

Table S1. Drivers of the LULC changes in Nordul Gorjului de Vest Natura 2000 site

	Acronyms	Drivers	Units	Spatial resolution	Source
Climatic drivers	bio1	Annual mean temperature	°C	10 minutes(~340 km ²)	WorldClim
	bio2	Annual mean diurnal range	°C	10 minutes(~340 km ²)	WorldClim
	bio3	Isothermality	%	10 minutes(~340 km ²)	WorldClim
	bio4	Temperature seasonality	°C	10 minutes(~340 km ²)	WorldClim
	bio5	Maximum temperature of warmest month	°C	10 minutes(~340 km ²)	WorldClim
	bio6	Minimum temperature of coldest month	°C	10 minutes(~340 km ²)	WorldClim
	bio7	Temperature annual range	°C	10 minutes(~340 km ²)	WorldClim
	bio8	Mean temperature of wettest quarter	°C	10 minutes(~340 km ²)	WorldClim
	bio9	Mean temperature of driest quarter	°C	10 minutes(~340 km ²)	WorldClim
	bio10	Mean temperature of warmest quarter	°C	10 minutes(~340 km ²)	WorldClim
	bio11	Mean temperature of coldest quarter	°C	10 minutes(~340 km ²)	WorldClim
	bio12	Annual precipitation	mm	10 minutes(~340 km ²)	WorldClim
	bio13	Precipitation of wettest month	mm	10 minutes(~340 km ²)	WorldClim
	bio14	Precipitation of driest month	mm	10 minutes(~340 km ²)	WorldClim
	bio15	Precipitation seasonality	%	10 minutes(~340 km ²)	WorldClim
	bio16	Precipitation of wettest	mm	10 minutes(~340	WorldClim

		quarter		km ²)	
	bio17	Precipitation of driest quarter)	mm	10 minutes(~340 km ²)	WorldClim
	bio18	Precipitation of warmest quarter	mm	10 minutes(~340 km ²)	WorldClim
	bio19	Precipitation of coldest quarter	mm	10 minutes(~340 km ²)	WorldClim
Biophysical drivers	elevation	Elevation	meters	250 m	SRTM Data
	aspect	Aspect	degree	250 m	SRTM Data
	slope	Slope	degree	250 m	SRTM Data
	nitrogen	Nitrogen	cg/kg	250 m	SoilGrids
	soil_carbon	Soil organic carbon stock	t/ha	250 m	SoilGrids
	Soil ph	Soil pH in water	pH*10	250 m	SoilGrids
Location drivers	Water euclid	Euclidean distance to nearest water bodies across the study site	meters	100 m	ArcMap processing based on vector layer of distribution of water courses at the level of the study area
	Roads euclid	Euclidean distance to nearest roads across the study site	meters	100 m	ArcMap processing based on vector layer of distribution of roads at the level of the study area
Anthropogenic drivers	Pop dens	Population density	Gridded population density	~ 1 km ²	WorldPop

