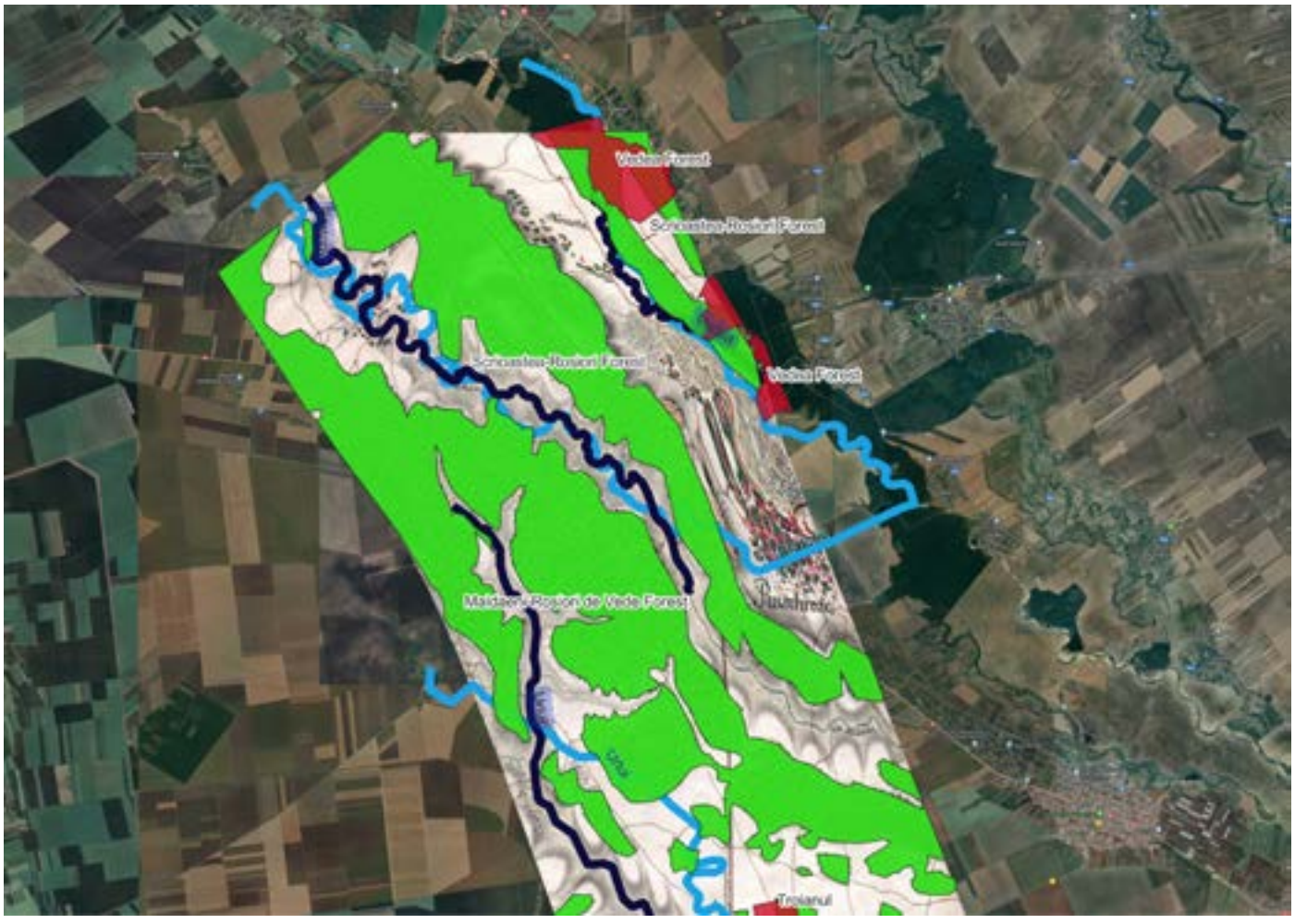
Maps shared by the CM Loulé e Portuguese Army, that we thank a lot.

Rivers in Rossiori de Vede (Romania) in past time and present time (practical using of GIS)



Rivers and forests in Rossiori de Vede in 1880. You can see georeferencing map from 1880 like a new layer in geographical information systems (program QGIS). Rivers are black line and the forest is a green polygon. When we georeference, it can happen that the raster layer is not displayed correctly. And that's what happened to the students from the Romanian school. This is because they were inserting a large map sheet. Working with GIS is very demanding and exceeds the capabilities of secondary schools. It's a university curriculum. But we are glad that we managed to work with GIS. Next picture is a datail with old maps from 1880 and actual ortophotomap.

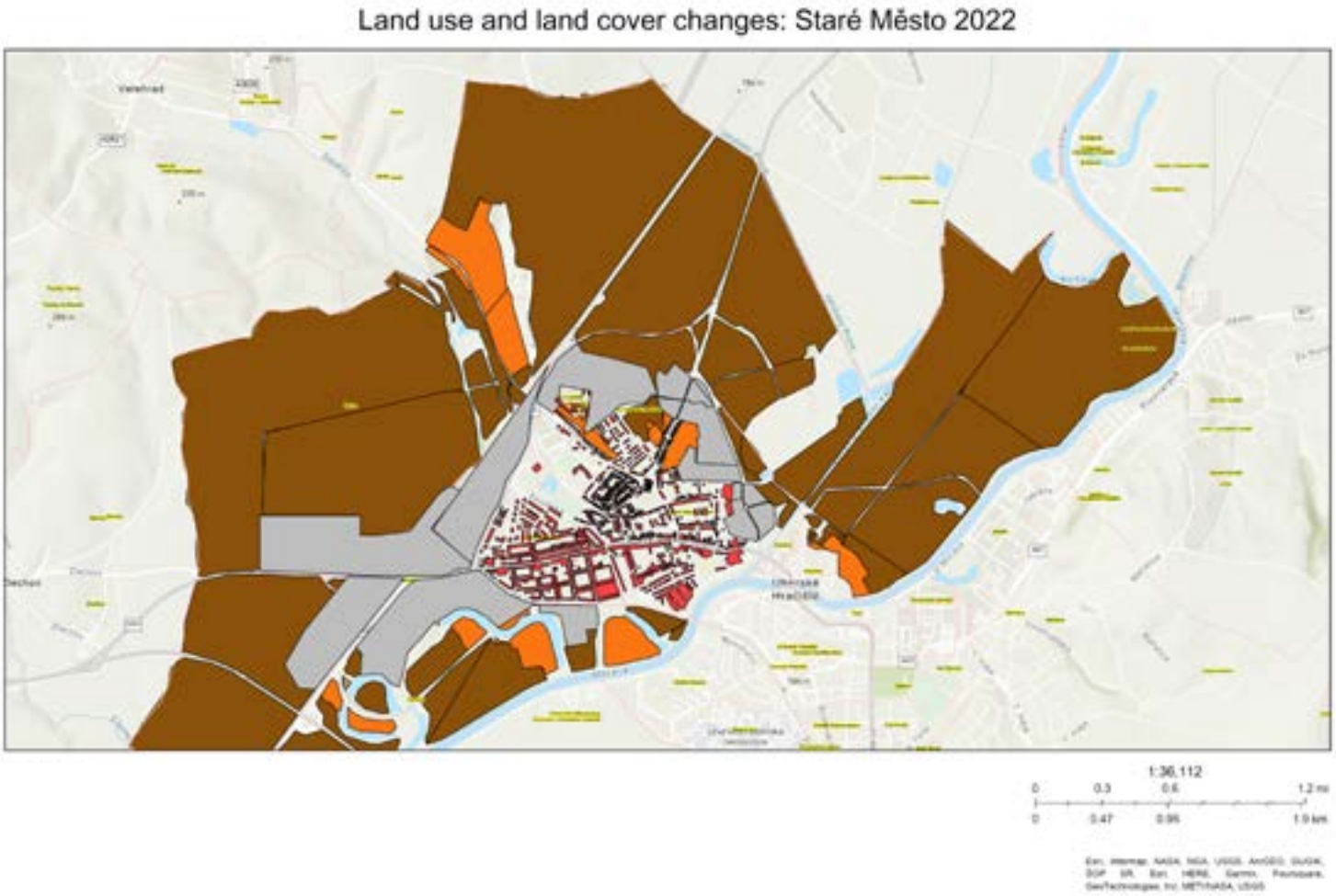
You can compare the current rivers and forest (top image) and a map where the past and the present are drawn.



