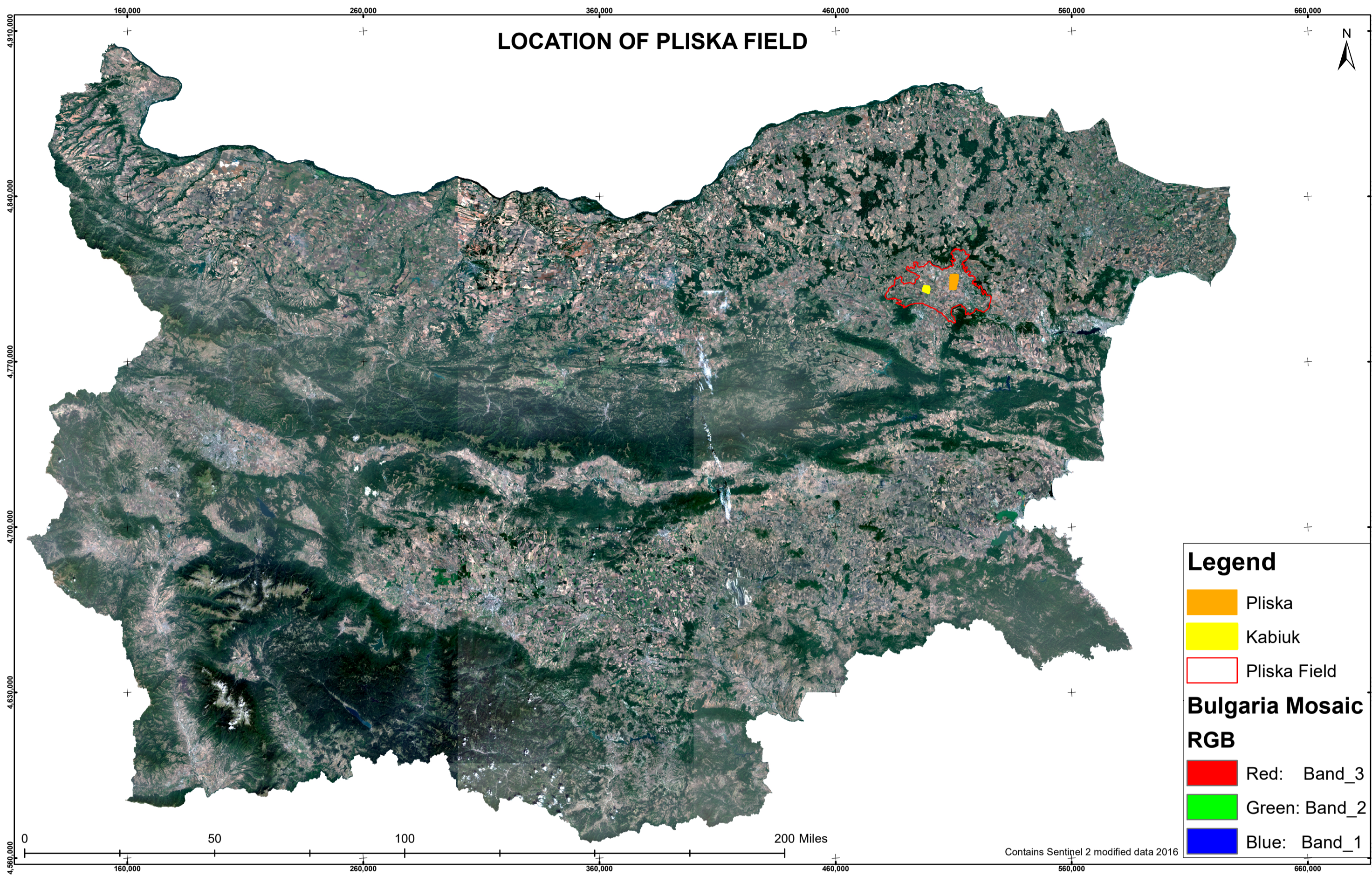


# PLISKA FIELD, BULGARIA - AN EXAMPLE OF CULTURAL HUMAN FOOTPRINT CONTINUITY

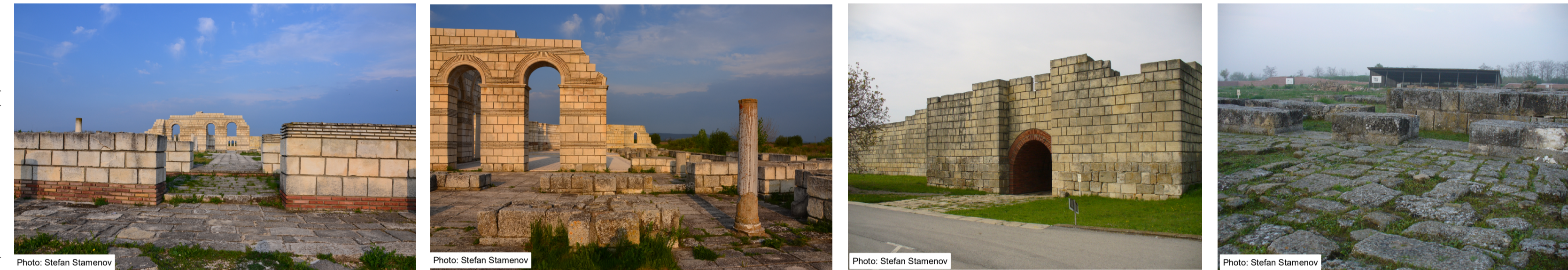
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Traces of human activities on the Earth surface has been left over the centuries and millennia of human culture and civilizations. These traces are also referred to as anthropogenic features or human footprints and the process anthropogenisation. This process is directly linked with the way of human living, results in reshaping the landscape and changing the nature in regional and in modernity even on global scale. Scientific studies devoted to this process have long discovered, that the anthropogenisation is not pointless, but appear as a specific, expected