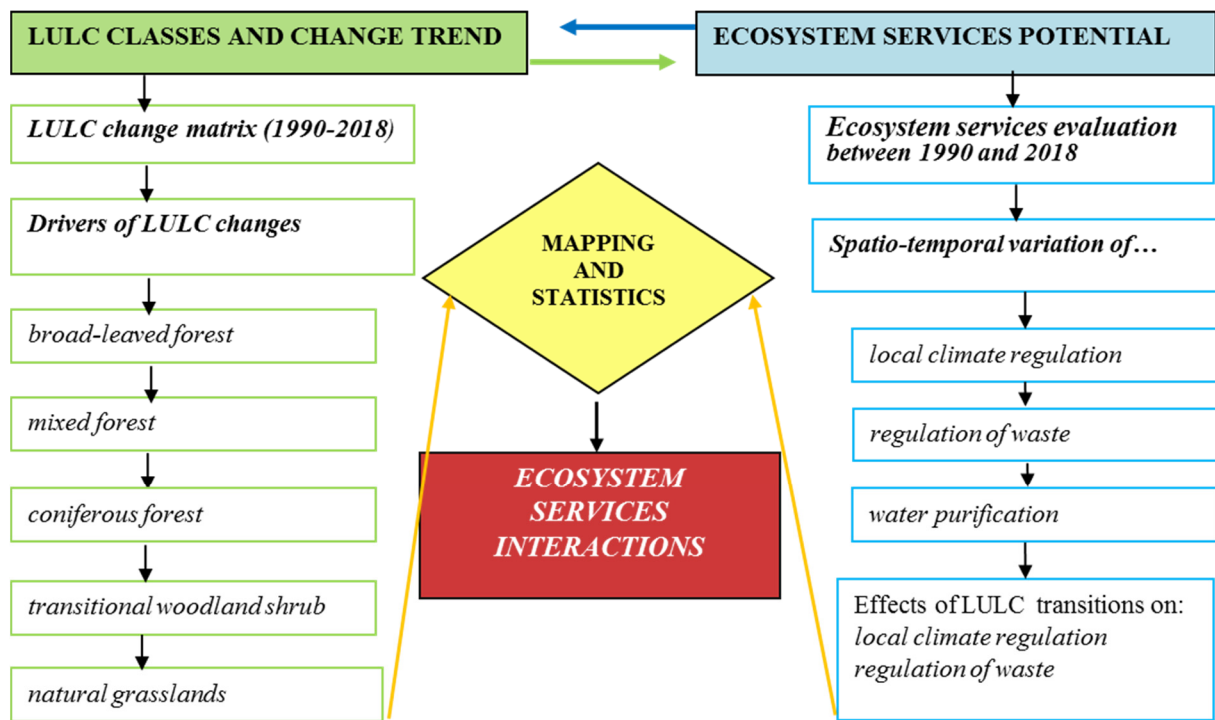


Figure S1. Flowchart diagram of methodological approach.