Region Staré Město and ortophotomaps from 1950 an 2021

We can also use old aerial photographs to explore the landscape. The Czech Republic has available aerial photographs from the 1920s and also from the 1950s. Thanks to many projects, these aerial photographs are also available online. We can find them, for example, on the pages of the INSPIRE National Geoportal. Thanks to this, we can see at how the land was used in the 1950s.

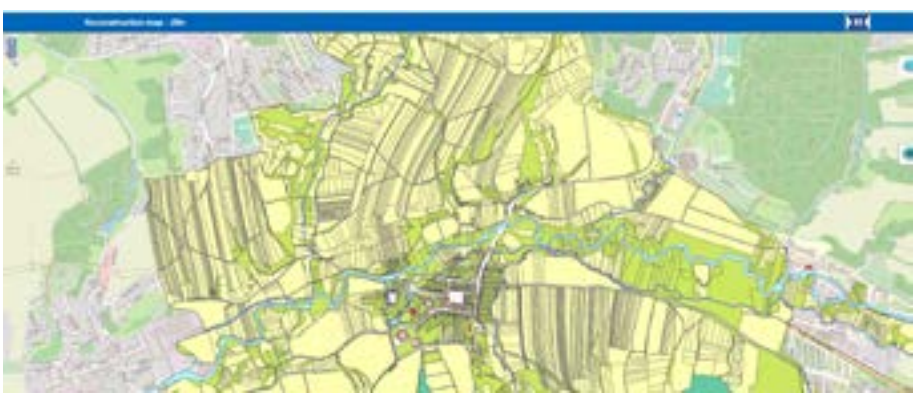
You can see how mosaic the landscape was. That was before collectivization. At the time when our country was democratic and private property was respected. After 1955, the appearance of the landscape began to change. The land of private owners was appropriated by the state and consolidation of the land began. The result was the large areas of arable land were threatened by erosion (water and wind). And this had an effect on organisms as well. The variety in the landscape has disappeared.



Thanks to working in the ArcGIS or QGIS program, we can create a reconstruction map that shows us how the landscape was used in the past. With students and teachers, we tried to work in both programs and several reconstruction maps were created during the project.

This type of mapping takes place in the field, with an underlying paper map, and later the results are processed in the ArcGIS online mapping software, which we obtained as a school for free. The result is a map of current land use in the Staré Město cadastre. Similarly, the map can be created from a stable cadastre maps is processed. By comparing these maps we can work with students; questions like what caused the changes in landscape use raised. The students then have to know better the region in which the school is located, they have to put into context the historical events that influenced the use of the land.

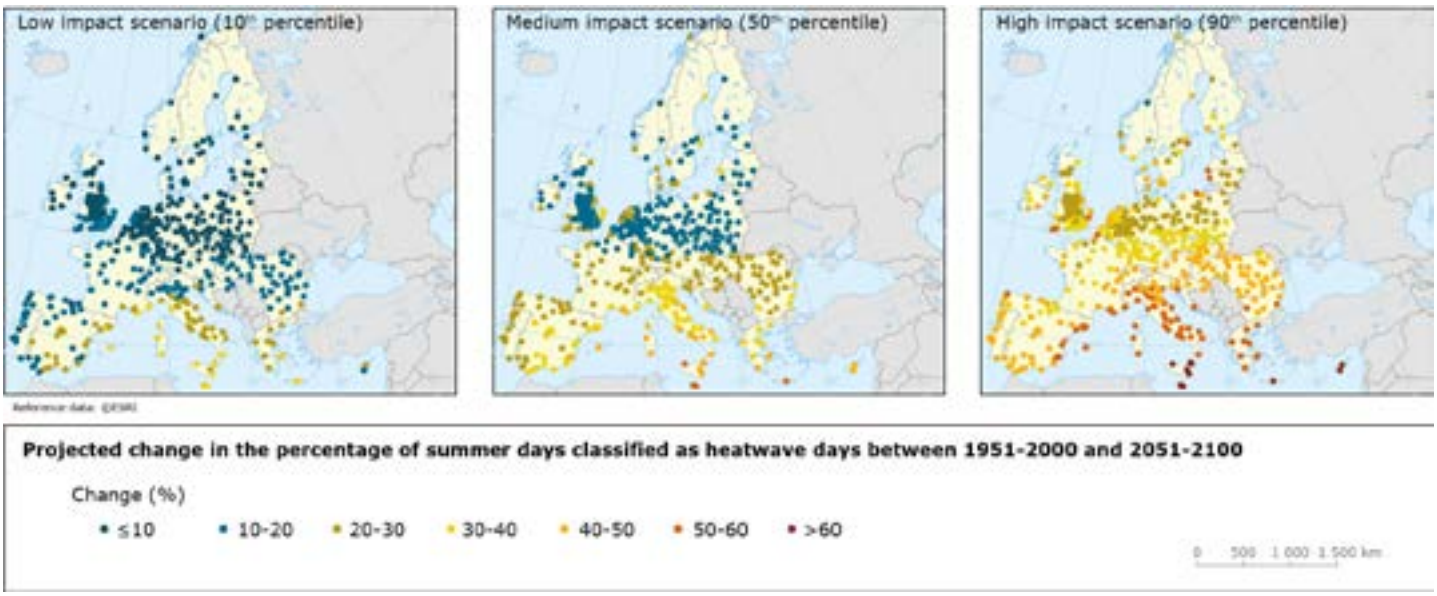
Reconstruction maps can also be found online. This is, for example, a reconstruction map of our regional town Zlín, which is available at http://towns.hiu.cas.cz/HAM/recmap.php?town=zlin. The map shows how the city of Zlín has changed compared to the beginning of the 19th century. On the reconstruction maps, we can pay attention to changes in the flow of rivers (here it is Dřevnice), we can see how the soil was fragmented in the past (the so-called plowland was separated by draws), etc.



ENVIRONMETAL TROUBLES IN THE LANDSCAPE

Projected change in the percentage of summer days classified as heatwave days between 1951-2000 and 2051-2100, July 2020

This dataset presents the projected changes in the percentage of summer days (May-September) classified as heatwaves days between the historical period (1951–2000) and the future period (2051–2100) in 571 European cities therefore indicating the projected future risks to human health.Heatwaves were defined as three consecutive days where both the maximum and the minimum temperature exceed their respective 95th percentile from the historical period. The analysis is based on 50 climate model projections from the Coupled Model Intercomparison Project Phase 5 (CMIP5) under the RCP8.5 climate scenario.



