

MaGICLandscapes Final Conference | 6th October 2020



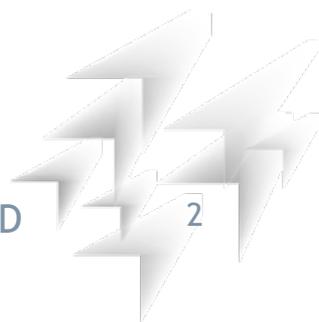
Transnational Framework of Green Infrastructure Assessment



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OBJECTIVE 1: DEFINITIONS, NEEDS AND POLICY OVERVIEW

- **General framework** for green infrastructure assessment (i.e. definitions)
- Identification of specific informational **needs** regarding green infrastructure at the European, regional and local level
- GI management approaches implemented in European, territorial and local **policies, regulations and objectives**
- Investigating theoretical approaches of GI assessment towards their success in practical application (state of art) and analysing best-practice examples



“GI is a **strategically planned network of natural and semi-natural** areas with other environmental features designed and managed to deliver a wide range of **ecosystem services** such as water purification, air quality, space for recreation and climate mitigation and adaptation. This network of **green (land) and blue (water) spaces** can improve environmental conditions and therefore citizens' health and quality of life. It also supports a green economy, creates job opportunities and enhances biodiversity. The Natura 2000 network constitutes the backbone of the EU green infrastructure.”

European Commission (2016): Green Infrastructure.

http://ec.europa.eu/environment/nature/ecosystems/index_en.htm



Regulation Topic	Global or regional international regulations	EU	AT	AT, Lower Austria	CZ	DE	DE, Saxony	IT	IT, Piedmont	PL
Green Infrastructure										
Green Infrastructure		GI	GI	GI	GI	GI				GI
Protection of Nature, Biodiversity and Landscape										
Nature and Biodiversity Protection (in general)				GI	GI	GI	GI			GI
Biodiversity Protection	GI	GI	GI		GI	GI	GI	GI	GI	
Species Protection	GI	GI		GI	GI	GI	GI	GI		GI
Invasive Species Management		F		F	F	F	F	F		F
Protection of areas/habitats	GI	GI		GI	GI	GI	GI	GI	GI	GI
Landscape Protection		GI		GI	GI	GI	GI	GI	GI	GI
Protection of Cultural and Natural Heritage	GI	GI					GI		GI	GI
Environmental Protection										
Prevention of harmful Effects on the Environment (in general)		F		F	F	F	GI		F	F
Environmental Liability		F	F	F	F	F		F		F
Environmental Assessment (EIA / SEA)	F	F	F		F	F	F	F	F	
Water Protection	GI	GI	F	GI		GI	GI	F	GI	F
Air and Climate Protection		F	F		F	F	F			F
Soil Protection		F		F	F	F	F	F	F	F
Economy and Sustainable Development										
Agriculture		GI		GI	GI	GI	GI			GI
Forestry		GI	GI	GI	GI	GI	GI	GI	GI	GI
Hunting and Fishing		GI	F		GI	F	GI	F	F	GI
Tourism and Recreation	GI	GI		GI	GI	GI	GI	GI		
Energy		F	F		F	F	F			F
Sustainable Development		F	F		F	F	F	F		F
Spatial Planning										
Regional and Local Planning		F		F	GI	F	GI	F		GI
Urban Planning		GI		F	GI	GI	GI	GI	GI	GI
Sectoral Planning		F	GI	F	F	F	F		GI	F
Access to Information on the Environment and Public Participation	F	F	F	F	F	F	F	F	F	F

- GI and its relationship to territorial law/policies of the five partner countries (Austria, Czech Republic, Germany, Italy and Poland) and international and EU regulations and programmes
- Includes regional level where applicable



OUTPUT 1: GI HANDBOOK



- Conceptual & Theoretical Background, Terms and Definitions...
- 185 pages
- EN, short versions in DE, CZ, PL, IT