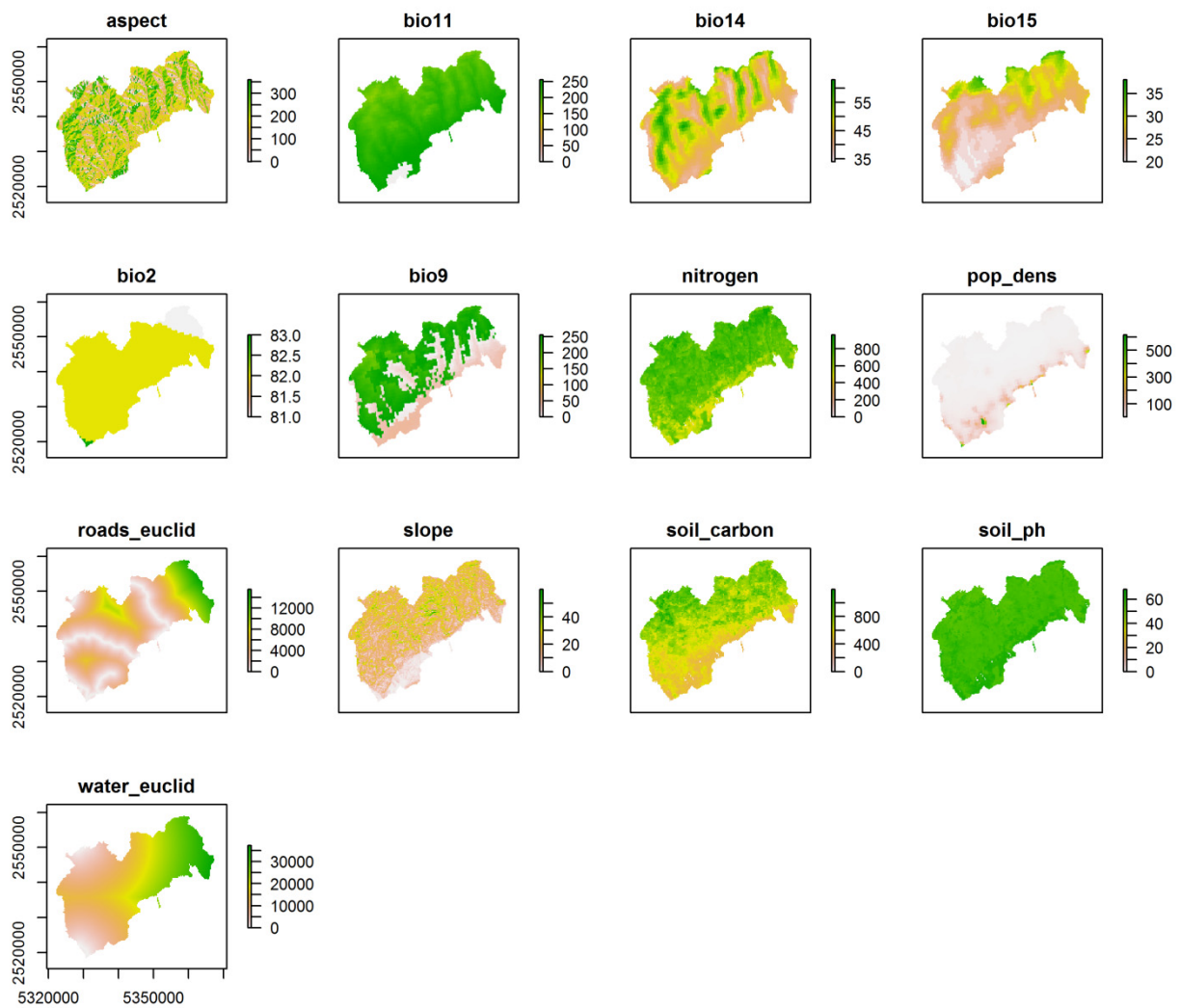


Figure S2. Maps of the predictors used in logistic regression analysis

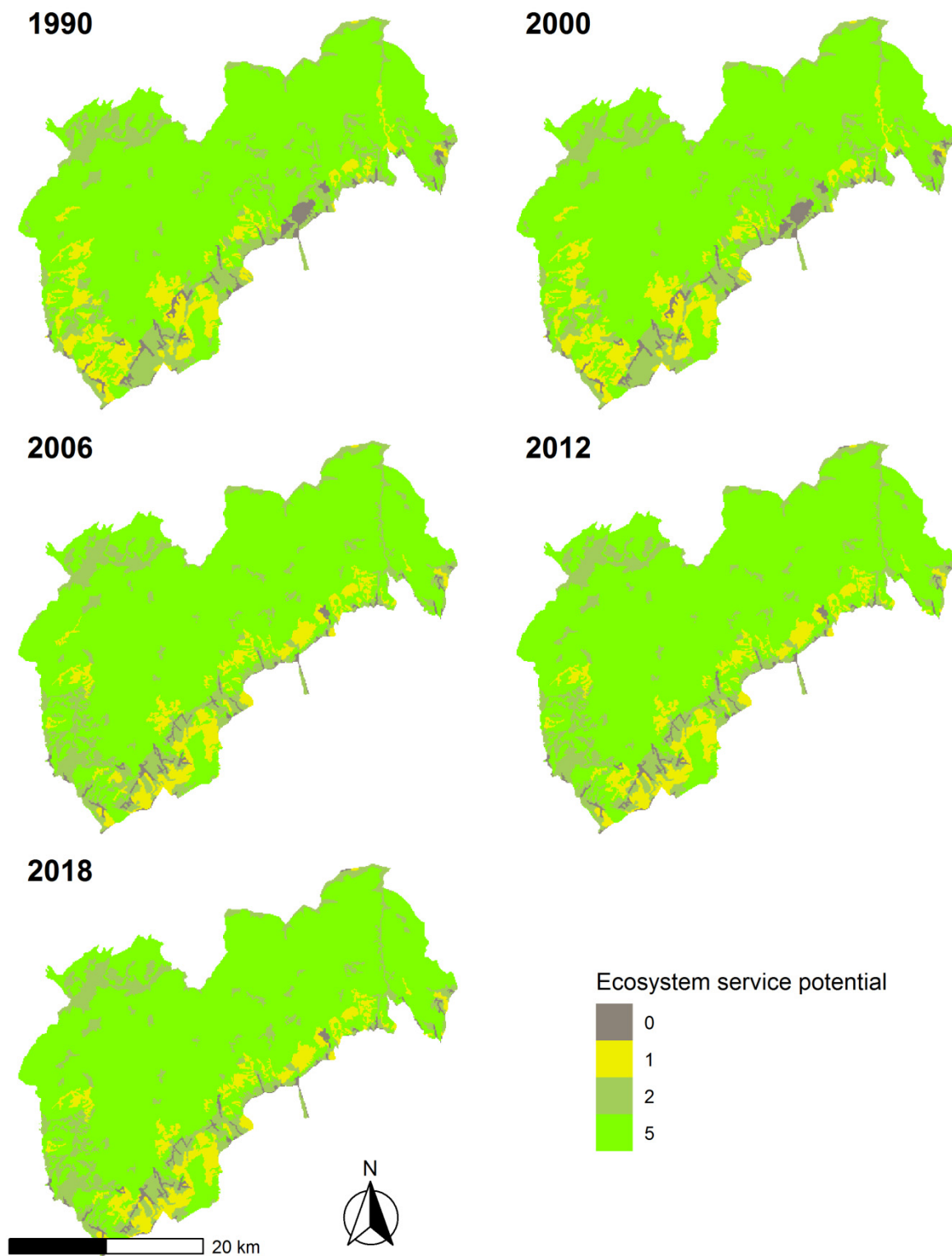


Figure S3. Maps of the local climate regulation ecosystem service from 1990 to 2018 in Nordul Gorjului de Vest Natura 2000 site. See methods for scale of the ES potential.