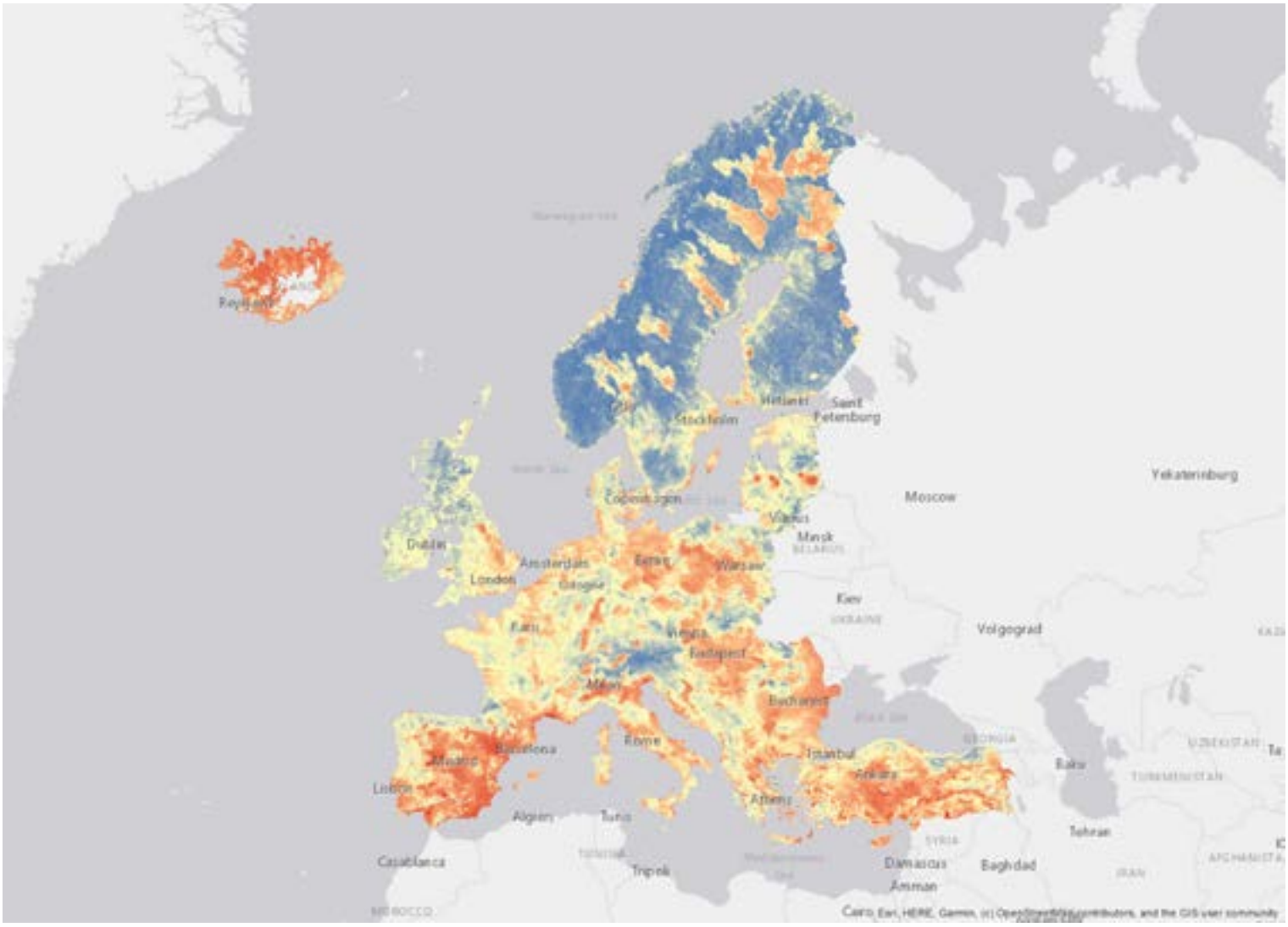
Soil erosion

Soil erosion is related to the changing climate in Europe. There are more sunny days in the summer, little rain and we have a shortage of water. The soil is then carried away by the wind (wind erosion). And then it rains (shortly and intensely) and there is a problem with water erosion. The soil is not able to absorb a large amount of water, so the water and the topsoil quickly run off the landscape. Photos are from the Czech republic.

Soil moisture deficit during the vegetation growing season, 2000-2019

The dataset consists of a collection of annual soil moisture (SM) anomalies during the vegetation growing season (GS) for the years 2000-2019 across EEA 38 area and the United Kingdom. The vegetation growing season is defined by EEA´s phenology data series „Vegetation growing season length 2000-2016", available in the EEA website and in this catalogue.
The anomalies are calculated based on the European Commission's Joint Research Centre European Drought Observatory (EDO) Soil Moisture Index (SMI) with respect to the 1995–2019 base period. The yearly start and end of GS periods are dynamic and calculated according to the EEA Phenology Indicators. A positive anomaly indicates that the observed SM was wetter than the long-term SM average for the base period, while a negative anomaly indicates that the observed SM was drier than the reference value. Because SM anomalies are measured in units of standard deviation from the long-term SMI average, they can be used to compare annual deficits/surplus of SM between geographic regions.
EDO is one of the early warning and monitoring systems of the Copernicus Emergency Management Service. As the dataset builds on EDO's SMI, it therefore contains modified Copernicus Emergency Management Service information (2019).

https://sdi.eea.europa.eu/catalogue/srv/eng/catalog.search#/metadata/a21e58ad-ff91-436c-866a-fcbcf2615841



Concentrations of heavy metals in European agricultural soils, 2020

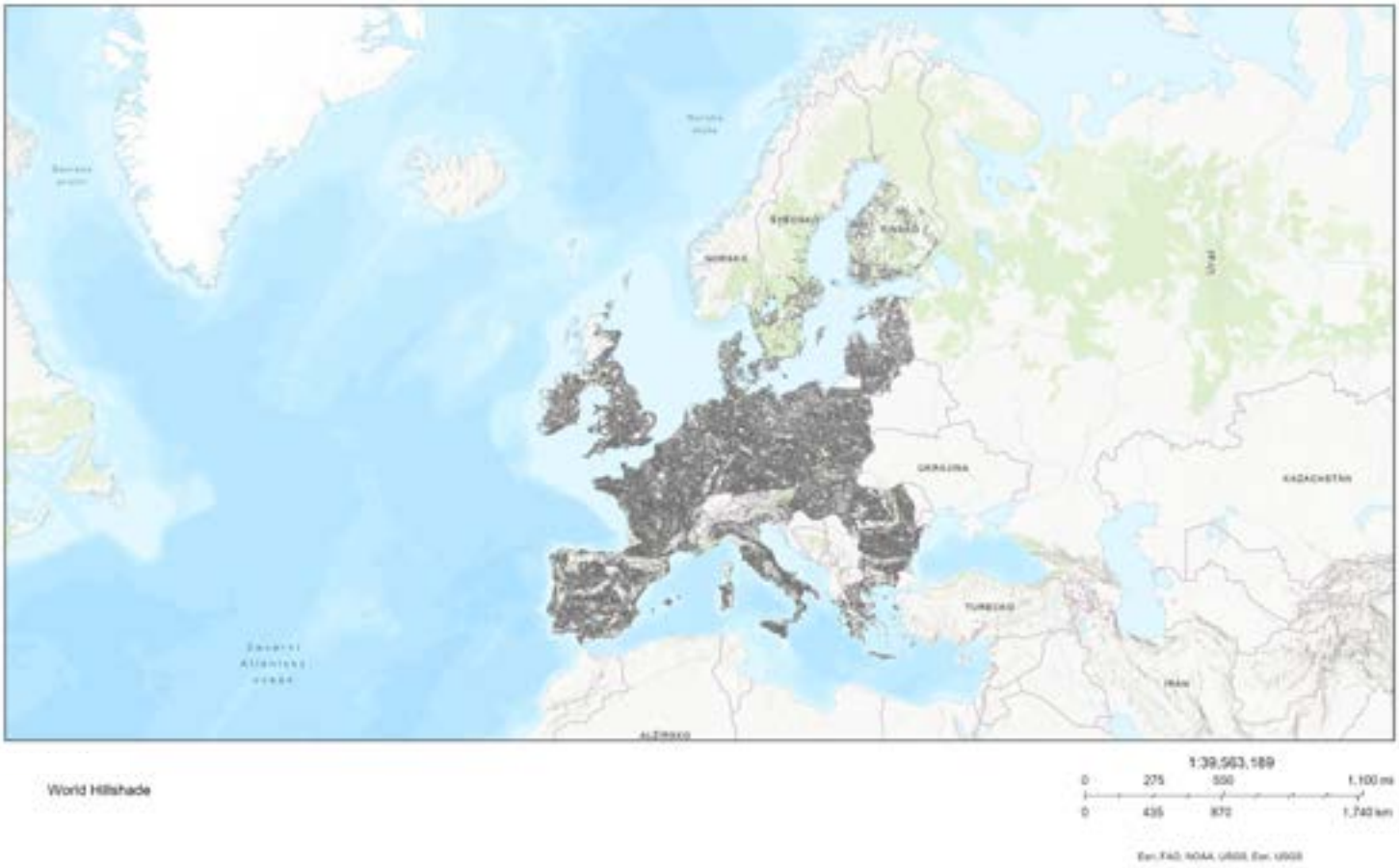
This data set contains current and critical metal concentrations and its exceedances in topsoils, as well as data related to the current and critical metal inputs to and outputs from soils (uptake, accumulation and leaching) and the resulting exceedances of critical metal inputs.

