

Report from Serbia



United Nations
Convention to Combat
Desertification

praus₄

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SO1-1 Trends in land cover

Land area

SO1-1.T1: National estimates of the total land area, the area covered by water bodies and total country area

Year	Total land area (km ²)	Water bodies (km ²)	Total country area (km ²)	Comments
2 001	87 725	732	88 457	
2 005	87 723	734	88 457	
2 010	87 727	730	88 457	
2 015	87 722	735	88 457	
2 019	87 721	736	88 457	

Land cover legend and transition matrix

SO1-1.T2: Key Degradation Processes

Degradation Process	Starting Land Cover	Ending Land Cover
Urban Expansion	Croplands	Artificial surfaces
Deforestation	Tree-covered areas	Artificial surfaces
Deforestation	Tree-covered areas	Other Barren land

Are the seven UNCCD land cover classes sufficient to monitor the key degradation processes in your country?

- Yes
 No

SO1-1.T4: UNCCD land cover legend transition matrix

Original/ Final	Tree-covered areas	Grasslands	Croplands	Wetlands	Artificial surfaces	Other Lands	Water bodies
Tree-covered areas	0	-	-	-	-	-	0
Grasslands	+	0	+	-	-	-	0
Croplands	+	-	0	-	-	-	0
Wetlands	-	-	-	0	-	-	0
Artificial surfaces	+	+	+	+	0	+	0
Other Lands	+	+	+	+	-	0	0
Water bodies	0	0	0	0	0	0	0

Land cover

SO1-1.T5: National estimates of land cover (km²) for the baseline and reporting period

	Tree-covered areas (km ²)	Grasslands (km ²)	Croplands (km ²)	Wetlands (km ²)	Artificial surfaces (km ²)	Other Lands (km ²)	Water bodies (km ²)	No data (km ²)
2000	30 670	3 458	52 533	111	892	60	733	
2001	31 298	3 453	51 884	110	918	61	732	
2002	31 423	3 451	51 718	110	953	68	732	
2003	31 656	3 445	51 453	110	992	68	733	
2004	31 786	3 436	51 285	110	1 038	68	734	

SO-1: To improve the condition of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality.

	Tree-covered areas (km ²)	Grasslands (km ²)	Croplands (km ²)	Wetlands (km ²)	Artificial surfaces (km ²)	Other Lands (km ²)	Water bodies (km ²)	No data (km ²)
2005	31 824	3 433	51 232	111	1 056	67	734	
2006	31 984	3 428	51 058	111	1 076	67	734	
2007	32 128	3 402	50 912	111	1 105	69	731	
2008	32 452	3 383	50 582	111	1 131	69	729	
2009	32 553	3 377	50 461	111	1 154	70	730	
2010	32 570	3 376	50 415	111	1 184	71	730	
2011	32 578	3 375	50 378	111	1 213	71	731	
2012	32 562	3 376	50 355	111	1 249	72	732	
2013	32 558	3 375	50 266	112	1 343	72	732	
2014	32 616	3 369	50 084	111	1 470	71	735	
2015	32 615	3 368	50 020	111	1 537	71	735	
2016	32 669	3 363	49 967	114	1 538	71	735	
2017	32 596	3 363	50 033	115	1 544	71	735	
2018	32 452	3 353	50 165	117	1 564	70	736	
2019	32 447	3 354	50 157	120	1 569	72	736	
2020								

Land cover change

SO1-1.T6: National estimates of land cover change (km²) for the baseline period

	Tree-covered areas (km ²)	Grasslands (km ²)	Croplands (km ²)	Wetlands (km ²)	Artificial surfaces (km ²)	Other Lands (km ²)	Water bodies (km ²)	Total (km ²)
Tree-covered areas (km ²)	30 407	13	218	1	7	18	6	30 670
Grasslands (km ²)	94	3 353	4	0	7	0	0	3 458
Croplands (km ²)	2 107	2	49 795	0	622	0	5	52 531
Wetlands (km ²)	1	0	0	109	0	0	1	111
Artificial surfaces (km ²)	0	0	0	0	892	0	0	892
Other Lands (km ²)	0	0	0	0	7	53	0	60
Water bodies (km ²)	5	0	3	1	2	0	723	734
Total	32 614	3 368	50 020	111	1 537	71	735	

SO1-1.T7: National estimates of land cover change (km²) for the reporting period

	Tree-covered areas (km ²)	Grasslands (km ²)	Croplands (km ²)	Wetlands (km ²)	Artificial surfaces (km ²)	Other Lands (km ²)	Water bodies (km ²)	Total land area (km ²)
Tree-covered areas (km ²)	32 220	12	369	8	2	2	1	32 614
Total	32 448	3 354	50 157	119	1 569	72	736	

SO-1: To improve the condition of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality.

	Tree-covered areas (km ²)	Grasslands (km ²)	Croplands (km ²)	Wetlands (km ²)	Artificial surfaces (km ²)	Other Lands (km ²)	Water bodies (km ²)	Total land area (km ²)
Grasslands (km ²)	27	3 336	0	0	5	0	0	3 368
Croplands (km ²)	200	6	49 788	0	24	1	0	50 019
Wetlands (km ²)	0	0	0	111	0	0	0	111
Artificial surfaces (km ²)	0	0	0	0	1 537	0	0	1 537
Other Lands (km ²)	1	0	0	0	1	69	0	71
Water bodies (km ²)	0	0	0	0	0	0	735	735
Total	32 448	3 354	50 157	119	1 569	72	736	

Land cover degradation

SO1-1.T8: National estimates of land cover degradation (km²) in the baseline period

	Area (km ²)	Percent of total land area (%)
Land area with degraded land cover	895	1 .0
Land area with non-degraded land cover	87 560	99 .0
Land area with no land cover data	0	0 .0

SO1-1.T9: National estimates of land cover degradation (km²) in the reporting period

	Area (km ²)	Percent of total land area (%)
Land area with improved land cover	227	0 .3
Land area with stable land cover	87 798	99 .3
Land area with degraded land cover	431	0 .5
Land area with no land cover data	0	0 .0

General comments

The country possesses the CORINE land cover dataset. However, this dataset is also of low confidence, as it overestimates the area under forests (Report on the State of Environment in the Republic of Serbia, Serbian Environmental Protection Agency 2018). In addition, there is no clear and defined methodology to aggregate CORINE land cover classes into 7 classes proposed by UNCCD. This activity requires more comprehensive consultations and takes a lot of time. Therefore, the results obtained via global databases are a temporary solution until the appropriate discussion with the pool of nationally recognized experts is carried out.