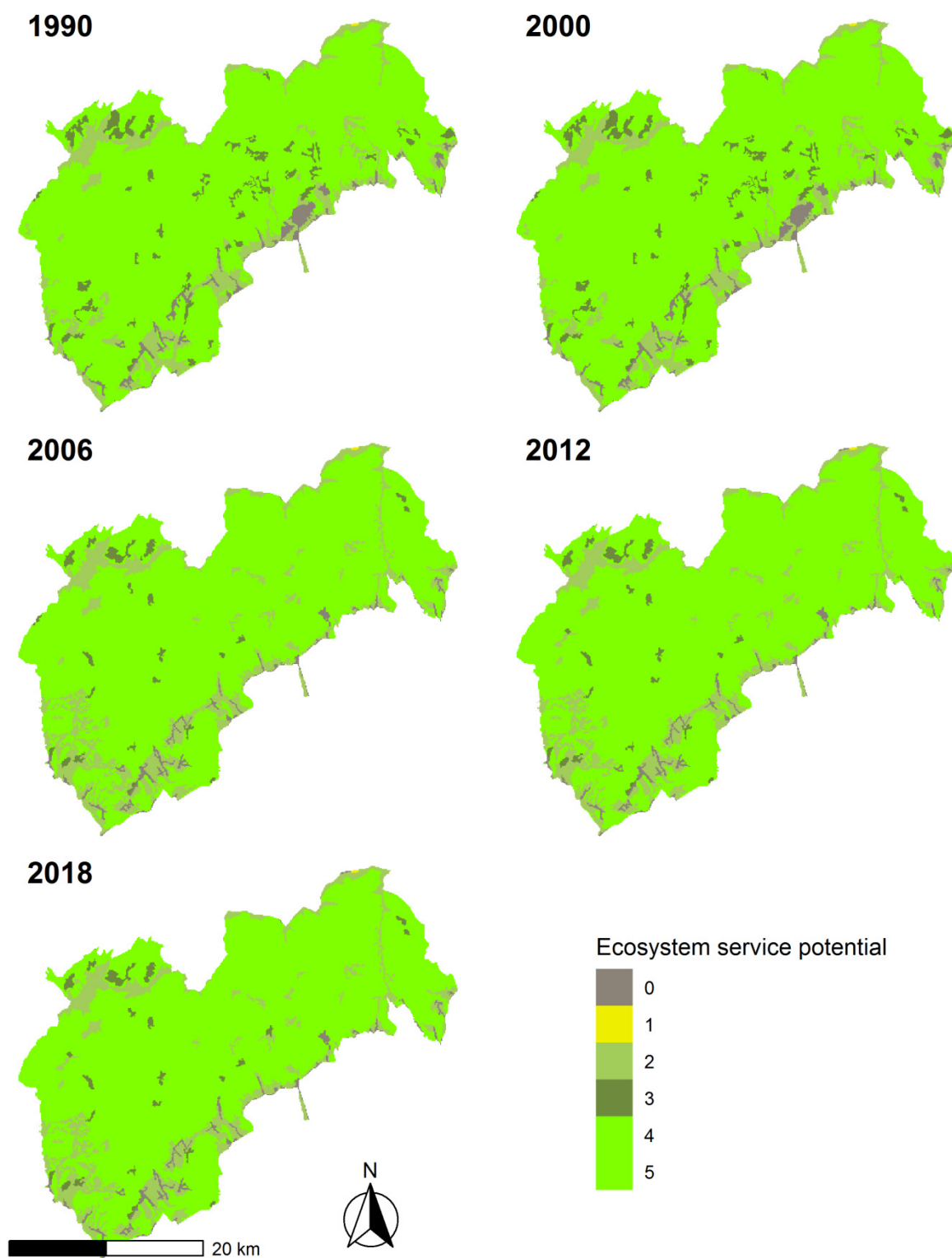


Figure S4. Maps of the regulation of waste ecosystem service from 1990 to 2018 in Nordul Gorjului de Vest Natura 2000 site. See methods for scale of the ES potential.

