

Mapping of cultural heritage located in Estonian landscapes

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In addition to museums and archives, a lot of cultural heritage is located in the landscape. On the global scale, the most spectacular elements are included in UNESCO's World Heritage List. On national level, the most important cultural sites are protected under national law and managed by the National Heritage Board. Landscapes also contain tens of thousands of signs of human activities that have fallen out of use, and heritage sites that mainly hold a meaning for the local community. As a whole, these affect the preservation of a nation's and more particularly a community's, cultural traditions. In the digital age, the traditions that to this day have mainly been passed on verbally would vanish if they could not be digitalized. Connecting the location of heritage sites situated in the landscape with a geographic information system's (GIS) database gives landscapers and proprietors important additional information. Its integrated use with other databases allows creating new knowledge in the research of our history. To the authors' knowledge the GIS databases used for Estonian heritage sites have not been previously compared; only one analysis of the National Registry of the Cultural Monuments has previously been printed in an international publication registrist (Vianello, A. 2014. Website Review: National Register of Cultural Monuments (of Estonia). In: The CS Newsletter XXVII).

National registry of cultural monuments

The Register of Cultural Monuments was established in 1994. In 2001 were made the first attempts to connect our database to the Internet. The new, web-friendly interface of the Database was ready to use on May 2002. The National Register of Cultural Monuments is available to the public at the homepage of the National Heritage Board (register.muin.ee). Users can access the register with a password and their ID document. The use of an ID document is the main method for accessing the majority of data-bases in Estonia. The database includes information on all monuments that have been listed as protected national monuments, including archaeological, architectural, art monuments, industrial heritage and heritage conservation areas. The data-base includes a large number of data for different searches. Public information includes data on protected monuments, lists of objects under temporary protection, on objects that have been deleted from the list of protected monuments. The public data-base also includes information on licensed restorers, researchers, archaeologists. In 2003 the register was linked to the cadastral map of the Land Board (geoportal.maaamet.ee), the location of immovable objects is public.

Koordinaadid:

Mälestise nimi: Suursadama tallimaja
Mälestise vana number: -
Mälestise registri number: 2886
Lühitus: -
Registreeritud: Kaitseala
Aeg: 15.10.1999
Registreeritud: 26.10.1999

Määrused ja käskkirjad (2)
Inspekteerimised (5)
Katastrikood (1)
Leevendused (2)

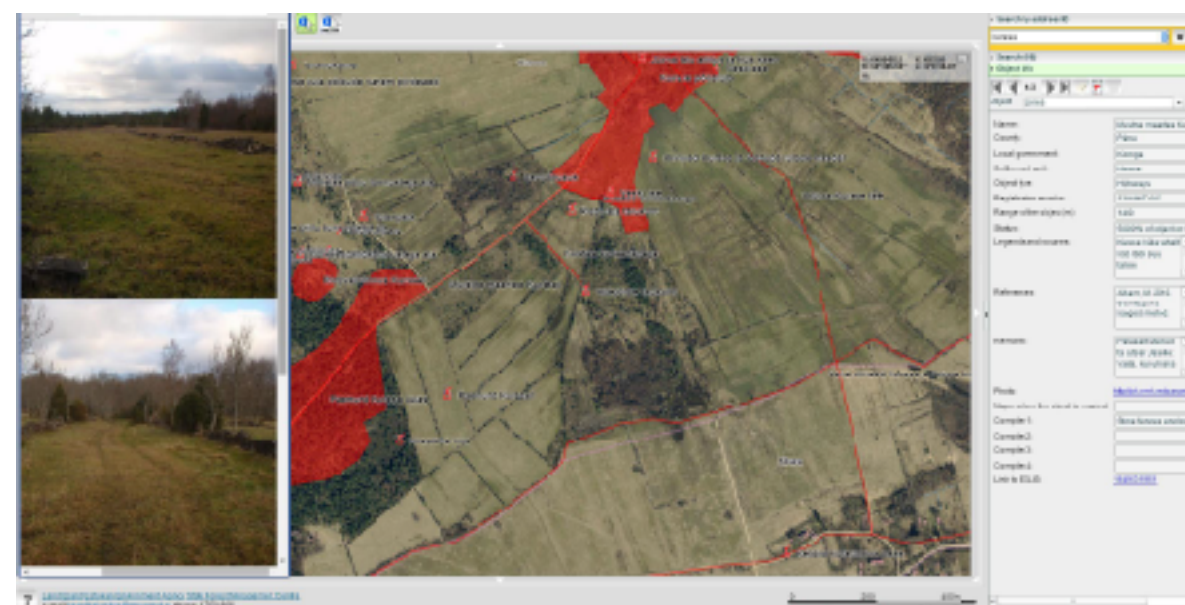
Object in detail view

Monument type	Movable objects	Territory	Immovable	Total objects
Historical	3	-	1265	1268
Archeological	1	1	6630	6632
Architectural	1	-	5260	5261
Art	13140	-	293	13433
Engineering	49	-	1	50
Heritage Conservation Area	-	12	-	12
Object of UNESCO world Heritage List	-	1	3	4
Total	13194	14	13452	26660