SO1-2 Trends in land productivity or functioning of the land

Land productivity dynamics

SO1-2.T1: National estimates of land productivity dynamics (in km²) within each land cover class for the baseline period

Land cover class	Net land productivity dynamics (km ²) for the baseline period					
	Declining (km ²)	Moderate Decline (km ²)	Stressed (km ²)	Stable (km ²)	Increasing (km ²)	No Data (km ²)
Tree-covered areas	0	337	977	5 847	23 243	4
Grasslands	10	71	504	1 735	1 032	1
Croplands	1	315	2 476	24 341	22 655	7
Wetlands	0	0	8	44	58	0
Artificial surfaces	0	15	219	425	233	0
Other Lands	2	2	9	12	28	0
Water bodies	0	9	203	256	247	8

SO1-2.T2: National estimates of land productivity dynamics (in km²) within each land cover class for the reporting period.

Land cover class	Net land productivity dynamics (km ²) for the reporting period					
	Declining (km ²)	Moderate Decline (km ²)	Stressed (km ²)	Stable (km ²)	Increasing (km ²)	No Data (km ²)
Tree-covered areas	1	556	2 090	10 574	18 085	3
Grasslands	6	142	1 161	698	1 322	1
Croplands	3	1 342	26 110	14 636	7 594	3
Wetlands	0	3	32	33	41	0
Artificial surfaces	0	16	785	163	91	0
Other Lands	1	1	15	20	24	0
Water bodies	1	24	449	111	134	8

SO1-2.T3: National estimates of land productivity dynamics for areas where a land conversion to a new land cover class has taken place (in km²) for the baseline period.

Land Conversion		Net land productivity dynamics (km ²) for the baseline period					
From	To	Net area change (km ²)	Declining (km ²)	Moderate Decline (km ²)	Stressed (km ²)	Stable (km ²)	Increasing (km ²)
Croplands	Tree-covered areas	2 107	0	9	27	332	1 740
Croplands	Artificial surfaces	622	0	7	74	346	195
Tree-covered areas	Croplands	218	0	10	31	49	128
Grasslands	Tree-covered areas	94	0	1	4	19	70

SO1-2.T4: National estimates of land productivity dynamics for areas where a land conversion to a new land cover class has taken place (in km²) for the reporting period.

SO-1: To improve the condition of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality.

Land Conversion		Net land productivity dynamics (km ²) for the reporting period					
From	To	Net area change (km ²)	Declining (km ²)	Moderate Decline (km ²)	Stressed (km ²)	Stable (km ²)	Increasing (km ²)
Croplands	Tree-covered areas	1 044	0	13	88	401	542
Croplands	Artificial surfaces	488	0	6	379	73	31
Tree-covered areas	Croplands	464	0	17	96	187	165
Grasslands	Tree-covered areas	89	0	1	7	18	63

Land Productivity degradation

SO1-2.T5: National estimates of land productivity degradation in the baseline period

	Area (km ²)	Percent of total land area (%)
Land area with degraded land productivity	782	0.9
Land area with non-degraded land productivity	86 929	99.1
Land area with no land productivity data	11	0.0

SO1-2.T6: National estimates of land productivity degradation in the reporting period

	Area (km ²)	Percent of total land area (%)
Land area with improved land productivity	27 989	31.9
Land area with stable land productivity	57 611	65.7
Land area with degraded land productivity	2 112	2.4
Land area with no land productivity data	7	0.0

General comments

There is no nationally verified data on LPD in the Republic of Serbia. Although there are remote sensing experts, in the Republic of Serbia there is no national centre for remote sensing working on a similar methodology required for UNCCD reporting. We utilized JRC 1 km dataset for the determination of LPD, as the same dataset was used in the previous reporting. The differences in the obtained results between baseline periods among the two reporting are due to the alteration of methodology. We are comfortable with the data, however, due to lack of time for verification they will be estimated as of low confidence.

SO1-3 Trends in carbon stocks above and below ground

Soil organic carbon stocks

SO1-3.T1: National estimates of the soil organic carbon stock in topsoil (0-30 cm) within each land cover class (in tonnes per hectare).

Year	Soil organic carbon stock in topsoil (t/ha)						
	Tree-covered areas	Grasslands	Croplands	Wetlands	Artificial surfaces	Other Lands	Water bodies
2000	124	109	80	101	106	131	25
2001	122	110	81	101	103	131	25
2002	121	110	81	101	99	116	25
2003	120	110	82	101	95	117	25
2004	120	110	82	101	91	117	25
2005	120	110	82	101	89	118	25
2006	119	110	82	101	88	118	25
2007	118	111	83	101	85	115	25
2008	117	112	83	100	83	114	25
2009	117	112	83	101	82	113	25
2010	117	112	83	101	80	112	25
2011	117	112	83	100	78	112	25
2012	117	112	84	100	75	111	25
2013	117	112	84	100	70	111	25
2014	117	112	84	100	64	111	25
2015	116	112	84	108	58	110	25
2016	116	112	85	106	58	111	25
2017	116	112	84	105	57	112	25
2018	117	112	84	104	57	112	25
2019	117	112	84	101	57	109	25
2020							

If you opted not to use default Tier 1 data, what did you use to calculate the estimates above?

- Modified Tier 1 methods and data
- Tier 2 (additional use of country-specific data)
- Tier 3 (more complex methods involving ground measurements and modelling)

SO1-3.T2: National estimates of the change in soil organic carbon stock in soil due to land conversion to a new land cover class in the baseline period

Land Conversion		Soil organic carbon (SOC) stock change in the baseline period					
From	To	Net area change (km ²)	Initial SOC stock (t/ha)	Final SOC stock (t/ha)	Initial SOC stock total (t)	Final SOC stock total (t)	SOC stock change (t)
Croplands	Tree-covered areas	2 107	105.2	119.7	22 159 938	25 217 976	3 058 038

SO-1: To improve the condition of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality.

Land Conversion		Soil organic carbon (SOC) stock change in the baseline period					
From	To	Net area change (km ²)	Initial SOC stock (t/ha)	Final SOC stock (t/ha)	Initial SOC stock total (t)	Final SOC stock total (t)	SOC stock change (t)
Grasslands	Tree-covered areas	94	138.4	138.4	1 301 236	1 300 964	-272
Tree-covered areas	Croplands	218	109.3	98.2	2 383 168	2 141 608	-241 560
Croplands	Artificial surfaces	622	68.6	49.1	4 269 688	3 054 107	-1 215 581

SO1-3.T3: National estimates of the change in soil organic carbon stock in soil due to land conversion to a new land cover class in the reporting period

Land Conversion		Soil organic carbon (SOC) stock change in the reporting period					
From	To	Net area change (km ²)	Initial SOC stock (t/ha)	Final SOC stock (t/ha)	Initial SOC stock total (t)	Final SOC stock total (t)	SOC stock change (t)
Croplands	Tree-covered areas	200	90.6	93.0	1 811 103	1 859 745	48 642
Grasslands	Tree-covered areas	27	122.5	122.5	330 635	330 635	0
Croplands	Artificial surfaces	24	75.7	68.3	181 593	163 882	-17 711
Tree-covered areas	Croplands	369	107.5	105.0	3 965 358	3 873 477	-91 881

Soil organic carbon stock degradation

SO1-3.T4: National estimates of soil organic carbon stock degradation in the baseline period

	Area (km ²)	Percent of total land area (%)
Land area with degraded soil organic carbon (SOC)	579	0.7
Land area with non-degraded SOC	87 095	99.3
Land area with no SOC data	48	0.1

SO1-3.T5: National estimates of SOC stock degradation in the reporting period

	Area (km ²)	Percent of total land area (%)
Land area with improved SOC	0	0.0
Land area with stable SOC	87 017	99.2
Land area with degraded SOC	660	0.8
Land area with no SOC data	42	0.0

General comments

There are data on SOC in the Republic of Serbia obtained from various campaigns, soil surveys, research activities, projects, and extension services... The most of existing data are not obtained from SOC campaigns and need further verification in order to assess their level of confidence. Data quality assessment and the creation of a SOC map might be the next steps in order to improve national reporting.