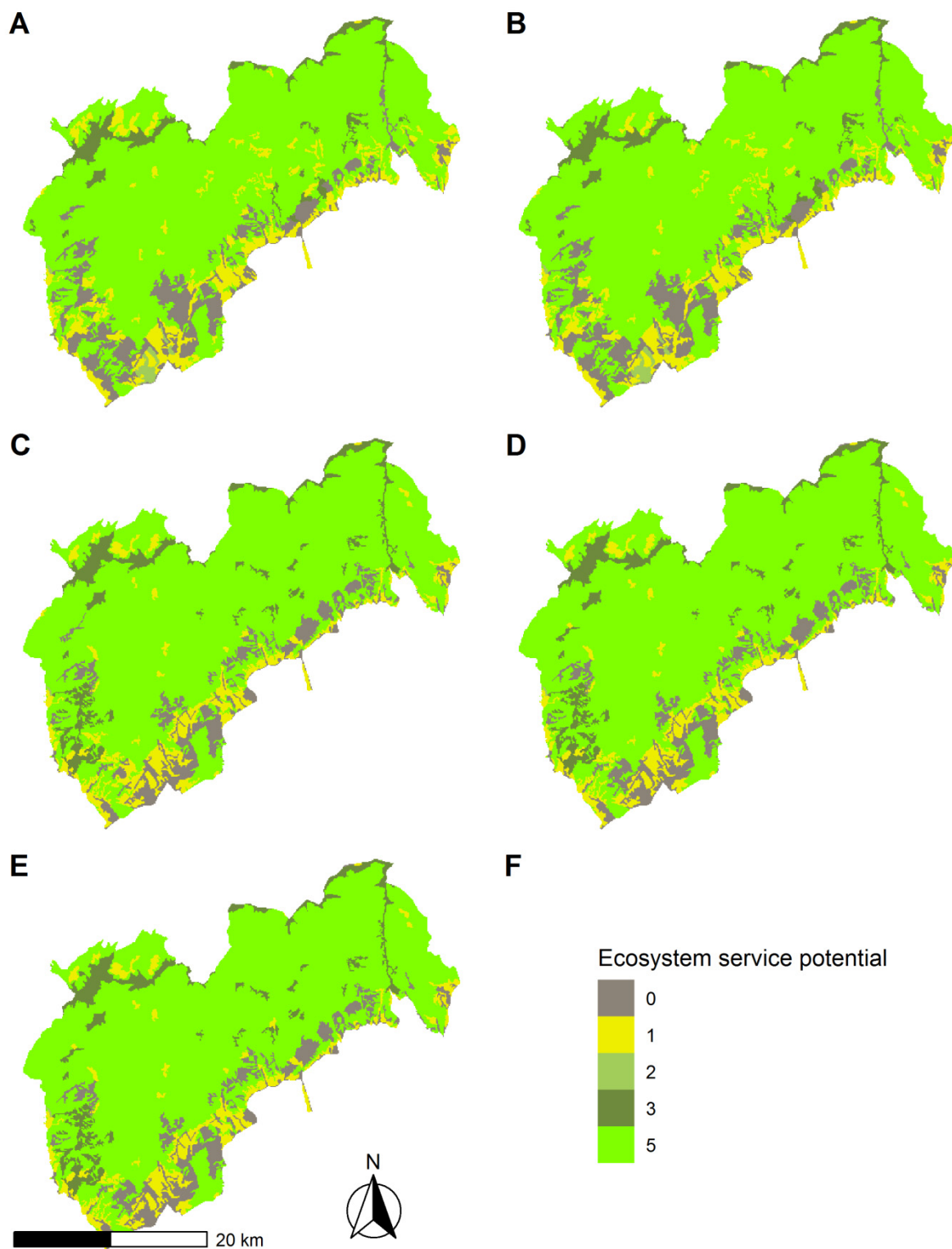


Figure S5. Maps of the water purification ecosystem service from 1990 to 2018 in Nordul Gorjului de Vest Natura 2000 site. See methods for scale of the ES potential.

Table S2. Correlation matrix between remaining LULC drivers after excluding the collinear variables

[illegible]

Table S3. Pairwise interactions between ecosystem services for overall study period (1990-2018). For synergy and dis-synergy interactions are indicated also the area where the three ES increase or decrease together. ES1- local climate regulation; ES2- regulation of waste; ES3-water purification.

Interactions between ecosystem services	
Synergy (win-win)	ES1-ES2: 40.51 km ² ES1-ES3: 67.24 km ² ES2-ES3: 35.53 km ² ES1-ES2-ES3: 35.53 km ²
Trade-off (positive/negative)	ES1-ES2: 23.33 km ² ES1-ES3: 0 km ² ES2-ES3: 10.7 km ²
Trade-off (negative/positive)	ES1-ES2: 10.7 km ² ES1-ES3: 0 km ² ES2-ES3: 27.65 km ²
Dis-synergy (lose-lose)	ES1-ES2: 13.18 km ² ES1-ES3: 24.9 km ² ES2-ES3: 14.11 km ² ES1-ES2-ES3: 13.1 km ²