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GreenScape CE

D.1.2.1
Online GreenScape CE Visual Mapping Platform(GVMP)

Version Final

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GVMP NBS tool: guidelines for use

Project information	
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GVMP NBS tool: guidelines for use

The GVMP NBS tool contains data on individual NBS, geographical data (polygon and centroid) and attribute data. The NBS tool could be used in different steps of NBS planning and management.

- Conceptualization and planning of the whole system of NBS in the pilot city.
- Prioritisation of NBS implementation.
- Study of compatibility with existing GI.
- Impact assessment of already implemented NBS.
- Calculation of the connectivity of NBS systems.

The GVMP NBS tool establishes a data infrastructure for handling NBS data for each pilot area. The database design is compatible with that of the Urban Nature Atlas (https://una.city/), which will simplify the transfer of data to the European NBS database after the project's completion. This tool allows direct consultation of data on climate conditions (European Environment Atlas) and potential climate changes, calculated based on Copernicus satellite data (https://www.protecht2save-wgt.eu/). The collected data allows for a systematic analysis of NBS data and its connections with GI.

The tool provides information on the NBS status for pilot sites (Fig.5), input and updating of NBS data (Fig.6), and links to external portals. During the 1st and 2nd period, the connection with the European Environmental Agency (Fig. 7), Climate predictions data (Fig. 8) and City of Zagreb Greenery data (Fig. 9) was implemented.