This data set has been compiled by the European Topic Centre on Urban, Land and Soil Systems (ETC/ULS) in the context of a study on metal and nutrient dynamics where the fate and dynamics of the most abundant heavy metals and nutrients in agricultural soils were investigated. The purpose of this study was to investigate the impacts of agricultural intensification in Europe, and to understand its environmental impact. Metal concentrations in soils were used from two consecutive Europe-wide geochemical surveys, sampled in 1998 (FOREGS survey) and 2009 (GEMAS survey). For land use, the 2010 Eurostat data were used.

The metals included in this data set are cadmium (Cd), copper (Cu), lead (Pb) and zinc (Zn). The results on the fate of Nitrogen (N) and Phosphorus (P) are included in a separate dataset. Cu and Zn are minor nutrients but at high inputs, they may cause adverse impacts on soil biodiversity, whereas Cd and Pb are toxic metals that may lead to soil degradation, by both affecting soil biodiversity and food quality. Metal budgets based on spatially explicit input and output data were calculated using the INTEGRATOR model; approximately 40,000 so-called NCUs as unique combinations of soil type, administrative region, slope class and altitude class were used. Available critical limits for food, water and soil organisms, from different existing regulations and studies, were converted to soil property-dependent critical metal concentrations (soil-based quality standards), which were then used to calculate critical metal inputs.

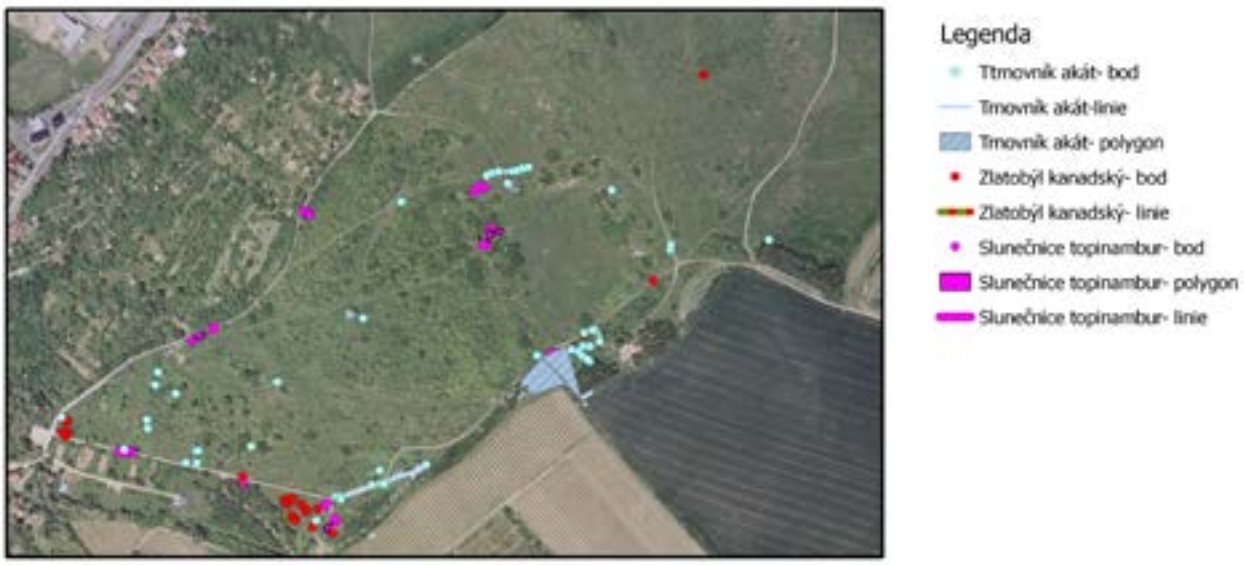
The results allow for the first time to identifying spatial hot spots for critical environmental impact of soil pollution for the four most abundant heavy metals. It thus informs policy processes important for planning and guiding sustainable agriculture and soil management. The work is methodologically novel, as it applies endpoint risk to thresholds in soils, and thus guides future impact studies. Updates with more recent land use and soil data are now possible.

The description of the included model results and the reference report is provided under „lineage". The data set is provided as SHP and also in a GDB, the latter including as well the N and P concentrations. An Excel file „Metadata heavy metals nutrients.xlsx" with the attribute metadata is provided with the data set.