SO1-4 Proportion of degraded land over the total land area

Proportion of degraded land over the total land area (Sustainable Development Goal Indicator 15.3.1)

SO1-4.T1: National estimates of the total area of degraded land (in km²), and the proportion of degraded land relative to the total land area

	Total area of degraded land (km ²)	Proportion of degraded land over the total land area (%)
Baseline Period	1 659	1 .9
Reporting Period	3 671	4 .2
Change in degraded extent	2012	

Method

Did you use the SO1-1, SO1-2 and SO1-3 indicators (i.e. land cover, land productivity dynamics and soil organic carbon stock) to compute the proportion of degraded land?

Which indicators did you use?

- Land Cover
- Land Productivity Dynamics
- SOC Stock

Did you apply the one-out, all-out principle to compute the proportion of degraded land?

- Yes
- No

Level of Confidence

Indicate your country's level of confidence in the assessment of the proportion of degraded land:

- High (based on comprehensive evidence)
- Medium (based on partial evidence)
- Low (based on limited evidence)

Describe why the assessment has been given the level of confidence selected above:

The main reasons are the resolution of default datasets for land cover, the accuracy of the SoilGrids SOC dataset, and a lack of time in verifying LPD datasets which contribute to land degradation more than the other two sub-indicators. Also, the resolution of the proposed methodology does not distinguish the linear forms of soil erosion, like gullies and furrow erosion, which are present in the hilly-mountainous part of the country.

False positives/ False negatives

SO1-4.T3: Justify why any area identified as degraded or non-degraded in the SO1-1, SO1-2 or SO1-3 indicator data should or should not be included in the overall Sustainable Development Goal indicator 15.3.1 calculation.

Location Name	Type	Recode Options	Area (km ²)	Process driving false +/- outcome	Basis for Judgement	Edit Polygon
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Perform qualitative assessments of areas identified as degraded or improved

SO1-4.T4: Degradation hotspots

Hotspots	Location	Area (km ²)	Assessment Process	Direct drivers of land degradation hotspots	Action(s) taken to redress degradation in terms of Land Degradation Neutrality response hierarchy	Remediating action(s) (both forward-looking and current)	Edit Polygon
Total no. of hotspots	0						

S0-1: To improve the condition of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality.

Hotspots	Location	Area (km ²)	Assessment Process	Direct drivers of land degradation hotspots	Action(s) taken to redress degradation in terms of Land Degradation Neutrality response hierarchy	Remediating action(s) (both forward-looking and current)	Edit Polygon
Total hotspot area	0						

What is/are the indirect driver(s) of land degradation at the national level?

- 1.
- 2.
- 3.
- 4.
- 5.

S01-4.T5: Improvement brightspots

Brightspots	Location	Area (km ²)	Assessment Process	What action(s) led to the brightspot in terms of the Land Degradation Neutrality hierarchy?	Implementing action(s) (both forward-looking and current)	Edit Polygon
Total no. of brightspots	0					
Total brightspot area	0					

What are the enabling and instrumental responses at the national level driving the occurrence of brightspots?

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

General comments

Brightspots and hotspots were not discussed since this analysis requires in-depth on-field analysis for verification, and there was a lack of time to perform this analysis. According to our opinion, hotspots are mainly related to LPD degradation, whereas we did not receive on-field information about brightspots. It is planned to do a certain-level analysis in the forthcoming period to assess the changes.

SO1 Voluntary Targets

SO1-VT.T1: Voluntary Land Degradation Neutrality targets and other targets relevant to strategic objective 1

Target	Year	Location(s)	Total Target Area (km ²)	Overarching type of Land Degradation Neutrality (LDN) intervention	Targeted action(s)	Status of target achievement	Is this an LDN target? If so, under which process was it defined/adopted?	Which other important goals are also being addressed by this target?	Edit Polygon
To increase the area of national territory under forests to 41.4% by 2050	2050	Country territory		<input checked="" type="checkbox"/> Avoid <input checked="" type="checkbox"/> Reduce <input type="checkbox"/> Reverse	<ul style="list-style-type: none"> Restore/improve tree-covered areas 	Ongoing	<input type="radio"/> Yes <input checked="" type="radio"/> No		
To increase the area under forests in the Autonomous Province of Vojvodina to 14.3%, primarily by applying the system of forest protection belts		Autonomous Province of Vojvodina		<input checked="" type="checkbox"/> Avoid <input checked="" type="checkbox"/> Reduce <input type="checkbox"/> Reverse	<ul style="list-style-type: none"> Restore/improve tree-covered areas 	Ongoing	<input type="radio"/> Yes <input checked="" type="radio"/> No		
To increase the level of forest cover in areas under bare and degraded soil, in mountainous areas south of the Sava and Danube Rivers, in the area of 100,000 ha by 2030 so as to control erosion and torrential processes	2030	Mountainous areas south of the Sava and Danube Rivers,	1 000	<input checked="" type="checkbox"/> Avoid <input checked="" type="checkbox"/> Reduce <input checked="" type="checkbox"/> Reverse		Ongoing	<input type="radio"/> Yes <input checked="" type="radio"/> No		
				<input type="checkbox"/> Avoid <input type="checkbox"/> Reduce <input type="checkbox"/> Reverse			<input type="radio"/> Yes <input checked="" type="radio"/> No		
Total			Sum of all targeted areas 1 000						

SO1.IA.T1: Areas of implemented action related to the targets (projects and initiatives on the ground).

Relevant Target	Implemented Action	Location (placename)	Action start date	Extent of action	Total Area Implemented So Far (km ²)	Edit Polygon
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SO-1: To improve the condition of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality.