Database of cultural heritage

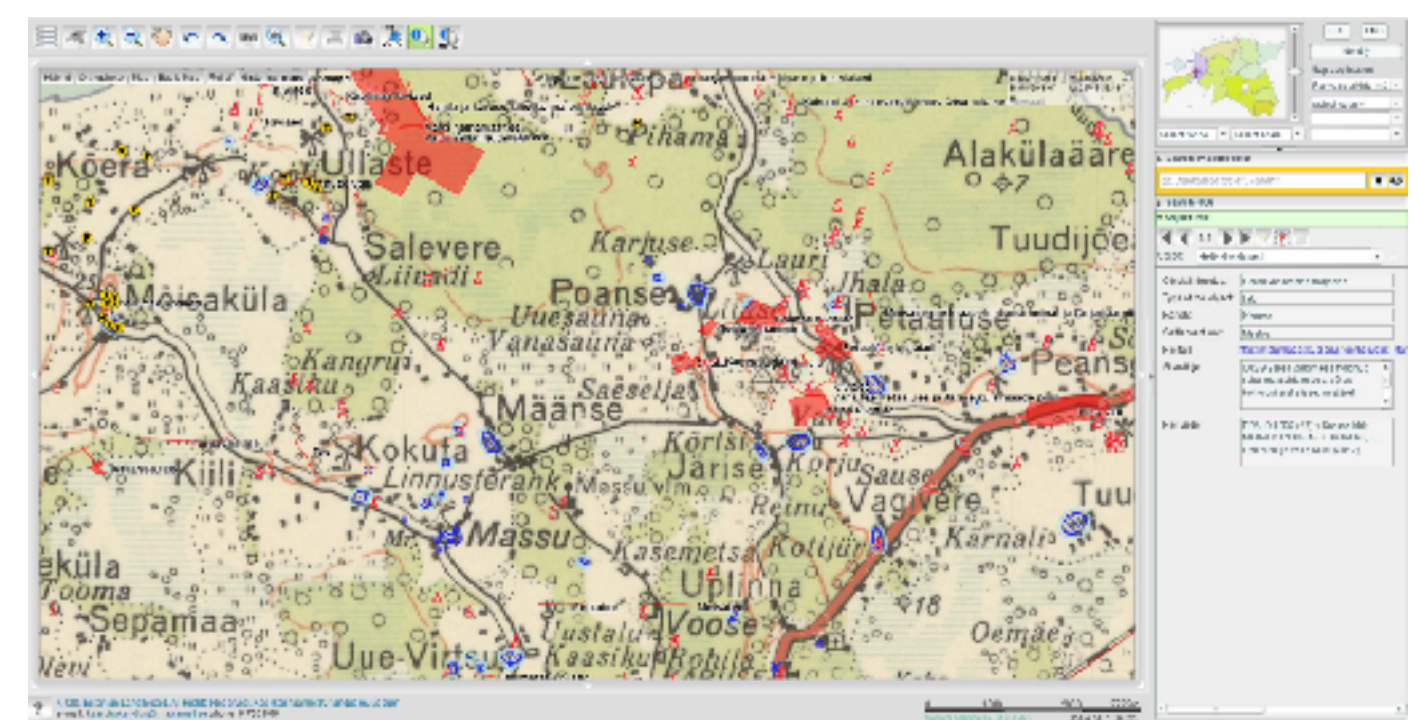
Estonians got the idea to map the out of use signs of human activities located in the landscape, i.e. heritage objects, that are not protected by national law from Sweden. It was a very innovative approach for landscape management that so far had only been regulated by the protective measures of heritage and natural values. In 2005, one of the administrators of state land, the State Forest Management Center, started methodically mapping heritage objects with the help from European Union funds (rmk.ee/for-a/heritage-culture). External financing made nationwide mapping possible regardless of the purpose and ownership of the land. Mappers were mainly from local communities and the work was municipality-based. By 2011, as a result of four projects all over Estonia, more than 35,000 objects had been mapped and entered, along with a photo and a short description, in the cultural heritage data application of the Estonian Land Board's Geoportal (geoportal.maaamet.ee). Every year, new objects are added and existing information is updated. Data is divided between 153 different types of objects, in turn divided into six groups. 85% of the objects on the map are point spatial objects. Objects are described in a laconic manner to give the user of the data the primary information about the object and its location. Collected data is a source of information mainly to the property owners, but also to local researchers, people who are introducing local culture, and planners - for example, the heritage objects have been taken into account while planning the route corridor of Rail Baltic's railroad.