OBJECTIVE 2: GI MAPPING FRAMEWORK

- Aim: Identify the **spatial distribution of GI and BI** with a focus on the transnational (European) scale as a basis for further analyses (functionality, benefits)
- Following a structural, rather data-driven approach using existing spatial datasets of GI and BI elements (i.e. potential green infrastructure) as a first step (in subsequent work the elements classified as GI and BI will be qualified according to the landscape services they provide)
- Practical example: Lessons learnt from MaGICLandscapes process (limitations of data sets, solutions)



- 1) Definition of GI
- 2) Definition of GI and BI classes representing the objects of interest from Step 1 (legend) considering the needs of the target groups
- 3) Research of data that already mapped the GI and BI classes, depending on the scale the study is aimed at (European, national, regional, local) and acquisition of these data
- 4) Evaluating the content and quality of the datasets (compared to the definition or aim)
- 5) Producing a map of potential GI and BI



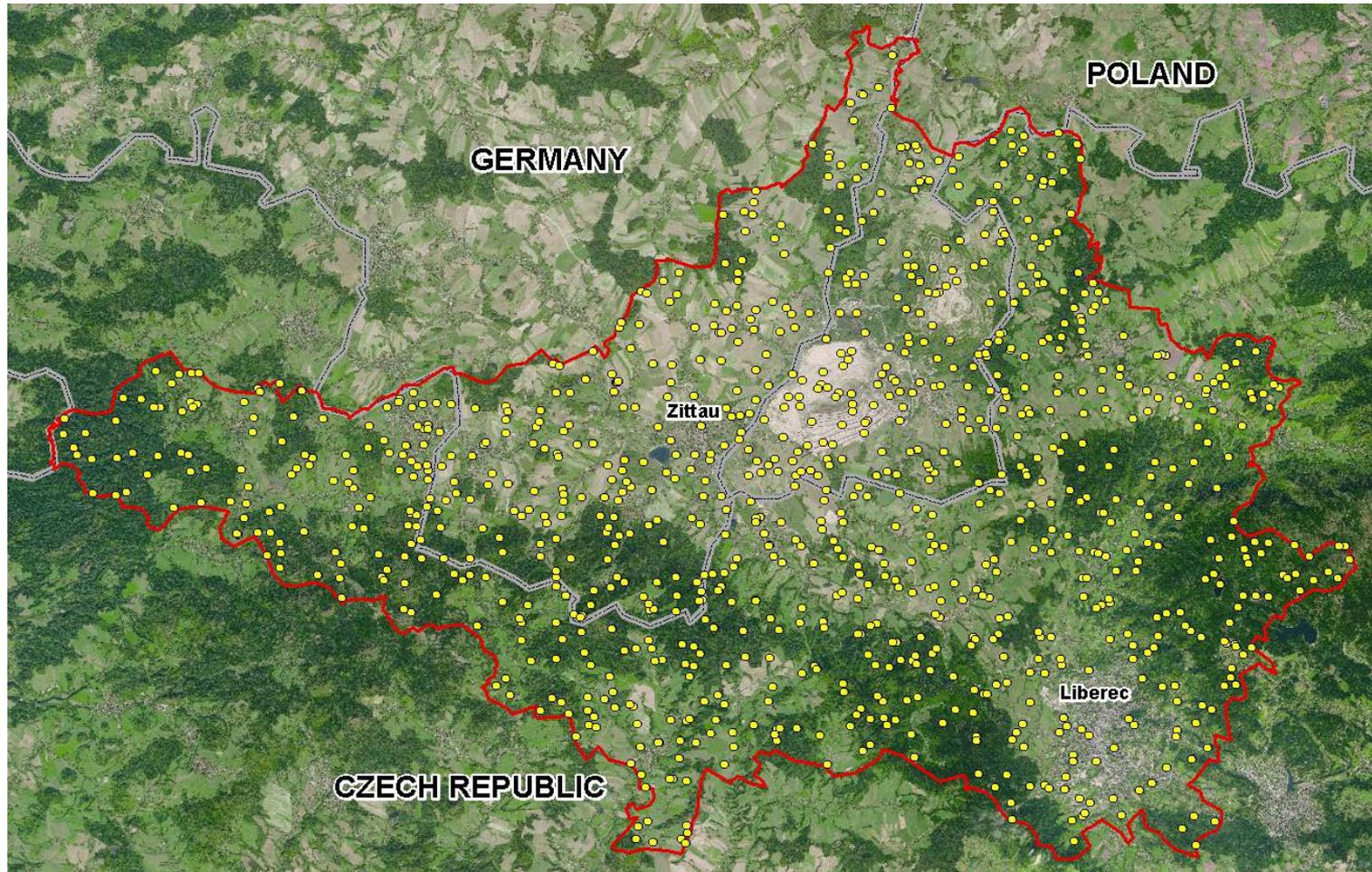
TESTED DATA SETS OF GI AND BI ELEMENTS

Name	Source	Year	Remarks
Permanent Water Bodies (PWB)	Copernicus High resolution layers	2012	Raster
Wetlands (WET)			Raster
Natural Grasslands (NGR)			Raster
Forest Additional support layer (FAD)			Raster
Forest Type (FTY)			Raster
CORINE Land Cover (CLC)	EEA	2012	Vector
High Nature Value Farmland (HNVF)	EEA	2012	Raster, 100 m
European catchments and Rivers network system (Ecrins)	EEA	1990-2006	Vector (beta version)
EU-Hydro River Network	Copernicus	2012	Vector
European Settlement Map (ESM)	Copernicus	2012	Raster, 2.5 m
USGS Global Land Cover data layers	USGS	ca. 2010	Raster, 30 m

Time status: Mid 2017 till end of 2018!