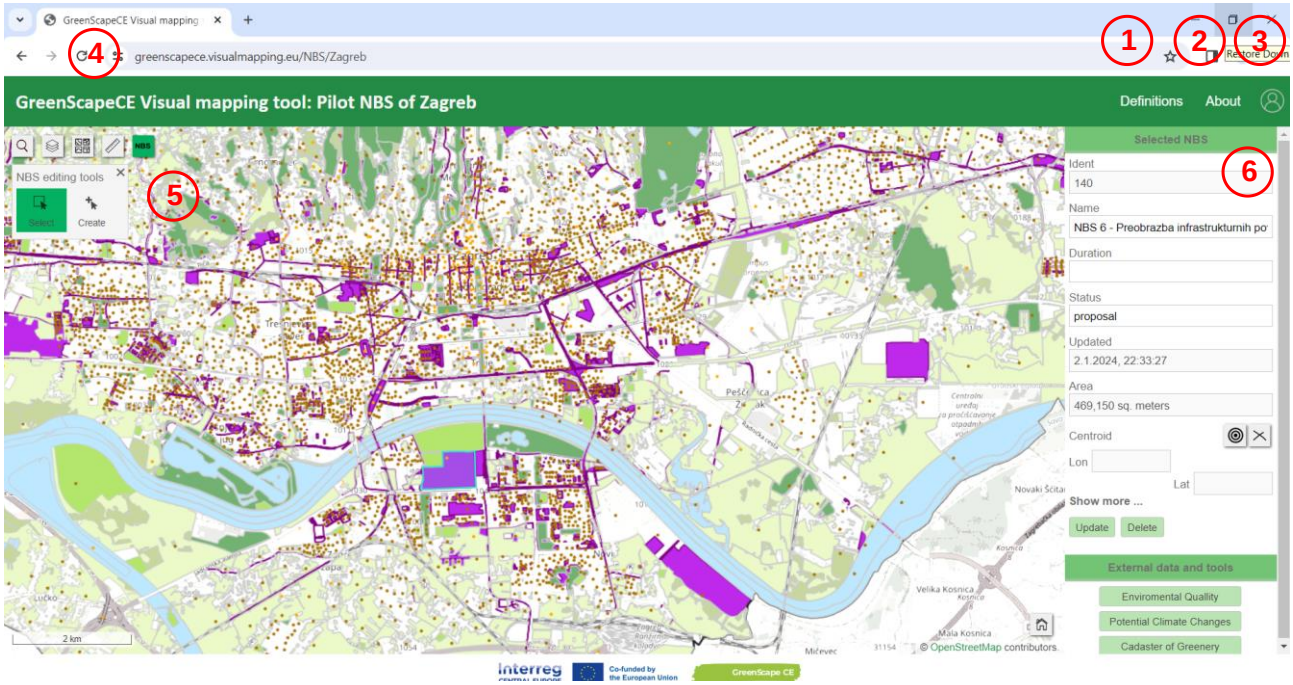

Fig. 5: GVMP NBS tool screenshot

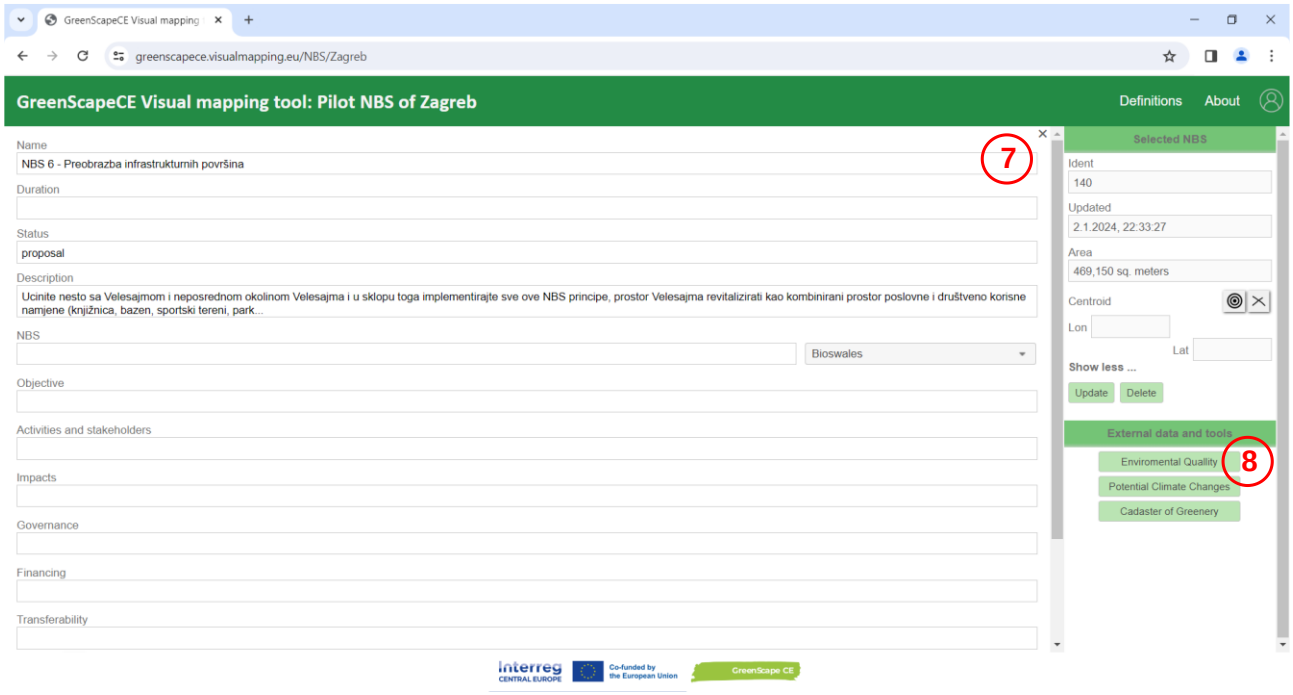

Fig. 6: GVMP NBS tool update section screenshot

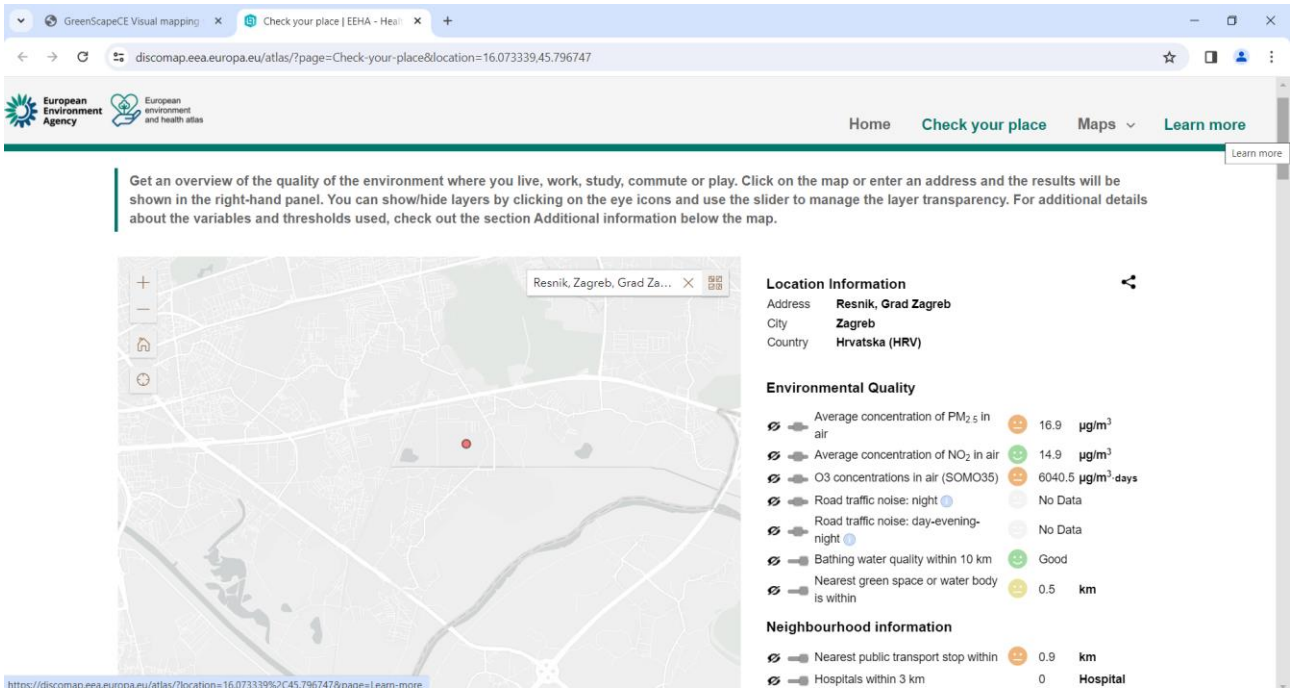