Mapping invasive plants

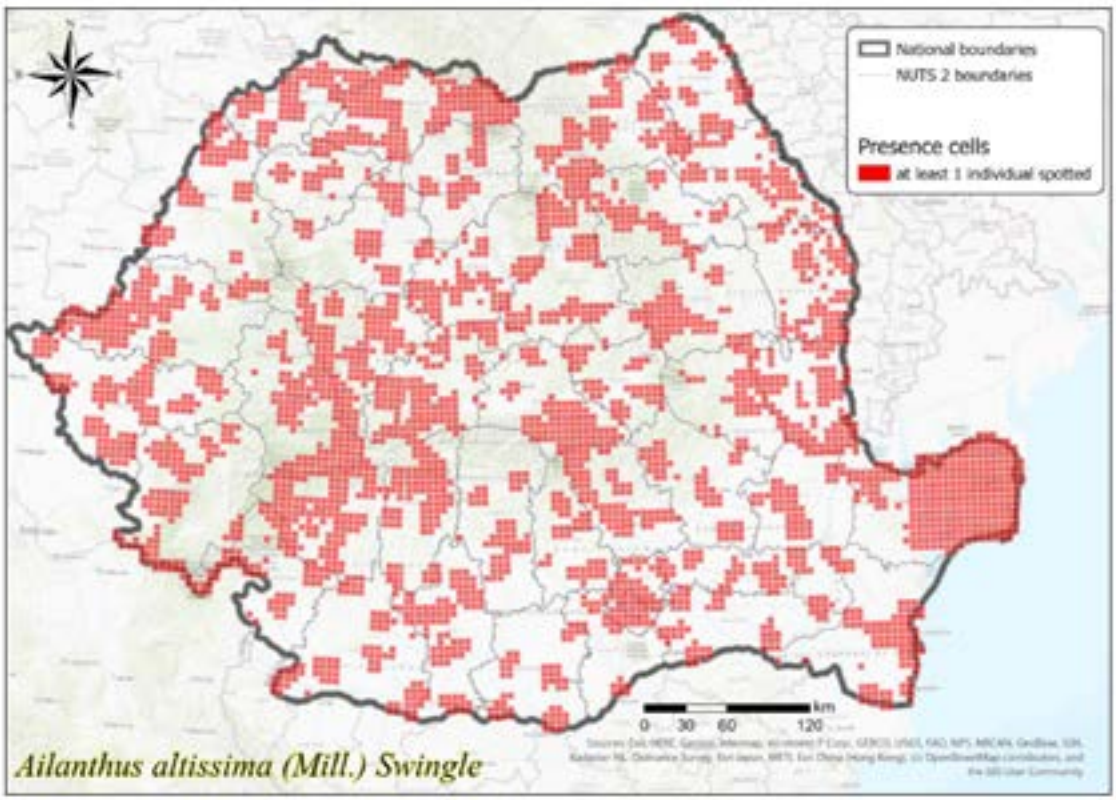
Soil erosion is related to the changing climate in Europe. There are more sunny days in the summer, little rain and we have a shortage of water. The soil is then carried away by the wind (wind erosion). And then it rains (shortly and intensely) and there is a problem with water erosion. The soil is not able to absorb a large amount of water, so the water and the topsoil quickly run off the landscape. Photos are from the Czech republic.



1: 4229 Mančíková Ivana

Problem with invasive plants in Romania (Ailanthus altissima)

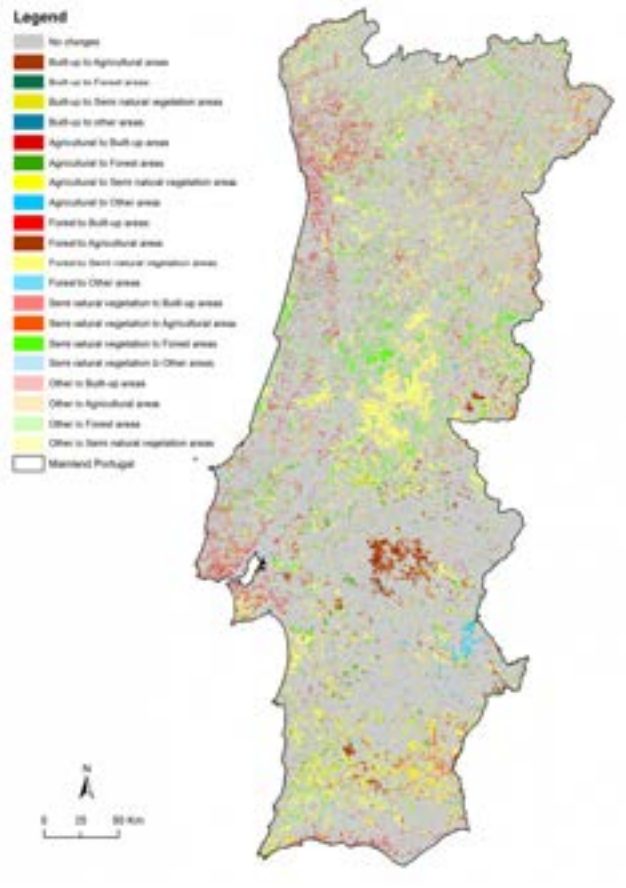
It is a very fast-growing tree that is able to have an allelopathic effect on the surroundings and thus limit the growth of the surrounding vegetation; it mainly secretes ailanthon, which causes difficulties in the growth of about seventy species of deciduous and coniferous trees. These substances are mainly produced by young individuals, which thus win the fight for light with other woody plants. It causes serious damage to buildings, infrastructure and cultural monuments in urban areas. It acts as a troublesome weed in gardens and parks, orchards and vineyards. It spreads intensively under power lines, along railways, roads, and sometimes along waterways. A large amount of pollen causes allergic problems.