Relevant Target	Implemented Action	Location (placename)	Action start date	Extent of action	Total Area Implemented So Far (km ²)	Edit Polygon
					Sum of all areas relevant to actions under the same target	
					To increase the area of national territory under forests to 41.4% by 2050:	0 .00
					To increase the area under forests in the Autonomous Province of Vojvodina to 14.3%, primarily by applying the system of forest protection belts:	0 .00
					To increase the level of forest cover in areas under bare and degraded soil, in mountainous areas south of the Sava and Danube Rivers, in the area of 100,000 ha by 2030 so as to control erosion and torrential processes :	0 .00

General comments

Nationwide LDN target is: Reaching land degradation neutrality in the territory of the Republic of Serbia by 2030 Presented targets in the SO1-VT.T1 are actually measures to achieve land degradation neutrality by 2030. Additional comments for NVT measures: 1. NVT1 There is a significant increase in the area under forests through afforestation and the natural conversion of pastures and shrublands into forests. The official data will be known in the summer of 2023 when the National Forest Inventory of the Republic of Serbia is going to be finalized. 2. NVT2 There is an increase in forest cover in the territory of AP Vojvodina. The official data will be known in the summer of 2023 when the National Forest Inventory is going to be finalized. The system of forest protection belts - It is an ongoing activity. There is a small increase in the area (RSO), but we also collected a lot of information that at the municipality level there were more results. 3. NVT3 It is an ongoing activity. There is an increase in the area restored, and there are plans for further work. We can not provide spatial data in GIS form for the areas afforested or planned to be afforested.

SO2-1 Trends in population living below the relative poverty line and/or income inequality in affected areas

Relevant metric

Choose the metric that is relevant to your country:

- Proportion of population below the international poverty line
- Income inequality (Gini Index)

Income inequality (Gini Index)

SO2-1.T2: National estimates of income inequality (Gini index)

Year	Income inequality (Gini Index)
2000	
2001	
2002	
2003	
2004	
2005	
2006	
2007	
2008	
2009	
2010	
2011	
2012	39.9
2013	39.5
2014	40.5
2015	40.5
2016	38.8
2017	36.2
2018	36.2
2019	35.0
2020	34.5

Qualitative assessment

SO2-1.T3: Interpretation of the indicator

Indicator metric	Change in the indicator	Comments
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General comments

The Statistical Office of the Republic of Serbia (SORS) calculates the GINI index based on data obtained from the survey "Income and Living Conditions Survey (EU-SILC)". The survey is aligned with EU regulations and Eurostat's methodology prescribed for this EU-SILC (Statistics on Income and Living Conditions) survey. Data are almost the same (varying from 39.8 in 2016 to 33.3 in 2020). According to the same methodology (EU-SILC), SORS calculated the proportion of the population living below the national poverty line, by sex and age. A declining risk tendency was observed from 25.9% in 2016 to 21.7% in 2020. Neglecting difference in poverty risk was observed between genders. Population under the age of 18 were the most exposed to the risk of poverty (24.2%). Individuals aged 25 to 54 had the lowest rate of risk of

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poverty (19.6%). The most exposed to the risk of poverty were unemployed persons (46.7%), while the lowest rate of risk of poverty was for persons employed by an employer (6.2%). For self-employed persons, this rate was 18.8%, and for pensioners 19.4%. Bright spots: Belgrade district – poverty rate 3.9 % Hot spots: Southern and Eastern Serbia –absolute poverty 11.9% Sources: <https://publikacije.stat.gov.rs/G2021/Pdf/G20211282.pdf> <https://socijalnoukljucivanje.gov.rs/sr/category/dokumentacrl> <https://sdg.indikatori.rs/en-US/>

SO2-2 Trends in access to safe drinking water in affected areas

Proportion of population using safely managed drinking water services

SO2-2.T1: National estimates of the proportion of population using safely managed drinking water services

Year	Urban (%)	Rural (%)	Total (%)
2000	81	66	74
2001	81	66	74
2002	81	66	74
2003	81	66	74
2004	81	66	75
2005	81	67	75
2006	81	67	75
2007	81	67	75
2008	81	67	75
2009	81	67	75
2010	81	67	75
2011	81	67	75
2012	81	67	75
2013	81	67	75
2014	82	67	75
2015	82	67	75
2016	82	67	75
2017	82	67	75
2018	82	67	75
2019	82	67	75
2020	82	67	75

Qualitative assessment

SO2-2.T2: Interpretation of the indicator

Change in the indicator	Comments

General comments

The highest percentage of connected households is in the Autonomous Province of Vojvodina (91%) - South Bačka district (94%) and Belgrade district (92%), the lower is in the Central and South of Serbia (71 %) (the most critical districts are Nišavski and Toplica districts, 49% and 58 %, respectively). The percentage of the population using safely managed drinking water - connected to the water supply collecting network increased from 85.9% in 2016 to 89.9 in 2020. Water extraction increased from 634 to 686.7 million m³ in 2016 and 2020, respectively. Approximately 62% of water is abstracted from ground waters or natural springs and the rest from streams or accumulations. About two-thirds are delivered on average, while the rest are losses. The proportion of the population with access to basic drinking water services is above 99%. Sources: <https://publikacije.stat.gov.rs/G2021/pdf/G20215676.pdf> <https://www.rdvode.gov.rs/doc/Strategija%20upravljanja%20vodama.pdf> <http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/viewdoc?uid=ccd6ac-d2ec-4e59-b5ab-82d7402072b5> <https://www.srbija.gov.rs/dokument/45678/strategije-programi-planovi-.php>

SO2-3 Trends in the proportion of population exposed to land degradation disaggregated by sex

Proportion of the population exposed to land degradation disaggregated by sex

SO2-3.T1: National estimates of the proportion of population exposed to land degradation disaggregated by sex.

Time period	Population exposed (count)	Percentage of total population exposed (%)	Female population exposed (count)	Percentage of total female population exposed (%)	Male population exposed (count)	Percentage of total male population exposed (%)
Baseline period	955826	10 .9	488743	11 .0	467083	10 .8
Reporting period	912824	10 .3	468890	10 .4	443934	10 .2

Qualitative assessment

SO2-3.T2: Interpretation of the indicator

Change in the indicator	Comments

General comments

Despite the intention to use the national data, the data available from the Statistical Office of the Republic of Serbia could not be used due to the following reasons: - Data resolution - Sex-disaggregated data is available only to the level of municipalities. - Data distribution – Data is limited to the extent of municipalities and therefore distribution could only be orientational. It is administrative distribution linked to the polygon area, not in the raster format. - Format – Data was available only in tables. The initial intention to generate an adequate georeferenced set of sub-national data that covers the full extent of the country (raster) was limited with the resolution and distribution. The population exposed is a bit decreased, and land degradation is a bit increased. This might be because of several reasons, a certain shift in degraded areas (geographically), migration, decrease in population. The calculated number of the population exposed by land degradation follows the land degradation pattern. However, the confidence of the data cannot be verified through comparison with in-situ data, as it would require detailed analysis. The confidence level also depends on the confidence level of the results of SO1-4.