Fig. 7: GVMP NBS tool link to EEA at NBS location (red dot) screenshot

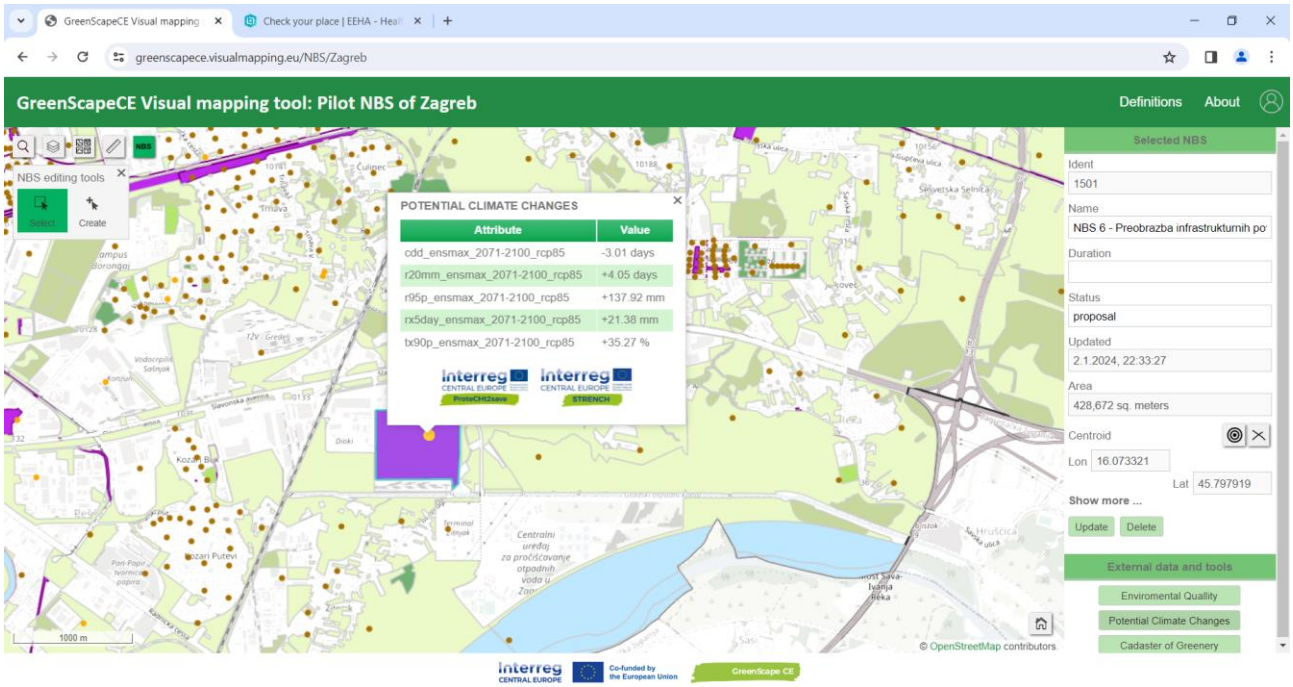

Fig. 8: GVMP NBS tool link to climate data screenshot