GROUND TRUTHING



COMMON LEGEND

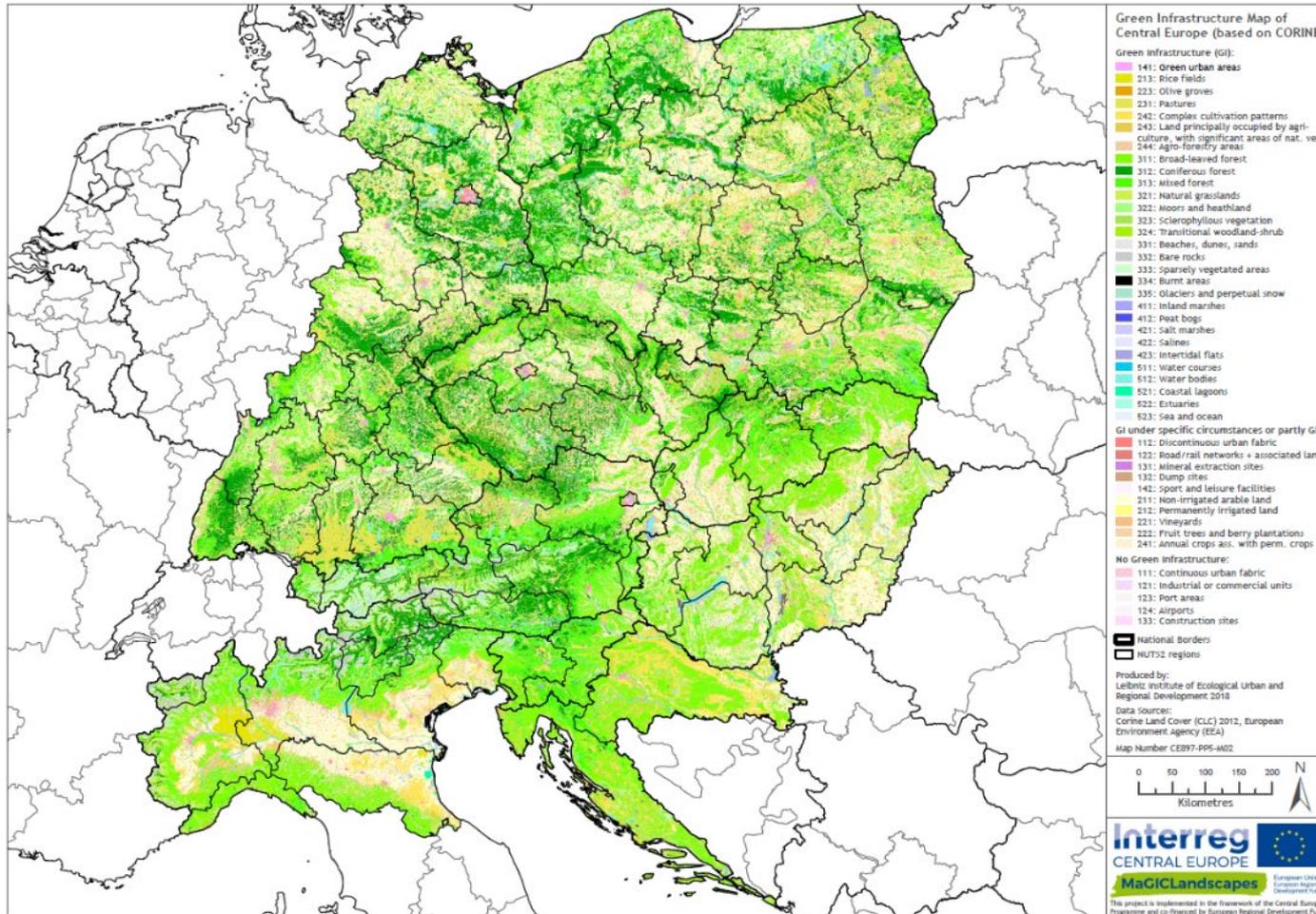
Group	CLC Code	Description	
GI	141	Green urban areas	
	213	Rice fields	
	223	Olive groves	
	231	Pastures	
	242	Complex cultivation patterns	
	243	Land principally occupied by agriculture, with significant areas of natural vegetation	
	244	Agro-forestry areas	
	311	Broad-leaved forest	
	312	Coniferous forest	
	313	Mixed forest	
	321	Natural grasslands	
	322	Moors and heathland	
	323	Sclerophyllous vegetation	
	324	Transitional woodland-shrub	
	331	Beaches, dunes, sands	
	332	Bare rocks	
	333	Sparsely vegetated areas	
	334	Burnt areas	
	335	Glaciers and perpetual snow	
	411	Inland marshes	
	412	Peat bogs	
	421	Salt marshes	
	422	Salines	
	423	Intertidal flats	
	511	Water courses	
	512	Water bodies	
	521	Coastal lagoons	
	522	Estuaries	
	523	Sea and ocean	
	GI according to specific circumstances	112	Discontinuous urban fabric
		122	Road and rail networks and associated land
		131	Mineral extraction sites
		132	Dump sites
		142	Sport and leisure facilities
211		Non-irrigated arable land	
212		Permanently irrigated land	
221		Vineyards	
222		Fruit trees and berry plantations	
241		Annual crops associated with permanent crops	
No GI	111	Continuous urban fabric	
	121	Industrial or commercial units	
	123	Port areas	
	124	Airports	
	133	Construction sites	

- Result of a questionnaire
- CLC classification scheme (44 classes at Level 3) has been discussed and agreed
- Due to generalisation (MMU 25 ha), mixed classes etc. a top-level classification was added:
 - GI/BI
 - Not GI/BI
 - GI according to specific circumstances (e.g. extensively managed “Vineyards” or “Fruit trees and berry plantations”, specification on regional scale!...)



TRANSNATIONAL MAP OF GI (CENTRAL EUROPE)

Based on the transnational CORINE map incl. common classification scheme and colour code