SO2 Voluntary Targets

SO2-VT.T1

Target	Year	Level of application	Status of target achievement	Comments
Population connections to public water supply 96% in Belgrade District and AP Vojvodina and 90% in Central Serbia	2034	Subnational		

General comments

Population connections to public water supply is planned to be 96% in Belgrade District and AP Vojvodina and 90% in Central Serbia by the year 2034. About 30% of the existing small local water supply systems will be connected to the central water supply networks until the end of 2026. It primarily refers to facilities for supplying drinking water to pre-school and school institutions, Sources:

<https://publikacije.stat.gov.rs/G2021/pdf/G20215676.pdf> <https://www.rdvode.gov.rs/doc/Strategija%20upravljanja%20vodama.pdf>

<http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/viewdoc?uuid=ccd6ad6ac-d2ec-4e59-b5ab-82d7402072b5>

<https://www.srbija.gov.rs/dokument/45678/strategije-programi-planovi-.php>

SO3-1 Trends in the proportion of land under drought over the total land area

Drought hazard indicator

SO3-1.T1: National estimates of the land area in each drought intensity class as defined by the Standardized Precipitation Index (SPI) or other nationally relevant drought indices

	Drought intensity classes				
	Mild drought (km ²)	Moderate drought (km ²)	Severe drought (km ²)	Extreme drought (km ²)	Non-drought (km ²)
2000	1 687	11 606	11 703	63 461	0
2001	12 596	2 264	634	0	72 963
2002	23 723	1 630	0	0	63 104
2003	55 792	25 883	558	0	6 225
2004	0	0	0	0	88 457
2005	0	0	0	0	88 457
2006	9 713	390	0	0	78 354
2007	2 619	0	0	0	85 838
2008	64 445	5 556	0	0	18 456
2009	5 902	0	0	0	82 555
2010	0	0	0	0	88 457
2011	1 384	23 489	38 179	25 405	0
2012	50 829	16 549	0	0	21 079
2013	28 311	539	0	0	59 607
2014	177	0	0	0	88 280
2015	33 126	1 079	0	0	54 252
2016	0	0	0	0	88 457
2017	50 273	8 919	0	0	29 265
2018	1 275	0	0	0	87 183
2019	34 674	7	0	0	53 776
2020					
2021					

SO3-1.T2: Summary table for land area under drought without class break down

	Total area under drought (km ²)	Proportion of land under drought (%)
2000	87 725	100.0
2001	15 494	17.7
2002	25 353	28.9
2003	82 232	93.7
2004	0	0.0
2005	0	0.0

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	Total area under drought (km ²)	Proportion of land under drought (%)
2006	10 103	11.5
2007	2 619	3.0
2008	70 001	79.8
2009	5 902	6.7
2010	0	0.0
2011	87 725	100.0
2012	67 378	76.8
2013	28 850	32.9
2014	177	0.2
2015	34 205	39.0
2016	0	0.0
2017	59 192	67.5
2018	1 275	1.5
2019	34 681	39.5
2020		-
2021		-

Qualitative assessment:

Data quality assessment: Official national gridded dataset for precipitation is not available, but the gridded dataset from which are used data for this assessment (GPCC) well represents (considering also updated data resolution) the main spatial and temporal features of the precipitation distribution in the Republic of Serbia. Gridded climate datasets were developed on high resolution (0.01 degrees) for the purpose of different projects related to zoning of agricultural production, but they are not adopted as official national database. Regional datasets, including surrounding countries, were also developed (0.1 degrees) but not for the period until 2019 (for example, project CARPATCLIM with data for the period 1961-2010; activities continued, work in progress). Indicator verification: Results provided by indicator "SPI-12 December" (SPI-12DEC) using GPCC data and observed national data from stations well represent annual drought intensity classes and their spatial distribution in the period 2000-2019. Verification was implemented for the same indicator using provided data and national data. Indicator verification for drought assessment: Indicator SPI-12DEC recognize major meteorological drought events in the years 2000 and 2011. This indicator does not recognize significant drought events during other years in the period 2000-2019 because its application is not suitable for drought monitoring in the Republic of Serbia (RS). National monitoring of meteorological drought is implemented by the Republic Hydrometeorological Service of Serbia (RHMSS), updating each month values for SPI-12, SPI-6, SPI-3, SPI-2, SPI-1 (publicly available) and other (SPI-24, SPI-9, SPI-5, SPI-4). The most representative drought indicators for RS, including assessment of impacts, are "SPI-12 September" (SPI-12SEP), "SPI-6 September" (SPI-6SEP) and "SPI-3 August" (SPI-3AUG), because of the annual distribution of precipitation and distribution by intensity. The period during which dominates the supply of water from precipitation is October-March (OCT-MAR) and the period with increasing demands for water is April-September (APR-SEP). Approximately, collected water reserves during OCT-MAR can impact dryness conditions in the following period APR-SEP. In this sense, more representative annual SPI is SPI-12SEP, rather than the proposed SPI for the calendar year. SPI-6SEP include a growing period for the majority of varieties, and SPI-3AUG includes the season with the highest risk of drought in RS. Using those SPI indicators years with more extreme drought in RS, with notable impacts (more or less extreme depending on the impacted sector and the area of impact) were during the years 2000, 2003, 2007, 2011, 2012, 2013, and 2017. Conclusion: Provided assessment using GPCC data SPI-12DEC represents well drought conditions for the calendar year in the Republic of Serbia. The frequency and intensities of drought events in the Republic of Serbia are underestimated using SPI-12DEC and using only one SPI indicator, because of the large inter/annual variability of precipitation increased also by climate change. Considering the purpose of this report which enables regional and global intercomparison of drought for the land degradation and desertification issues, given assessments are accepted because they well address major meteorological drought events.

General comments

The Republic of Serbia (RS) recognizes the drought as a national hazard, with increasing risk under climate changing conditions. An increase in temperature (an average of 1.8 degrees Celsius in 2011-2020 and 3.1 in 2041-2060, compared to 1961-1990, with the highest increase in maximum daily temperatures and during the Jun-July-August season) significantly impacts the risk of drought besides the shifts in annual precipitation distribution (shift of maximum precipitation from June to earlier periods, expansion and reduction of precipitation of dry season) and reduction of weak and moderate precipitation events and intensification of high precipitation events. In the Drought Initiative of the Republic of Serbia (draft submitted to UNCCD in 2020) is recognized divergence in SPI and SPEI values, showing the significance of temperature increase in risk assessment of droughts. Also, increasing aridity by 2041-2060 is recognized to significantly impact land degradation risk (Soil degradation and climate change in Serbia, UNDP, 2022). In this sense, SPEI could be more appropriate for monitoring and assessing the drought in the Republic of Serbia in relation to impacts. It is assessed that the frequency of years with drought increased by 40% (from 10% to 50%) on average over the territory of RS in 2011-2020 compared to 1961-1990, and in 2041-2060 it

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is expected to have each year with drought on average in RS. Extreme drought, with multisectoral impacts (like the drought in 2012, data given in Drought Initiative) is projected to be represented in 3 to 4 years per decade in the mid/century period. The overall analysis of drought risk is currently included in the preparation of the National Adaptation Plan. This plan includes an initiative to determine the national methodology to monitor drought as a multisectoral problem, to pronounce a state of emergency because of drought from the national to the local level, and to monitor the impacts of drought.