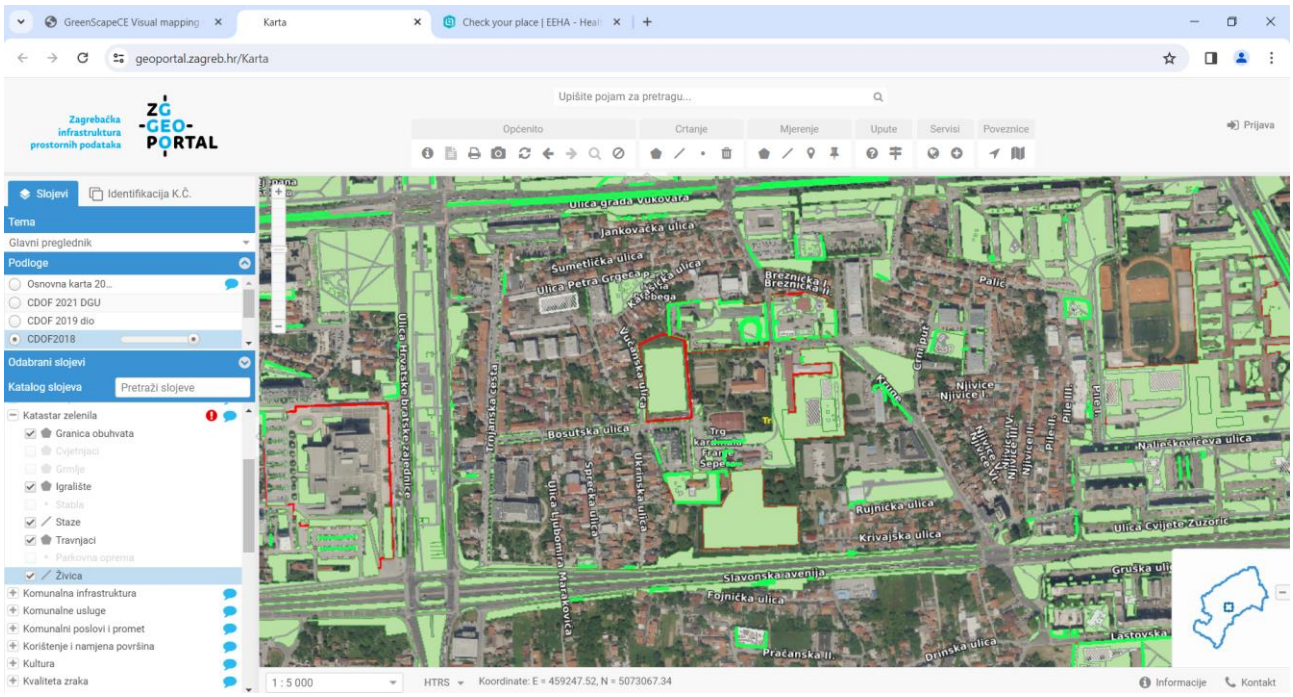

Fig. 9: GVMP NBS tool link to City of Zagreb portal Greenery data screenshot

GVMP NBS tool functionalities (fig. 5)	
1	descriptions of GVMP, instructions to use

