Ecological and historical GIS databases and maps related to KISKUN LTER

Ferenc Horváth*, Sándor Barabás, Marianna Biró, Eszter Lellei-Kovács, Zsolt Molnár and Tamás Rédei

> Instute of Ecology and Botany, Hungarian Academy of Sciences H-2163 Vácrátót, Hungary

> > *corresponding author: horvfe@botanika.hu

The focal questions of most research projects has a regional context from landscape to regional scale. There is a high priority of understanding the landscape ecological, ecosystem, land use, biodiversity and socio-economic patterns and processes of the region also. Therefore several projects and considerable efforts were done to create, collect and manage relevant maps and GIS databases of the Danube–Tisza Interfluve.

The following table overviews the most important habitat, vegetation, land use, land cover, soil and other thematic maps and/or GIS databases produced and applied in our researches.

Database / Map	Prepared by	Description
Habitat Map of the	Institute of Ecology	Reconstructed habitat map of the Danube-
Danube–Tisza	and Botany, HAS,	Tisza Interfluve from the 1780s (scale
Interfluve, 1780s	D-TMap Project	1:100 000, partly digitized). The botanical
		and ecological interpretation was based on
		the historical map of the I. Military Survey.
Land Use Map	Institute of Ecology	Land use map of the Danube–Tisza
of the Danube-	and Botany, HAS,	Interfluve from the 1880s (scale 1:25 000),
Tisza Interfluve,	D-TMap Project	based on the historical map of the III.
1880s		Military Survey.
Actual Habitat Map	Institute of Ecology	Actual habitat map of the Danube–Tisza
of the Danube-	and Botany, HAS,	Interfluve (scale 1:50 000, GIS database).
Tisza Interfluve,	D-TMap Project	The database consists of about 47 000
2000		records; 57 habitat types and land use
		change categories were applied.
MÉTA, Vegetation	Institute of Ecology	A hexagon-grid based actual vegetation
and Landscape	and Botany, HAS,	and landscape ecological database of the
Ecological Data-	MÉTA Project	botanical heritage of the country. Field
base of Hungary		survey was done in 2003–2007. The MÉTA
		hexagons were featured by 17 attributes.

Table 1. Ecological and historical GIS databases and maps related to KISKUN LTER.

Database / Map	Prepared by	Description
Kreybig's Soil Survey Map and Database	Institute of Soil Sciences and Soil Chemistry, HAS	Soil map and GIS database of the country (scale 1:25 000) from the first quarter of the XX. century. The physical and chemical soil properties were depicted onto the historical map of III. Military Survey.
AGROTOPO Soil Map	Institute of Soil Sciences and Soil Chemistry, HAS	Map and GIS database of soil types of the country, based on 11 basic soil features (scale 1:100 000).
CoenoDAT Reference Database	Institute of Ecology and Botany, HAS	National database of georeferenced phyto- sociological samples (relevés), which manages species composition data of plant communities.
Meteorological Dataset from Fülöpháza	Institute of Ecology and Botany, HAS	Standard meteorological datasets produced by the standard automatic meteorological station at Fülöpháza (Kiskunság, Central- Hungary). Data have been recorded and stored since May 2000.
CORINE Land Cover 100 (CLC-100)	Institute of Geodesy, Cartography and Remote Sensing	Land cover GIS map of Hungary from 1992 (scale 1:100 000). Method and land cover types follow the European standard.
CORINE Land Cover 50 (CLC-50)	Institute of Geodesy, Cartography and Remote Sensing	Land cover GIS map of Kiskunság from 1993 (scale 1:50 000). Method and land cover types follow a detailed national standard.
Historical maps of the I. and II. military survey, 1860s	Institute of War History	Historical topographic maps of the country (scale 1: 28 800). These maps depicted the pre-river control and pre-afforestation conditions of the landscape.
Historical map of the III. military survey, 1880s	Institute of War History	Historical topographic map of the country (scale 1: 25 000), which was done in the period of the well developed 'tanya' system.
Historical map of the V. military survey, 1950s	Institute of War History	Historical topographic map of the country (scale 1: 25 000) from the time period of most intensive, but small scale farming.
SPOT-4 satellite photo-map, 1998	Eurimage - Institute of Geodesy, Cartography and Remote Sensing	False coloured, georeferenced satellite photo-map with 10 m pixel resolution. Images were acquired in 1998.
LANDSAT TM5 satellite image, 2006	NASA	Georeferenced satellite image with 25 m pixel resolution and 7 bands. Image was acquired in 2006.