SO3-2 Trends in the proportion of the population exposed to drought

Drought exposure indicator

Exposure is defined in terms of the number of people who are exposed to drought as calculated from the SO3-1 indicator data.

SO3-2.T1: National estimates of the percentage of the total population within each drought intensity class as well as the total population count and the proportion of the national population exposed to drought regardless of intensity.

Reporting year	Non-exposed		Mild drought		Moderate drought		Severe drought		Extreme drought		Exposed population	
	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%
2000	0	0.0	95678	1.1	893318	10.3	924397	10.6	6796126	78.0	8 709 519	100.0
2001	7315858	84.0	985517	11.3	321668	3.7	84063	1.0	0	0.0	1 391 248	16.0
2002	5169036	59.4	3388122	38.9	142699	1.6	0	0.0	0	0.0	3 530 821	40.6
2003	295013	3.4	5714012	65.6	2650913	30.4	51595	0.6	0	0.0	8 416 520	96.6
2004	8709475	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2005	8710329	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2006	8101779	93.2	555938	6.4	32411	0.4	0	0.0	0	0.0	588 349	6.8
2007	8436330	97.1	247954	2.9	0	0.0	0	0.0	0	0.0	247 954	2.9
2008	1198107	13.7	6941116	79.7	574565	6.6	0	0.0	0	0.0	7 515 681	86.3
2009	8274214	94.9	441255	5.1	0	0.0	0	0.0	0	0.0	441 255	5.1
2010	8732063	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2011	0	0.0	37051	0.4	2028631	23.2	4337962	49.6	2342729	26.8	8 746 373	100.0
2012	1382651	15.9	4845721	55.7	2474463	28.4	0	0.0	0	0.0	7 320 184	84.1
2013	5327595	61.1	3363166	38.6	24775	0.3	0	0.0	0	0.0	3 387 941	38.9
2014	8723925	99.9	11048	0.1	0	0.0	0	0.0	0	0.0	11 048	0.1
2015	6158049	70.4	2517865	28.8	71076	0.8	0	0.0	0	0.0	2 588 941	29.6
2016	8770068	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2017	3047636	34.7	4009820	45.6	1734788	19.7	0	0.0	0	0.0	5 744 608	65.3
2018	7559306	85.9	1245684	14.1	0	0.0	0	0.0	0	0.0	1 245 684	14.1
2019	6541396	74.1	2292081	25.9	190	0.0	0	0.0	0	0.0	2 292 271	25.9
2020	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-

SO3-2.T2: National estimates of the percentage of the female population within each drought intensity class.

Reporting year	Non-exposed		Mild drought		Moderate drought		Severe drought		Extreme drought		Exposed female population	
	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%
2000	0	0.0	47364	1.1	442864	10.1	461383	10.5	3435857	78.3	4 387 468	100.0

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Reporting year	Non-exposed		Mild drought		Moderate drought		Severe drought		Extreme drought		Exposed female population	
	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%
2001	3699094	84.3	488945	11.1	159836	3.6	41742	1.0	0	0.0	690 523	15.7
2002	2582067	58.8	1734516	39.5	72123	1.6	0	0.0	0	0.0	1 806 639	41.2
2003	148684	3.4	2883846	65.6	1339354	30.5	25933	0.6	0	0.0	4 249 133	96.6
2004	4399086	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2005	4402238	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2006	4101081	93.3	278266	6.3	16173	0.4	0	0.0	0	0.0	294 439	6.7
2007	4272531	97.2	123184	2.8	0	0.0	0	0.0	0	0.0	123 184	2.8
2008	606073	13.7	3516521	79.7	290905	6.6	0	0.0	0	0.0	3 807 426	86.3
2009	4191832	94.9	224215	5.1	0	0.0	0	0.0	0	0.0	224 215	5.1
2010	4426873	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2011	0	0.0	18393	0.4	1031454	23.2	2219754	50.0	1167510	26.3	4 437 111	100.0
2012	700989	15.9	2441470	55.3	1275519	28.9	0	0.0	0	0.0	3 716 989	84.1
2013	2690062	60.8	1724701	39.0	12422	0.3	0	0.0	0	0.0	1 737 123	39.2
2014	4433931	99.9	5518	0.1	0	0.0	0	0.0	0	0.0	5 518	0.1
2015	3133479	70.5	1278389	28.7	35766	0.8	0	0.0	0	0.0	1 314 155	29.5
2016	4461893	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2017	1522270	34.0	2050327	45.8	903498	20.2	0	0.0	0	0.0	2 953 825	66.0
2018	3829946	85.4	654829	14.6	0	0.0	0	0.0	0	0.0	654 829	14.6
2019	3346660	74.3	1154781	25.7	95	0.0	0	0.0	0	0.0	1 154 876	25.7
2020		-		-		-		-		-	-	-
2021		-		-		-		-		-	-	-

SO3-2.T3: National estimates of the percentage of the male population within each drought intensity class.

Reporting year	Non-exposed		Mild drought		Moderate drought		Severe drought		Extreme drought		Exposed male population	
	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%
2000	0	0.0	48314	1.1	450454	10.4	463014	10.7	3360269	77.7	4 322 051	100.0
2001	3616764	83.8	496572	11.5	161832	3.7	42321	1.0	0	0.0	700 725	16.2
2002	2586969	60.0	1653606	38.4	70576	1.6	0	0.0	0	0.0	1 724 182	40.0
2003	146329	3.4	2830166	65.6	1311559	30.4	25662	0.6	0	0.0	4 167 387	96.6
2004	4310389	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2005	4308091	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

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Reporting year	Non-exposed		Mild drought		Moderate drought		Severe drought		Extreme drought		Exposed male population	
	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%
2006	4000698	93.2	277672	6.5	16238	0.4	0	0.0	0	0.0	293 910	6.8
2007	4163799	97.1	124770	2.9	0	0.0	0	0.0	0	0.0	124 770	2.9
2008	592034	13.8	3424595	79.6	283660	6.6	0	0.0	0	0.0	3 708 255	86.2
2009	4082382	95.0	217040	5.0	0	0.0	0	0.0	0	0.0	217 040	5.0
2010	4305190	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2011	0	0.0	18658	0.4	997177	23.1	2118208	49.2	1175219	27.3	4 309 262	100.0
2012	681662	15.9	2404251	56.1	1198944	28.0	0	0.0	0	0.0	3 603 195	84.1
2013	2637533	61.5	1638465	38.2	12353	0.3	0	0.0	0	0.0	1 650 818	38.5
2014	4289994	99.9	5530	0.1	0	0.0	0	0.0	0	0.0	5 530	0.1
2015	3024570	70.3	1239476	28.8	35310	0.8	0	0.0	0	0.0	1 274 786	29.7
2016	4308175	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2017	1525366	35.3	1959493	45.4	831290	19.3	0	0.0	0	0.0	2 790 783	64.7
2018	3729360	86.3	590855	13.7	0	0.0	0	0.0	0	0.0	590 855	13.7
2019	3194736	73.7	1137300	26.3	95	0.0	0	0.0	0	0.0	1 137 395	26.3
2020		-		-		-		-		-	-	-
2021		-		-		-		-		-	-	-