and sometimes planned result of various human activities pointed to secure the existence and prosperity of a particular human society or humanity in general.

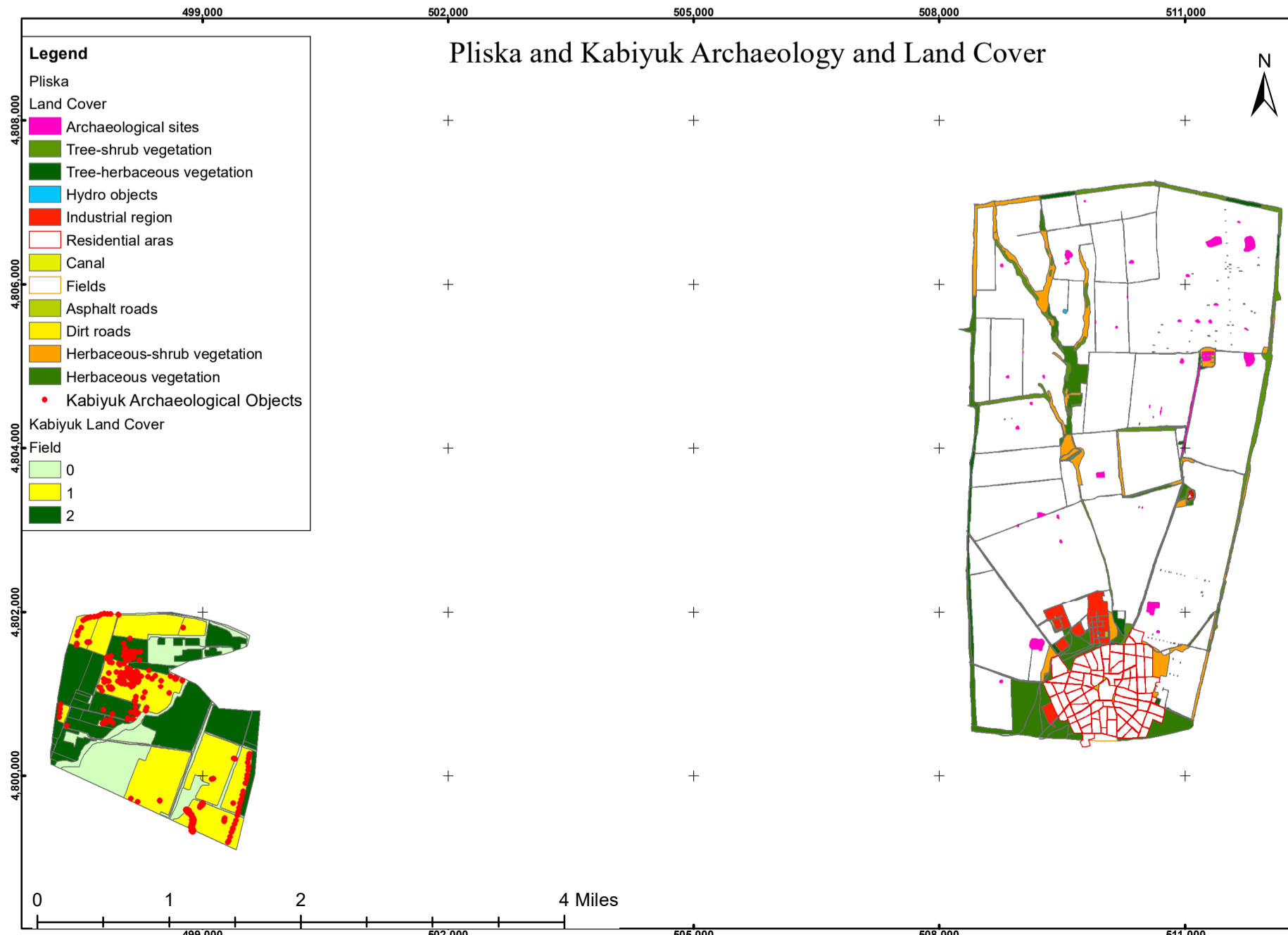


**Pliska field**  
Pliska field is a geographical area located in eastern part of Bulgaria and surrounded by the plateaus Voivodsko to north, Stana to east, Madara to south, Five-mounds hill and Shoumen plateau to southwest and Baikovski hill to west. It covers approximately an area of 700 sq.km and the predominant elevation is between 150 and 250 m. In geological term, the Pliska field is built mainly of Cretaceous clayey limestones and marl rocks, well as loess formations. The main rivers, which drain the Pliska field, are Provadiyska River, Kriva River, and Mutnisha River and their tributaries. The soils of Pliska field are mainly fertile chernozems that is why the area is predominantly agricultural, rendzinas in the east and northeast part of the field and alluvial soils along the rivers. The natural protected areas that falls within the Pliska field are two protected sites, and three sites included in Natura 2000 network of protected sites under Habitat directive and Bird's directive. The settlements located here are mainly villages and three towns – Novi Pazar, Kaspichan and Pliska. The Pliska field is located almost entirely in Shoumen district and covers parts of four municipalities – Shoumen, Hitrino, Novi Pazar and Kaspichan. The main railway in Northern Bulgaria, from Sofia to Varna, crosses the Pliska field.