Object type	Forest land	Residential land	Agricult. land	Natural grassland	Others	Total
Ancient farmsteads	1854	1663	238	1695	95	5545
Old place names	1252	167	281	361	516	2577
Cordons of guards	267	826	10	205	34	1342
Objects of manor architecture	232	668	27	179	70	1176
Schoolhouses	130	792	37	153	56	1168
Windmills	281	183	244	403	54	1165
Hereditary culture from the Soviet period	143	276	75	323	194	1011
Settlement farms	379	213	63	272	29	956
Sites of cottager saunas	355	163	50	329	18	915
Watermills	210	290	3	149	151	803
Others (143 types)	8102	4596	784	3618	2453	19553
Total	13205	9837	1812	7687	3670	36211



Map application "Memoryscapes"

The Estonian Environmental Board and Estonian Literary Museum are commonly developing the Memoryscapes project that links oral history with specific locations (maastikud.ee). Since cultural heritage is one of the protection goals of five Estonian national parks (that cover 3.7% of the area of the republic), the project mainly focuses on their territory. The information on the map originates from texts collected in the Cultural History Archive of the Estonian Literary Museum (from the beginning of 20th century to up to this day) and from the new texts on local tradition, collected during fieldwork. The project evolved from a local initiative in Soomaa National Park in 2006. In 2008, the project extended to Karula and Lahemaa National Parks and in 2012, the first fieldworks took place in Matsalu and Vilsandi National Parks. The collected text, video, picture and audio files are stored in the digital archives of the Estonian Literary Museum. They are also linked to the Estonian Land Board's Geoportal (geoportal.maaamet.ee) through the map objects in the Memoryscapes of National Parks map application. To interpolate the exact history of a settlement, the user of the map application can add the layers of heritage conservation, heritage objects and place-names, and change the historical raster maps that function as base maps. From the perspective of cultural and landscape history, preserving and exhibiting this kind of information is an important part of the continuation of local identity and it forms the grounds for community-based environment protection. Informed population is an important partner when it comes to realising the protection goals and preserving the natural environment.



All data on historical map: yellow - "Memoryscapes" object, red - object of cultural heritage and blue - object of National Registry of Monuments

National park	Photos	Sound files	Place names	Text files	Videos	Total
Soomaa	69	0	321	106	0	496
Lahemaa	100	0	110	870	0	1080
Vilsandi	256	5	1	184	4	450
Matsalu	366	59	11	419	23	878
Karula	256	0	0	283	0	539
Total	1047	64	443	1862	27	3443

The examples presented are the three main cultural heritage GIS databases in Estonia. All of them are linked to the main web mapping service in Estonian Land Board's Geoportal, which has created the opportunity for the best public use of the data collections. On the other hand, this limits the user's options to the ones integrated in the platform: they can perform primary inquiries and create new knowledge by comparing the data visually with different layers. When it comes more complicated geographical inquiries, the user should order a data collection and analyse it with more specialized GIS software that has more options than needed for an average user.

All discussed map applications are linked to external databases to acquire additional information. The technical side of the databases is adequate, but functions related to user accessibility certainly need further development. The biggest value of said databases is enabling their public use that increases public awareness and creates an opportunity for co-work between national authorities and local community to conserve the cultural heritage.

Address objects and/or geographical coordinates can be linked to photo and object collections in the future, showing their place of origin. This also creates an opportunity to analyse museum collections spatially. A good example of that is a digital photo collection Ajapaik (Time-Place, www.ajapaik.ee). GIS format of the data collections enables us to integrate them to the map applications used in smart devices, which in turn enables introducing the heritage objects in the landscape. The data collected from the landscape through fieldwork is also more precise than the GIS data collections generated through other data sources, for example Google Maps.



Stone related by Legend (N 58.79328, E 23.48238) Railroad bridge (N 59.10752, E 24.30154)

Manor in North Estonia (N 59.53683, E 26.08410)

Sacred place in South Estonia (N 58.10757, E 27.04968)

Windmill ruins (N 59.44130, E 25.09273)