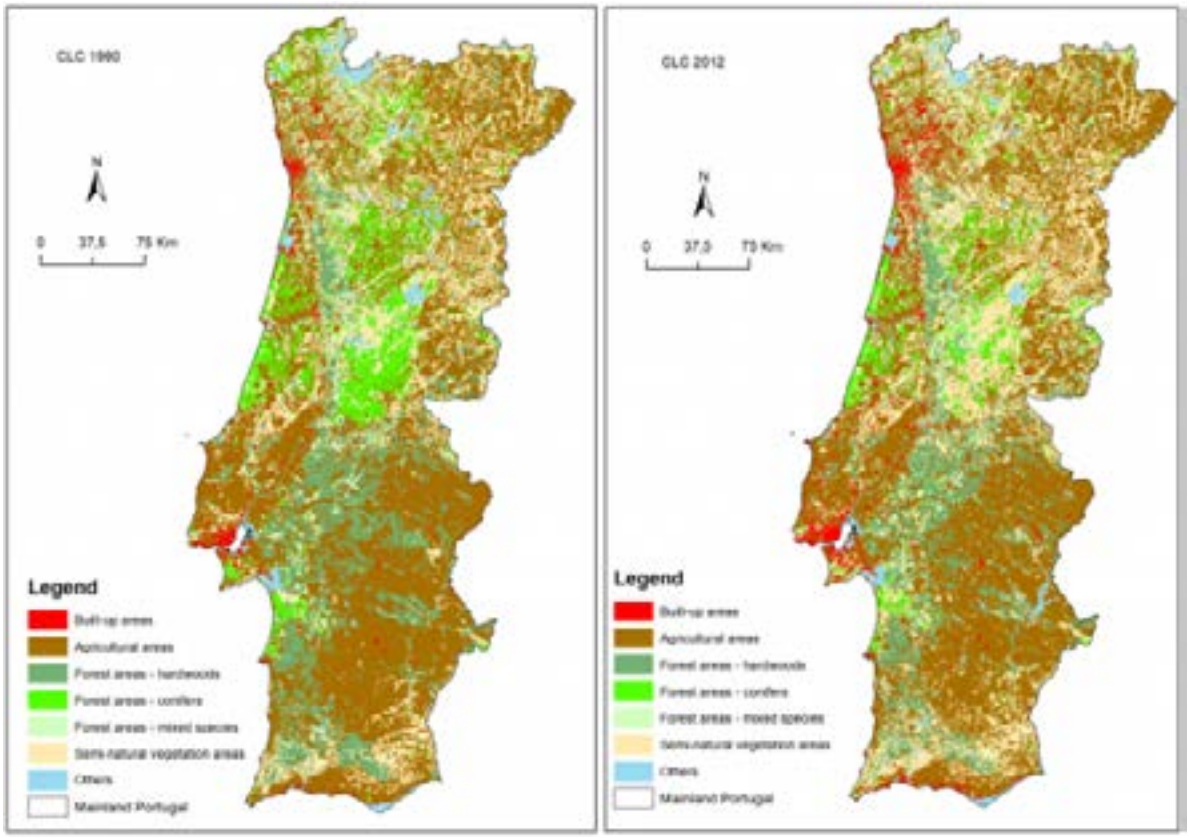
Biology and landscape

Wine region in Portugal

Agriculture in Portugal



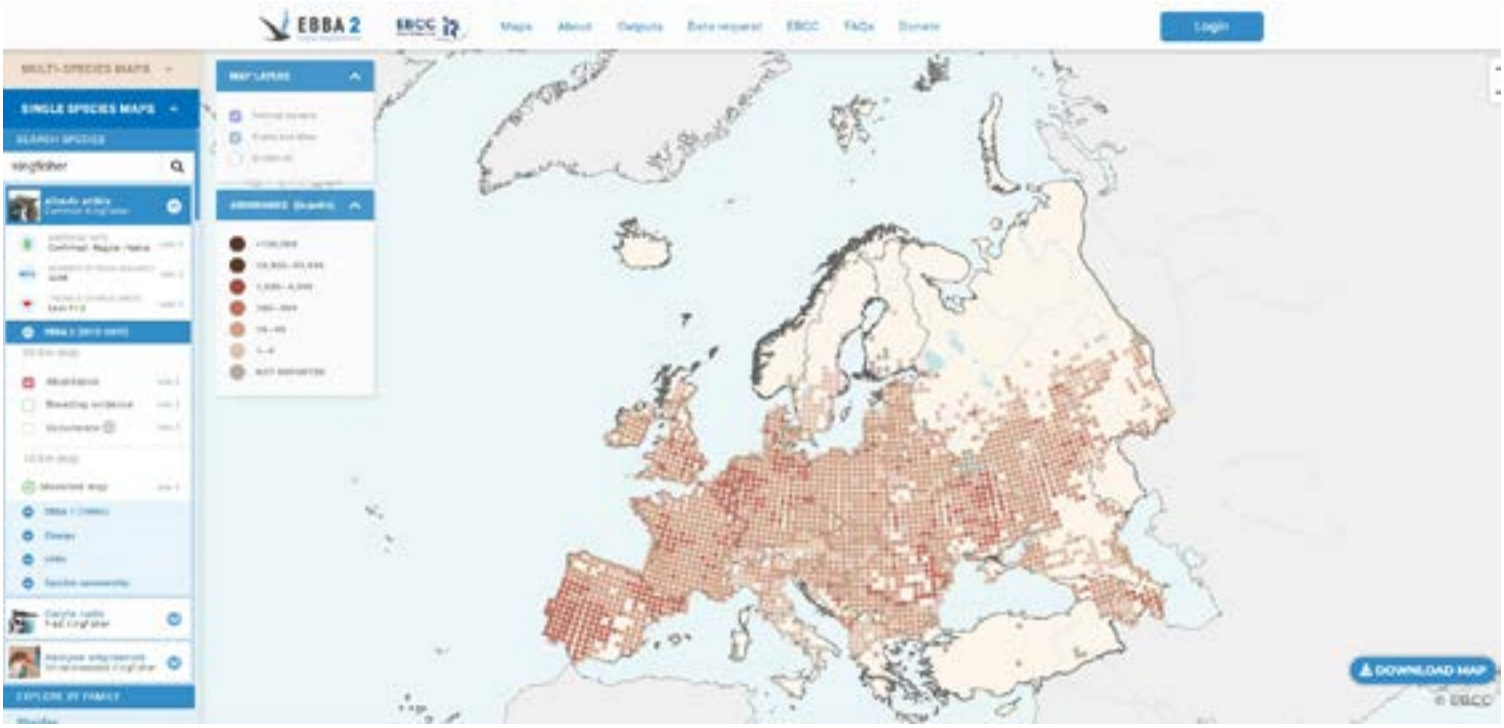
Agriculture greatly affects the landscape and also the distribution of organisms in the landscape. The more an area is used for agriculture, the fewer animal species there are. And we see that with Portugal. The bottom map shows the changes in the development of the agricultural landscape in Portugal.



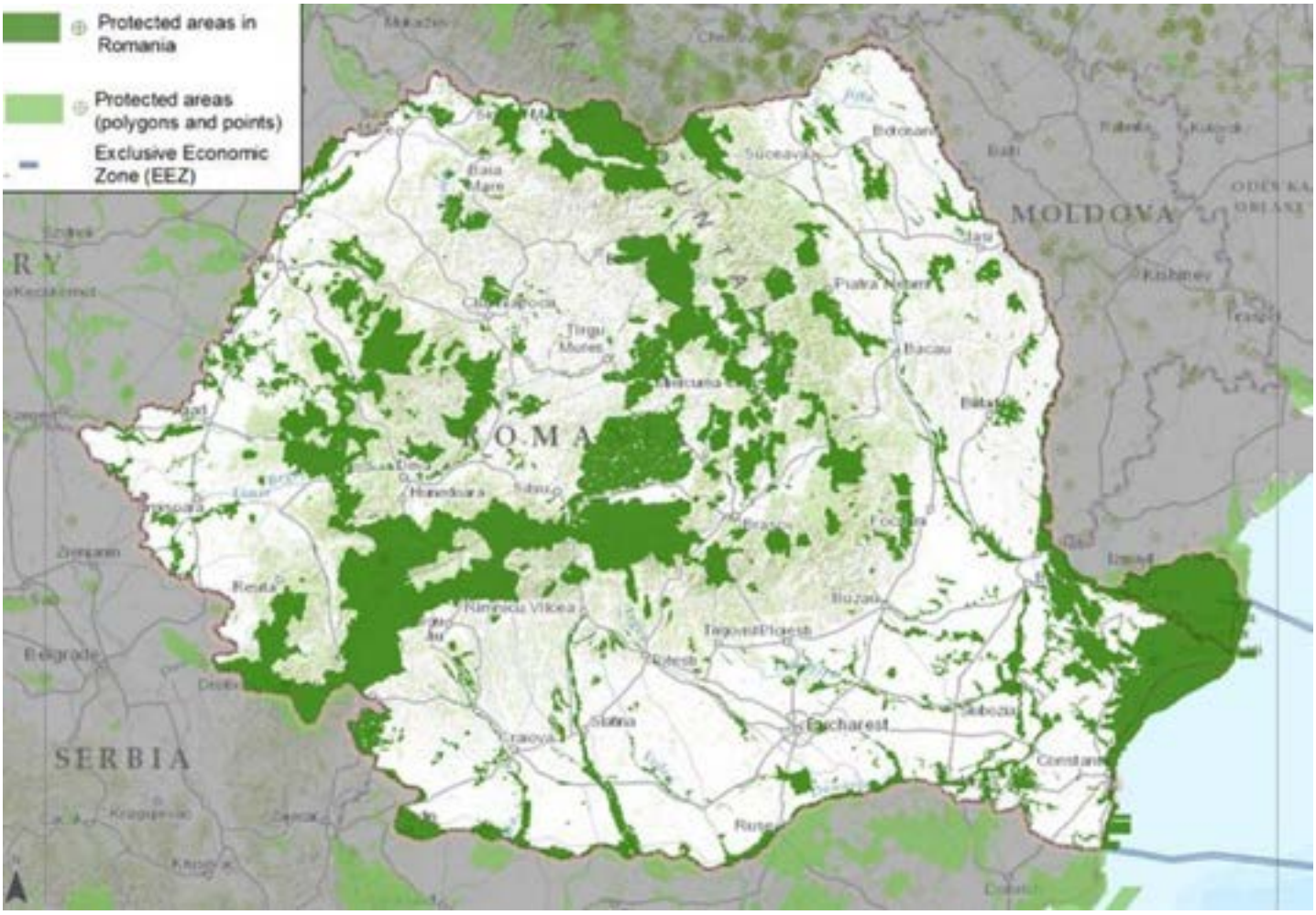
Maps shared by the CM Loulé e Portuguese Army, that we thank a lot.