Qualitative assessment

Interpretation of the indicator

Comments on the exposure assessment methodology: The population of the Republic of Serbia in the majority is not sensitive to drought impacts depending on their location, but impacts are indirect, through availability and price of food. Direct impacts are related to the availability of fresh water and its quality, not necessarily at the location of population settlements (considering the resolution of the assessment). Population distribution change: The distribution of the population (total, and by gender) is well addressed. The Republic of Serbia implemented a population census in 2022. Changes are noted in the migration of the population of cities. This alteration refers to the growth of larger cities compared to smaller ones, which also experienced a loss of population. There is also a decrease in the total population. Nevertheless, the presented assessment is not significantly sensitive to the changes in the total population count and their distribution. Conclusion: Because of the lack of national methodology to monitor multisectoral droughts, and assess risks (including exposure), as explained in SO3-1, the proposed methodology (assessment of exposure by location) is accepted in this report. Here is also valid a comment from SO3-1, that SPI-12 for December is not capable to recognize all drought events in the Republic of Serbia. So, one should bear in mind that SO3-2 is sensitive to data from SO3-1, and all given comments for SO3-1 are applicable to the SO3-2 sub-indicator.

General comments

At this stage, the Republic of Serbia does not have a developed methodology to monitor drought as a multisectoral hazard impacting many aspects of the population activities (directly and/or indirectly). Proposed results are accepted, but future actions related to implementing the National Adaptation Plan (under development) should contribute to a better understanding of the drought impacts and thereby the exposure of the population to the drought.

SO3-3 Trends in the degree of drought vulnerability

Drought Vulnerability Index

SO3-3.T1: National estimates of the Drought Vulnerability Index

Year	Total country-level DVI value (tier 1)	Male DVI value (tiers 2 and 3 only)	Female DVI value (tiers 2 and 3 only)
2000			
2001			
2002			
2003			
2004			
2005			
2006			
2007			
2008			
2009			
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			

Method

Which tier level did you use to compute the DVI?

- Tier 1 Vulnerability Assessment ⓘ
- Tier 2 Vulnerability Assessment ⓘ
- Tier 3 Vulnerability Assessment ⓘ

Qualitative assessment

SO3-3.T2: Interpretation of the indicator

Change in the indicator	Comments

General comments

There are no data given for the DVI in PRAIS. No national methodology exists for the assessment of drought vulnerability. Reasons and plans for future work related to this issue are given under the comments for SO3-1 and SO3-2.

S03 Voluntary Targets

S03-VT.T1

Target	Year	Level of application	Status of target achievement	Comments
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General comments

In the Republic of Serbia, drought is recognized as a national hazard. Assessments of climate change impact on drought frequency and intensity show a significant increase (observed and projected). The measures related to the drought are included in the National program for adaptation to climate change (National Adaptation Plan, NAP, for the period 2023-2030), which is currently under construction and should be adopted in 2023, according to the Law on Climate Change of the Republic of Serbia (adopted in 2021). The relevance of drought and increasing aridity for soil and land degradation is also considered, as well as some other multisectoral impacts (for example, agriculture, water resources, and forestry...). In other words, drought is one of the national threats induced and increased by climate change, with impacts and solutions which require planning with consideration of the nexus concept in addressing related issues. Planned activities should determine national methodology for monitoring drought as a multidimensional hazard and its impacts for recognizing the state of emergency caused by drought and for improvement of the warning systems related to drought. Consequently, improvements in the drought indicator(s) and assessments of vulnerabilities to drought are expected. Initial activities should be implemented in the period 2023-2025 (NAP first Action Plan). Drought should address the issues related to the targets of three UN conventions (UNFCCC, UNCCD and UNCBD), and their implications in the SDGs. Planned activities also consider the integration of increasing risks of drought in other relevant strategic documents. Comments related to other weather hazards which contribute to land degradation: Under climate changing conditions, increasing of extreme precipitation causes a high risk of land and soil degradation in the Republic of Serbia (Soil degradation and climate change in Serbia, UNDP, 2022).

S04-1 Trends in carbon stocks above and below ground

Soil organic carbon stocks

Trends in carbon stock above and below ground is a multi-purpose indicator used to measure progress towards both strategic objectives 1 and 4. Quantitative data and a qualitative assessment of trends in this indicator are reported under strategic objective 1, progress indicator S01-3.

SO4-2 Trends in abundance and distribution of selected species

SO4-2.T1: National estimates of the Red List Index of species survival

Year	Red List Index	Lower Bound	Upper Bound	Comment
2000	0.95015	0.93809	0.95235	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2001	0.94966	0.93812	0.95198	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2002	0.94922	0.9376	0.95167	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2003	0.94924	0.93687	0.95153	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2004	0.94944	0.93697	0.95138	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2005	0.95018	0.93623	0.95124	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2006	0.95103	0.93463	0.95116	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2007	0.95107	0.93201	0.95121	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2008	0.95113	0.93179	0.95202	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2009	0.95117	0.93069	0.95339	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2010	0.95119	0.92973	0.95378	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2011	0.95124	0.92826	0.95506	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2012	0.95127	0.92834	0.95644	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2013	0.95131	0.92627	0.95783	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2014	0.95133	0.92521	0.95976	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2015	0.95135	0.92368	0.96067	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2016	0.95137	0.92196	0.96209	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2017	0.95142	0.91959	0.9633	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database

Year	Red List Index	Lower Bound	Upper Bound	Comment
2018	0.95145	0.91871	0.96596	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2019	0.95148	0.91801	0.96677	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database
2020	0.95149	0.91612	0.96759	Source: SDG Indicator 15.5.1. Series: ER_RSL_LST, https://unstats.un.org/sdgs/dataportal/database