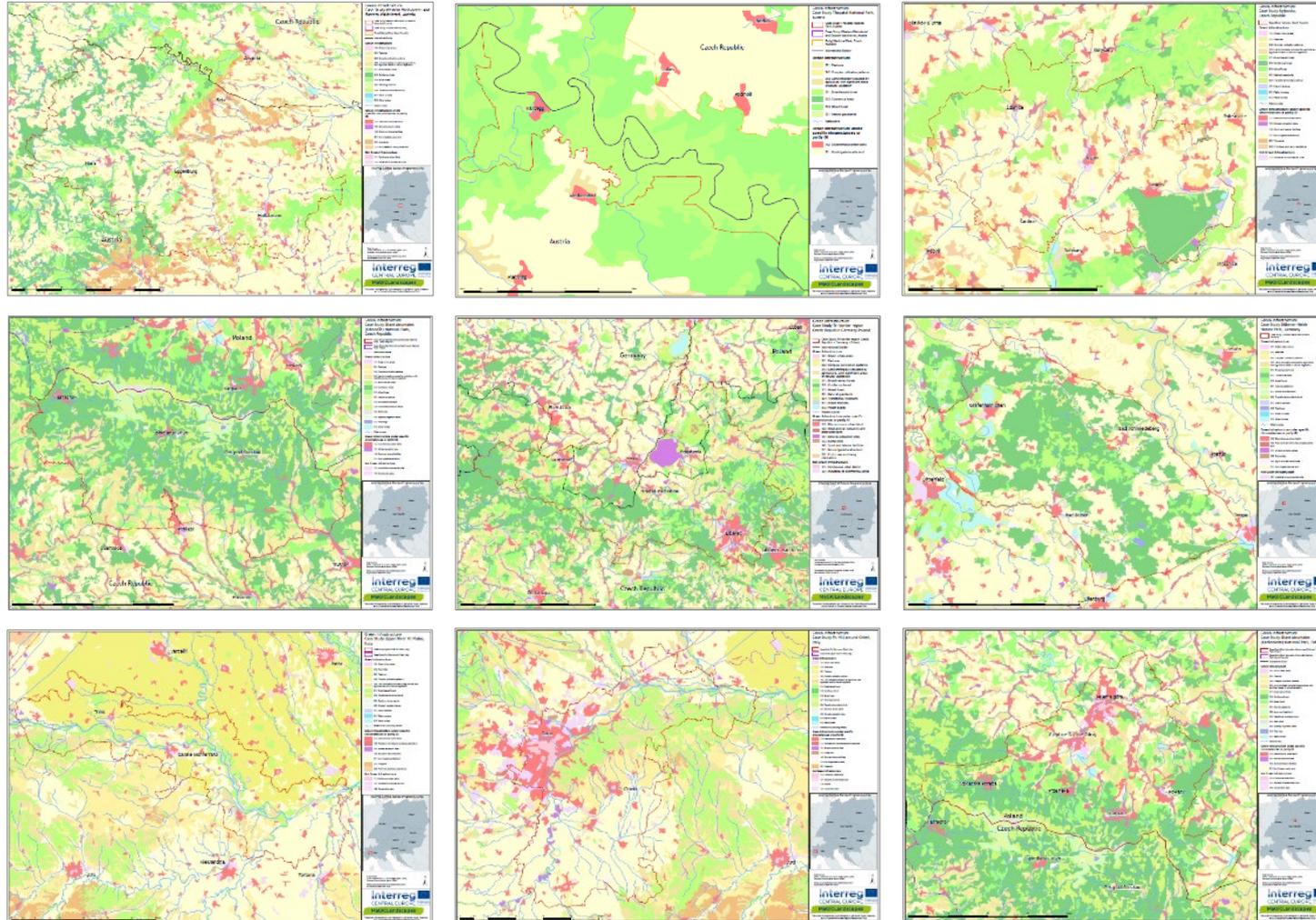
TRANSNATIONAL MAP OF GI (CENTRAL EUROPE), SIMPLIFIED