Occurrence of kingfisher

During field exercises, we observed kingfishers in the Czech Republic and Romania. Since the kingfisher is also known to the other partner countries, we were interested in where it is possible to observe it across in Europe.



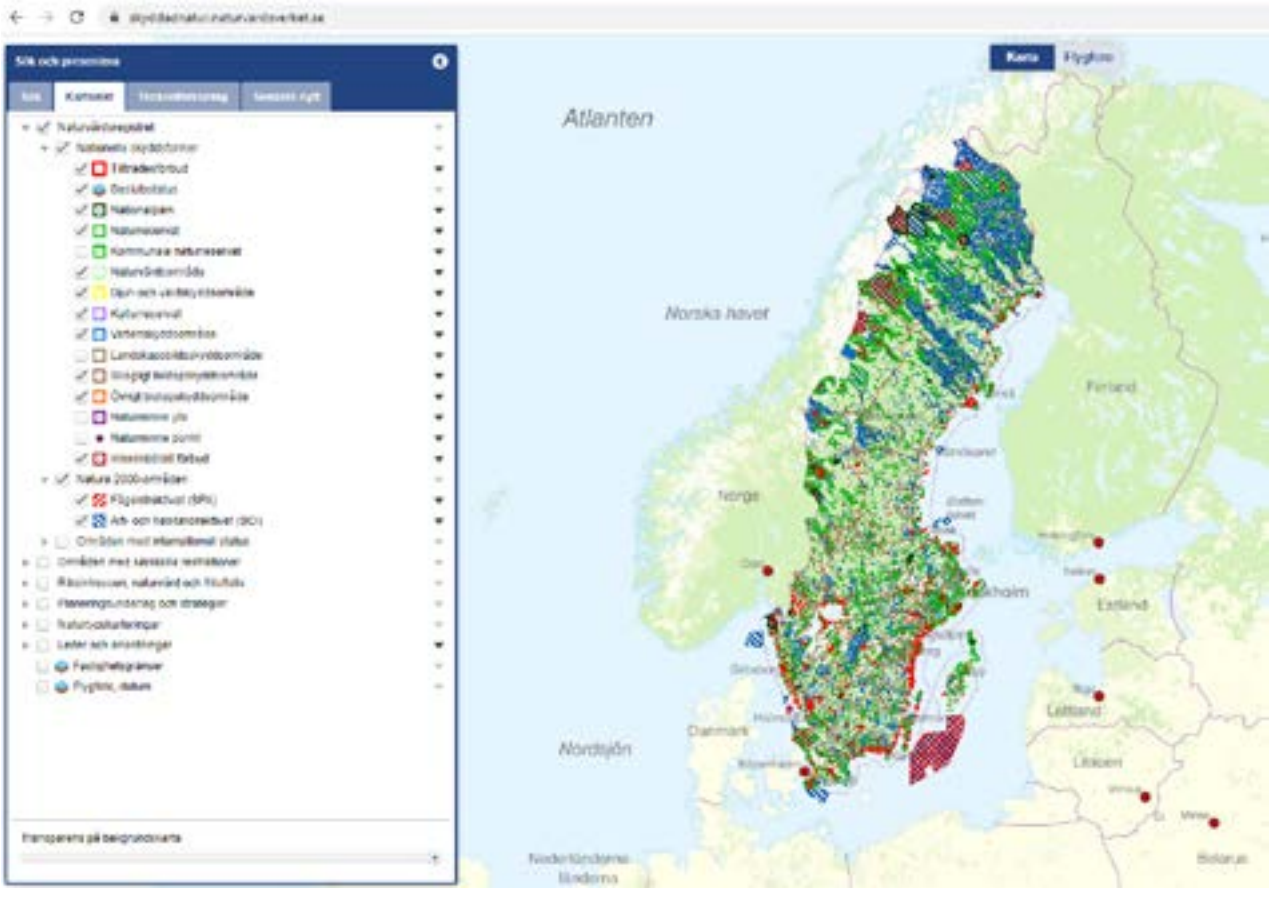
Protected areas in Romania



Illegal logging in Romania

On the map you can see places with illegal logging.

Map of protected areas in Sweden



Vanished landscape

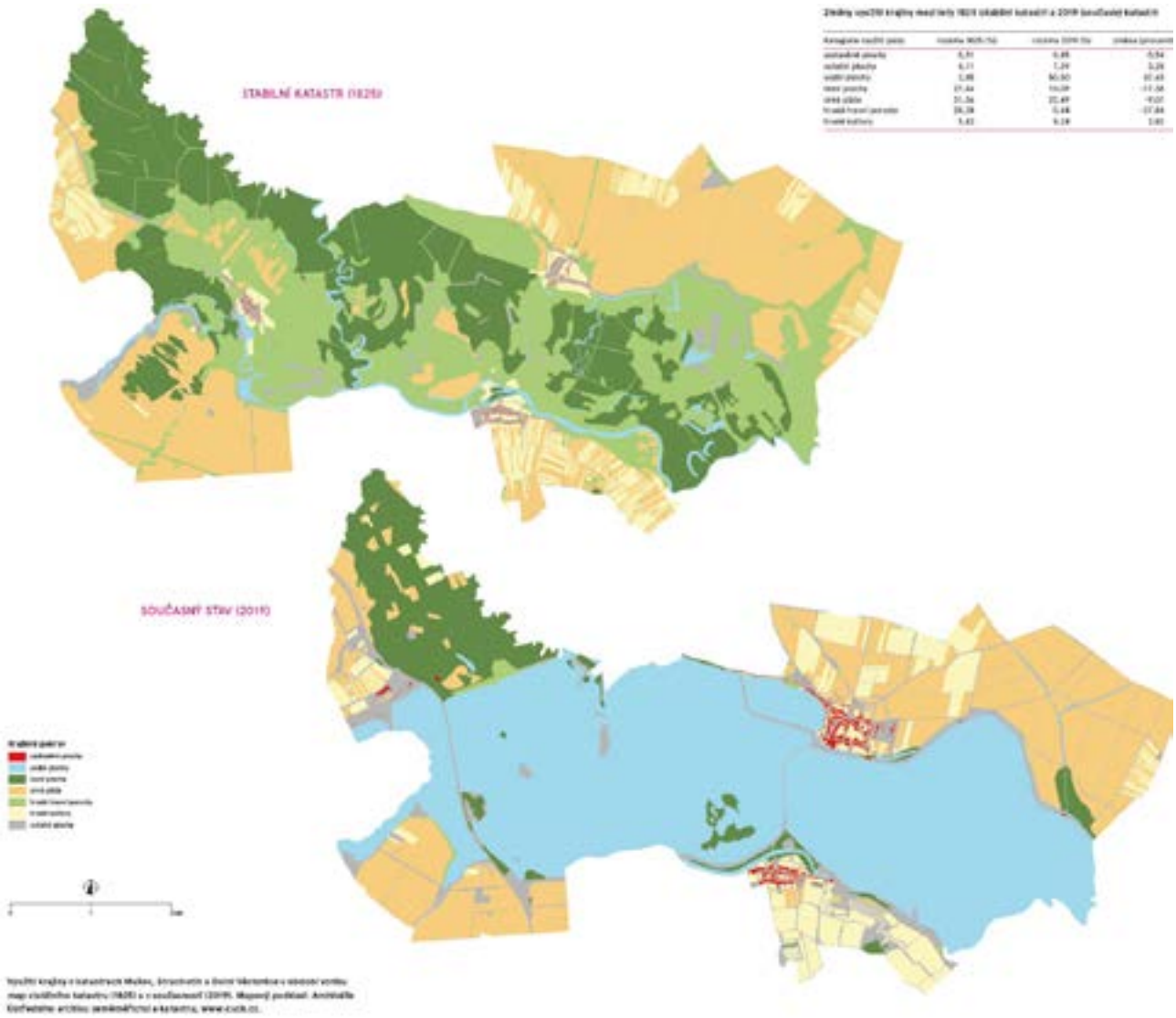
An interesting project that can be used by students and teachers not only from the Czech Republic is called „Zanikle Krajiny" and is available at http://www.zaniklekrajiny.cz/o-projektu. The project deals with the issue of the heritage of extinct landscapes in the Czech Republic. For the purposes of the project, heritage is understood as a process of active and intentional way of representing the past, the aim of which is to express the identification of those who represent. Inheritance is thus formed for certain reasons and for some purposes. This also applies to the heritage of the landscape. The landscape itself and its heritage are not immutable, they have a multi-historical character and are subjects of reconstruction, transformation, reinterpretation, representation, or aestheticization and commodification. The heritage of the cultural landscape is a source of knowledge about the history of society and nature. It is also an important part of the process of shaping territorial identities and the belonging of local communities, and as such it should be made available and passed on in an understandable form to experts and the general public.