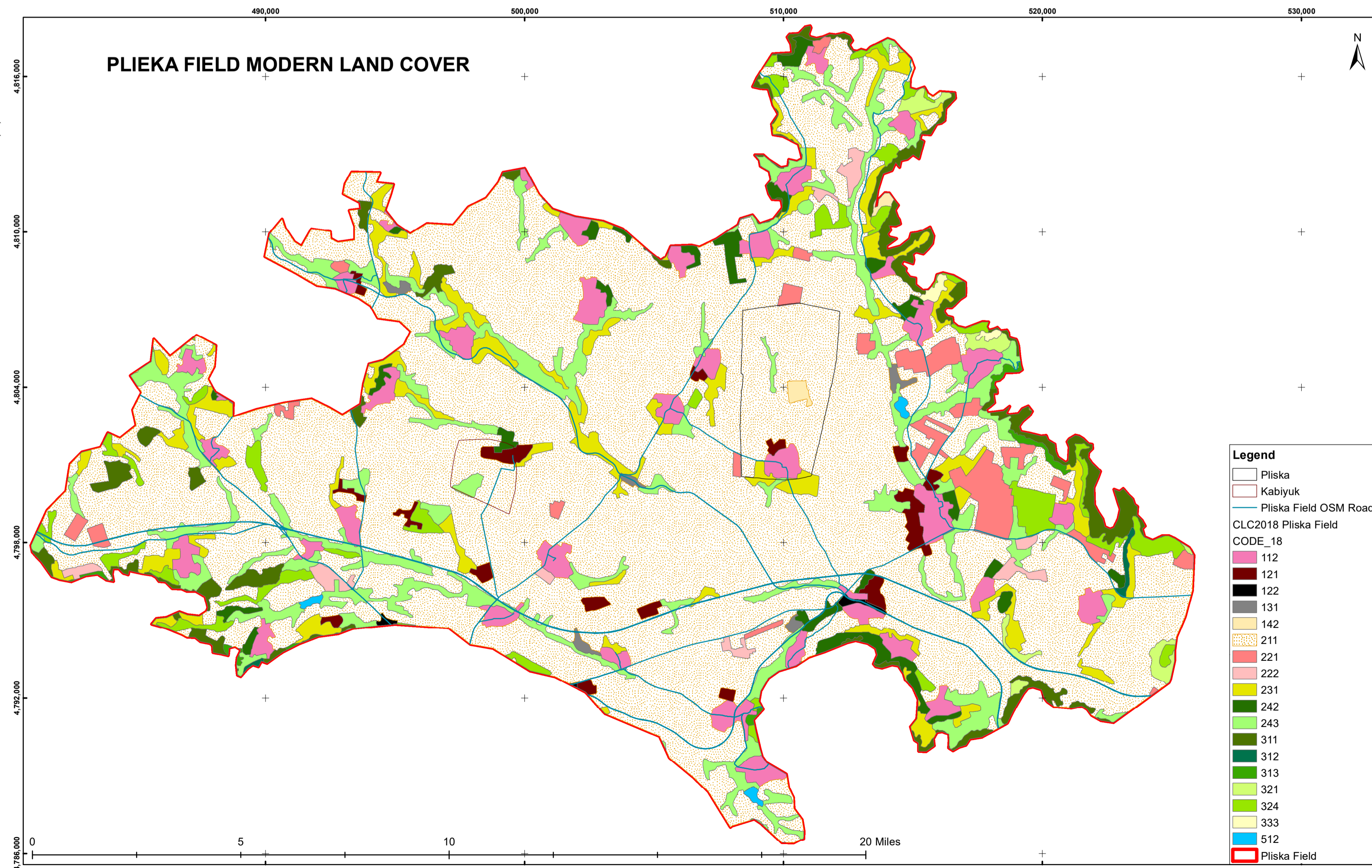
At the central part of Pliska field is located Medieval Pliska – the first Bulgarian capital, nowadays one of the most important archaeological sites in Bulgaria. Close to it, also on the territory of Pliska field, is located the non-capital royal residences (Aul) of the First Bulgarian Kingdom – Kabiuk. Both archaeological sites are announced as national historical and archaeological reserves.