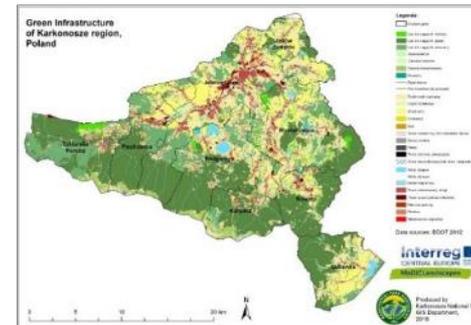
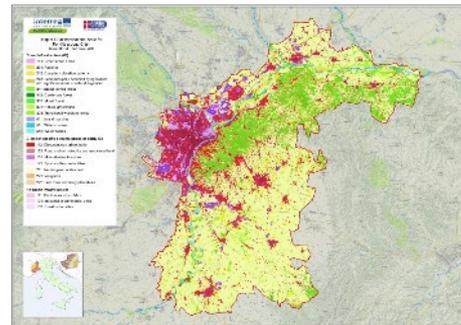
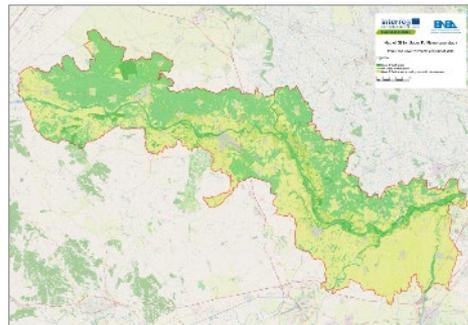
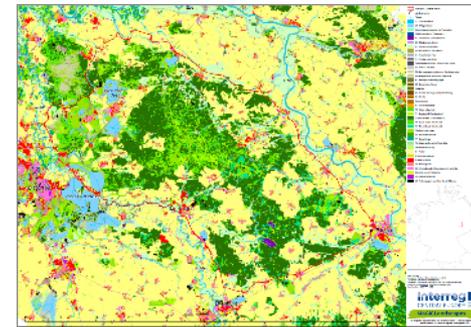
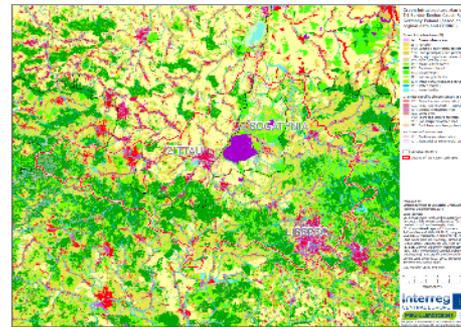
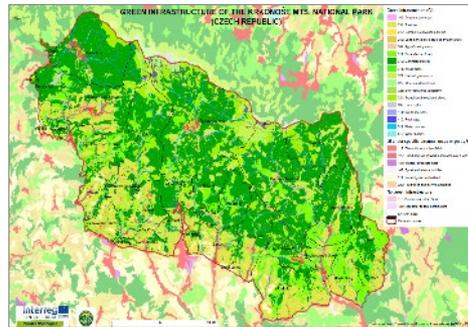
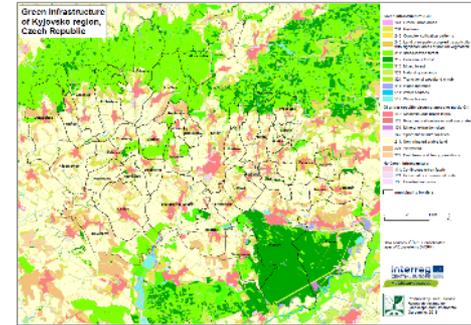
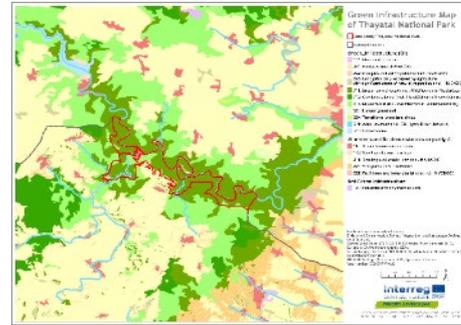
- Reduced legend with 3 classes (GI/maybe GI/ not GI)



RESULTING REGIONAL GI MAPS (TRANSNATIONAL SCALE)



RESULTING REGIONAL GI MAPS (REGIONAL SCALE)



OUTPUT 2: MANUAL OF GI MAPPING



- General Procedure of Mapping GI
- Transnational GI Map - Lessons from MaGICLandscapes
- Regional GI Maps
- 68 pages
- EN, short versions in DE, CZ, PL, IT



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