The outputs of the project will therefore be made available through a web information system, which will include the Digital Atlas of Disappeared Landscapes of the Czech Republic, interactive and mobile software map applications for the public. In the course of the project, two exhibitions, conferences, workshops will be organized and specialized maps and other publications will be prepared.

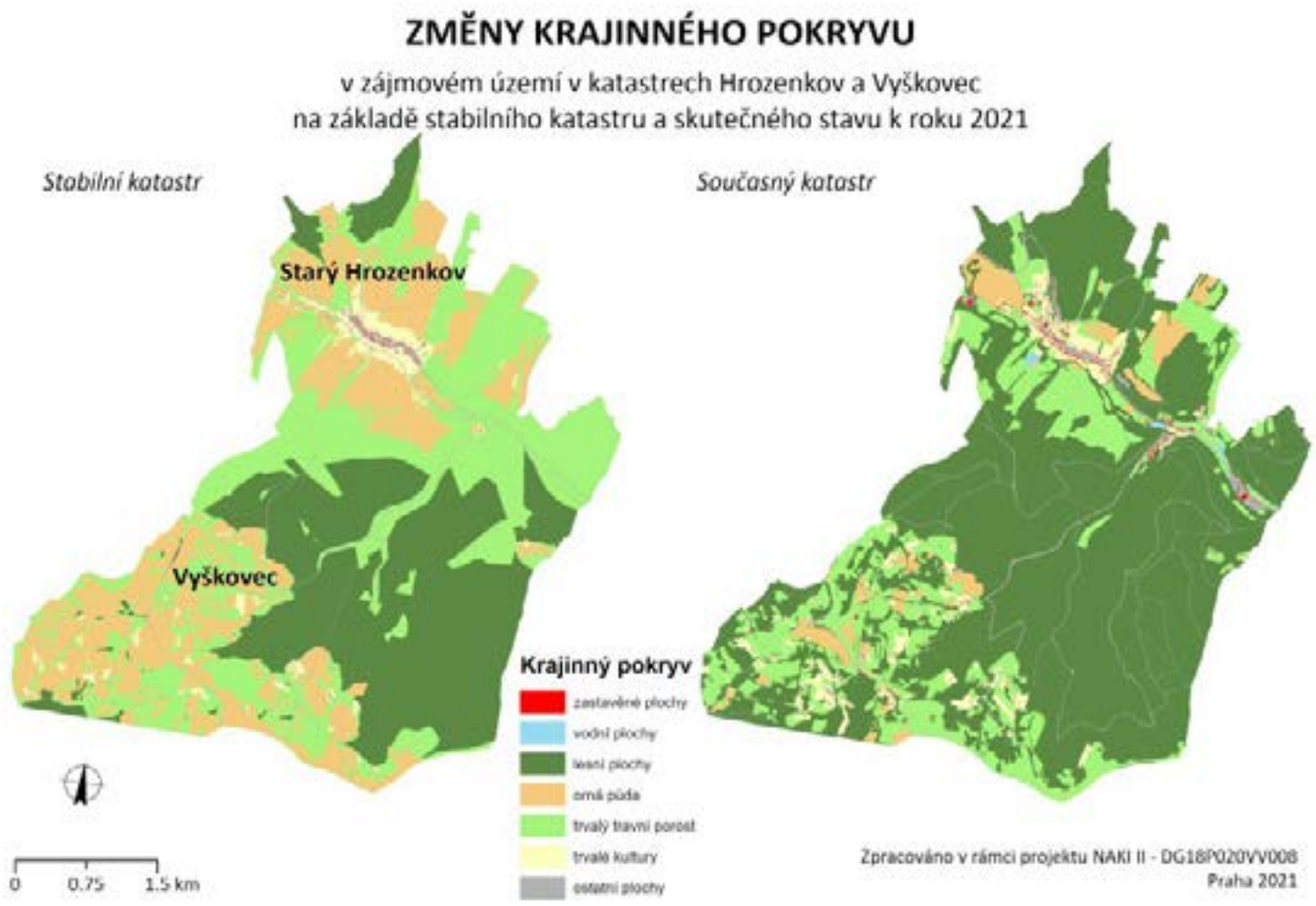
Landscapes represent certain values and the people who live in them should take an active interest in the shape and management of their heritage. Therefore, the project will focus on the publicity of the topic, but also on the participatory approach and making the results available to the public.

To work with the students, we selected two examples of lost landscapes – the lost landscape of the Novomlýn Reservoirs and the lost landscape of Mostecka, which was heavily affected by mining in the past and is currently undergoing reclamation.

As you can see on the map, the Nové Mlýny water reservoir is a modern affair. In 1825, the landscape was used for agriculture - either as pasture, there were forest stands and also arable land. Nowadays, the use has changed, today we only see a large water area, which is surrounded by arable land with a minimum of forests. This also caused significant grounding in the Novomlýn reservoirs.



Vanished landscape



Starý Hrozenkov belongs to the areas where the prevailing trend in the observed period was the extensification of landscape use. And a very strong extensification, when not only arable land (its area decreased by more than 21 percentage points), but also permanent grasslands (decrease by 15 percentage points) were replaced by less intensive forms of farming. These categories were replaced by forest areas in the central and northern parts of the territory. Forest areas are currently found on an extremely large proportion of the territory - they cover 67 percent of it (an increase of more than 33 percentage points).

In the southern part of the territory, a milder form of extensification prevailed, when arable land was largely replaced by permanent grasslands. Nevertheless, the total area of permanent grassland fell by 15 percentage points. A slight increase was recorded by water bodies, which also contribute to a more natural character of the landscape. Built-up areas only increased minimally. Permanent cultures and other areas did not expand significantly either, even though there was a certain development of residential activities in an otherwise peripheral area and their attenuation was not recorded. The map is from: http://www.zaniklekrajiny.cz/atlas/vyvoj-vuziti-krajiny-37

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