**Kabiuk**  
National Historical and Archaeological reserve Kabiuk is located in Northeast Bulgaria, 12 km northeast from the town of Shoumen. It was announced as a National Historical and Archaeological Reserve in 2011. With the amendment to the Law on Cultural Heritage, in its appendix, Kabiuk was added under No. 32 with the name "Early Medieval Village of Kabiuk" as an archaeological reserve situated on the territory of two municipalities- Shoumen and Hitrino (State Gazette, issue 54 of July 15, 2011). It is one of the main archaeological early medieval sites connected with the First Bulgarian Kingdom, whose earthen rampart is the second biggest after the fortification of the First Bulgarian Capital – Pliska. It covers an area of 5.7 sq. km. Kabiuk is a great example of a combination of cultural and natural heritage, and it includes three protected areas – archaeological reserve, protected site, and Natura 2000 site. The Kabiuk mound is proclaimed as a protected territory in 1973 with an area of 47.5 ha and is a home of over 200 herbaceous and shrub species. The mound Kabiuk falls within Natura 2000 protected sites under Habitats Directive 92/43/EEC on conservation of natural habitats and of wild fauna and flora, and it is one of the most important territories for the preservation of the steppe vegetation. The Kabiuk site has been explored sporadically through the years. Our project entitled "NHAR Kabiuk: Complex interdisciplinary study of one of the non-capital royal residences (Aul) of the First Bulgarian Kingdom" is the first archaeological project aimed to explore the whole area of Kabiuk and the first project in Bulgaria focused entirely on the leading role of methods for non-destructive survey. An interdisciplinary team including archaeologists, remote sensing and GIS specialists, and geophysicists implemented the project, which was aimed to apply a complex multidisciplinary approach for exploring archaeological objects covering large areas. The accent in the project is put on the non-destructive methods (aerospace methods and technologies, geophysics and GIS), combined with conventional archaeological methods of exploration aiming not only to discover and mapping the archaeological sites before excavation, but to plan ahead the measures of their conservation and usage as tourists' sites. Within this project the methodology for archaeological field survey, which was developed during the project for exploration of the Outer Town of Pliska was improved [1], [2].



**Pliska**  
Pliska is the first capital of Bulgaria. The Medieval city serves as a capital from the second half of the 7th century AD till year 893, when the capital is moved to the new city of Preslav. Pliska continues its existence till the mid of 11th century, when it is abandoned. For the time of its approximately 230 years of capital period Pliska exists as a big urban agglomeration for its epoch. (<http://www.kroraia.com/pliska/index.html>) The Medieval city covers an area of 21.9 sq. km. or 8.5 sq. mi in a pentagonal shape with long sides of approximately 8 km in length and short sides of approximately 3 km in length. Pliska was defended by three circles of fortification – the earthen rampart and ditch that forms the Outer Town, a stone wall that forms the Inner Town, and brick wall, that encircles the Citadel. The Palaces of Bulgarian rulers are situated in the Inner Town and the Citadel. The Outer Town was inhabited by regular people and there are also remains of manors interpreted as belonging to the aristocracy. According to the last archaeological researches the Outer Town was populated in relative density – there are open spaces between the neighborhoods. Prove for this theory is the location of the church buildings, evenly distributed on the whole territory but on a relatively big distance from each other. Archaeological research of Pliska had started in the end of 19th century and continues today. Due to the enormous area, specifics of the archaeological work, intervals between the campaigns and periods in history not allowing research, like wars, crises, the investigated area is about 5% of the whole territory. During the last 10 years of research a spatial model and GIS database of complete maps and others documentary was developed by Dr. Stefan Stamenov as part of a scientific project and PhD thesis titled "Spatial Model and Chronological Analysis of the Medieval Town of Pliska Using Aerospace and Ground-based Data". This is the first research of the Pliska site that combine RS and GIS technologies and methods to create a database for future research and conservation of the cultural heritage of the medieval site.



References:  
[1]. Stamenov, S., V. Naydenova. 2013. GNSS role in planning and conductance of terrain archaeological survey: technical aspects and methodology. Proceedings of 2013 Digital Heritage International Congress, vol.1, Published by IEEE, pp. 235-238  
[2]. Stamenov, S., V. Stamenova. Kabiuk Project: exploration and conservation of archaeological site using remote sensing methods and GIS technologies. Proceedings of the Third European SCGIS Conference "Geoinformation technologies for natural and cultural heritage conservation", SRTI-BAS, 2016, ISSN:1314-7749, 183-191