2	about the GVMP, authors, contributors	
3	user information, login form, registration form	
4	refresh the GVMP to up-to-date version	
5	map area with GIS tools	
		search places
		display layers / legend, user can switch visibility of the layer or use slider and change the transparency of the layer The names of the layers are abbreviated by the name of the pilot city and the layer type, where the first letter is the city and the second is the layer type (e.g. P_P is the population of the city of Ptuj). M - Milan, P - Ptuj, S - Szeged, W - Warsaw, Z – Zagreb, X – all cities P - Population, GI - Green areas from land use, B - Boundary X_NBS - NBS areas X_NBS_P - NBS centroids
		select basemap
		measure on a map distance or area
		NBS editing tools
		Selecting an NBS retrieves info about it, info can be updated, and links to EEA and other sources about the location of NBS are available in the External data and tools section.
		Create new NBS: opens NBS upload/update form (see no. 7).
6	selected NBS data: ident number, name, duration, status, updated date, area m2, centroid Lon/Lat, by clicking Show more … link NBS upload/update form opens (see no. 7)	
NBS upload/update form (fig. 6)		
7	NBS upload/update form fields: name, duration, status, description, NBS (source: GI typology DDD), objective, Activities and stakeholders, impacts, governance, financing, transferability, gallery, lessons learned, references	
External data and tools		
8	**Environmental quality** opens the European Environmental Agency page with data about the location selected on a GVMP map with regularly maintained data on the quality of the environment (Fig. 7): Address information (Address, Name of Municipality),	

Environmental Quality (Annual average concentration of $PM_{2.5}$, Annual average concentration of NO_2, Annual average concentration of O_3, Road traffic noise: night, Road traffic noise: day-evening-night, Distance to the nearest public green space or water body of at least 0.5 ha, Neighbourhood information (Distance to public transport (bus or train stop), Number of hospital beds within a 3 km radius, Sports and leisure facilities within a 3 km radius).
Potential climate changes Retrieves Climate Change Indices for selected location (Fig. 8): Risk maps of Central Europe show the changes of specific climate parameters and extreme indices for 2 historical periods (1951-1980 & 1987-2016) and under RCP4.5 and RCP8.5 scenarios for 2 future 30-year periods (2021-2050 & 2071-2100) with respect to the reference historical one (1976-2005). The indices were selected among the 27 ones set by the Expert Team on Climate Change Detection and Indices (ETCCDI), refer to the following extreme events: heavy rain, flooding, drought and extreme heating. CDD. Maximum length of dry spell, maximum number of consecutive days with RR < 1mm: Let RRij be the daily precipitation amount on day i in period j. Count the largest number of consecutive days where: RRij < 1mm R20mm Annual count of days when PRCP≥ 20mm: Let RRij be the daily precipitation amount on day i in period j. Count the number of days where: RRij ≥ 20mm R95pTOT. Annual total PRCP when RR > 95p (the number of wet days in the period). Let RRwj be the daily precipitation amount on a wet day w (RR ≥ 1.0mm) in period i and let RRwn95 be the 95th percentile of precipitation on wet days in the 1961-1990 period. Rx5day, Monthly maximum consecutive 5-day precipitation: Let RRkj be the precipitation amount for the 5-day interval ending k, period j. Then maximum 5-day values for period j are: Rx5dayj = max (RRkj) TX90p, Percentage of days when TX > 90th percentile: Let TXij be the daily maximum temperature on day i in period j and let TXin90 be the calendar day 90th percentile centred on a 5-day window for the base period 1961-1990. The percentage of time for the base period is determined where: TXij > TXin90
Cadastre of Greenery Link to local portal (e.g. Zagreb city portal) (Fig. 9)