Qualitative assessment

SO4-2.T2: Interpretation of the indicator

Change in the indicator	Drivers: Direct (Choose one or more items)	Drivers: Indirect (Choose one or more items)	Which levers are being used to reverse negative trends and enable transformative change?	Responses that led to positive RLI trends	Comments
Positive				<ol style="list-style-type: none"> 1. Legal & Policy Frameworks 2. Conservation Designation & Planning 3. Research & Monitoring 4. Species Management 5. Land / Water Management 6. Law Enforcement & Prosecution 7. Awareness Raising 8. Education & Training 9. Livelihood, Economic & Moral Incentives 10. Institutional Development 	<p>Since 2010 intensive development of legal and policy framework has contributed to better conservation of species and habitats. The whole process was facilitated within EU accession process. Since 2000 Serbia has ratified all international agreements relevant for biodiversity conservation (CBD, Bern, CMS...) and pursued their implementation. Establishment of ecological network in 2010 and the ongoing development of potential Natura 2000 network has also significantly contributed to conservation of species and habitats. In the past couple of years, biodiversity research and monitoring was significantly intensified mainly through activities related to development of the national ecological network and Natura 2000 network.</p>

General comments

National redlist assessment for birds was published in 2018. The assessment was done according to IUCN criteria. Reference: RADIŠIĆ, D., VASIĆ, V., PUZOVIĆ, S., RUŽIĆ, M., ŠĆIBAN, M., GRUBAČ, B., VUJIĆ, A. eds. (2018): The Red book of the fauna of Serbia III – Birds. Institute for nature conservation of Serbia, University of Novi Sad, Faculty of sciences, Department of biology and ecology and Bird protection and study society of Serbia. Summary of the data for birds: - 255 species assessed - number of species per redlist category: RE-14 CR-15 EN-22 VU-22 NT-19 LC-141 DD-2 NA-20 In 2019 national redlist assessment for animal species was done by Biological Faculty of Serbia which was contracted by the Institute for Nature Conservation of Serbia. Reference: Lakušić D. ed. (2019): Second preliminary red list of selected groups of plants, invertebrates, vertebrates and fungi of Serbia. Center for Biodiversity Informatio. University of Belgrade. Faculty of Biology. Summary of data for mammals- - 76 species assessed - number of species per category: RE-0 CR-3 EN-4 VU-11 NT-12 LC-27 DD-19 NA-0 Summary of data for amphibians- - 21 species assessed - number of species per category: RE-0 CR-0 EN-2 VU-1 NT-8 LC-9 DD-1 NA-0

SO4-3 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type

SO4-3.T1: National estimates of the average proportion of Terrestrial KBAs covered by protected areas (%)

Year	Protected Areas Coverage(%)	Lower Bound	Upper Bound	Comments
2000	16.85	16 .85	16 .85	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2001	19.22	19 .22	19 .22	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2002	19.22	19 .22	19 .22	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2003	19.22	19 .22	19 .22	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2004	19.22	19 .22	19 .22	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2005	20.52	20 .52	20 .52	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2006	20.88	20 .88	20 .88	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2007	20.88	20 .88	20 .88	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2008	20.98	20 .98	20 .98	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2009	20.99	20 .99	20 .99	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2010	20.99	20 .99	20 .99	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2011	20.99	20 .99	20 .99	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2012	21.07	21 .07	21 .07	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2013	22.43	22 .43	22 .43	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2014	24.17	24 .17	24 .17	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2015	26.15	26 .15	26 .15	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2016	26.22	26 .22	26 .22	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2017	26.22	26 .22	26 .22	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2018	27.95	27 .95	27 .95	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database
2019	28.79	28 .79	28 .79	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database

Year	Protected Areas Coverage(%)	Lower Bound	Upper Bound	Comments
2020	28.79	28.79	28.79	Source: SDG Indicator 15.1.2. Series: ER_PDT_TERR, https://unstats.un.org/sdgs/dataportal/database

Qualitative assessment

SO4-3.T2: Interpretation of the indicator

Qualitative Assessment	Comment
Increasing	In the baseline period the Government of Serbia has implemented several international agreements relevant for biodiversity conservation: Convention on Biodiversity in 2002, Bern, CMS and carpathian Convention in 2007. In 2010 an improved Law on nature protection was adopted which has enabled development of protected area network in the country including the ecological network. The Law was developed with the reference to EU Acquis (Habitat and Birds Directives). The first National Biodiversity Strategic Action Plan was adopted in 2011 and one of the goals was an increase of PA coverage. Other national strategic documents also integrated and promoted development of protected area system (e.g. National Spatial Plan from 2018). Development of protected areas, national and N2000 ecological network is also facilitated through the EU accession process in the field of environment and climate change.

General comments

For the calculation of KBA coverage only data for national protected areas. The data do not include the ecological network which was established in 2010. The network is established by bylaw, it is comprised of geographically defined areas and the specific measures for the protection of these areas are defined. Therefore, the network should be considered a protected area/ OECM (UNCBD). The ecological network includes areas of international importance for biodiversity conservation: Important Bird Areas, Important Plant Areas, Emerald sites, Prime Butterfly Areas and Ramsar Sites. Serbia has officially sent the data to WCMC through the OECM database. SDG data should be updated to reflect the actual situation in Serbia. The current network covers ca. 21% of the national territory. All IBA (43) from the 2008 Assessment are completely integrated and covered by the ecological network. Since most of the KBAs in Serbia are IBAs actual coverage is much higher (ca 90%). Serbia has data about the national ecological network as potential OECMs in the VI CBD national report. The data should be updated in the relevant global databases (UNEP-WCMC) to reflect the actual situation in Serbia. GIS data (shp file of the ecological network) are available.

SO4 Voluntary Targets

SO4-VT.T1

Target	Year	Level of application	Status of target achievement	Comments
Percentage of PA coverage	2023	National	Ongoing	Nature Protection Program 2021-2023, General objective 1
Percentage of ecological network coverage	2023	National	Ongoing	Nature Protection Program 2021-2023, General objective 1
Percentage of species and habitats in favorable conservation status	2023	National	Ongoing	Nature Protection Program 2021-2023, Specific objective 1.1

Complementary information

S05-1 Bilateral and multilateral public resources

Tier 1: Please provide information on the international public resources provided and received for the implementation of the Convention, including information on trends.

Trends in international bilateral and multilateral public resources provided

- Up ↑
 Stable ↔
 Down ↓
 Unknown ∞

Trends in international bilateral and multilateral public resources received

- Up ↑
 Stable ↔
 Down ↓
 Unknown ∞

Tier 2: Table 1 Financial resources provided and received

Provided / Received	Year	Total Amount USD	
		Committed	Disbursed / Received
Provided	2016	Committed 0	Disbursed 0
Provided	2017	Committed 0	Disbursed 0
Provided	2018	Committed 0	Disbursed 0
Provided	2019	Committed 0	Disbursed 0
Received	2016	Committed 0	Received 23 338 988 .67
Received	2017	Committed 0	Received 31 214 034 .61
Received	2018	Committed 0	Received 30 377 305 .67
Received	2019	Committed 0	Received 40 755 612 .53
Total resources provided:		0	0
Total resources received:		0	125 685 941 .48

Documentation box

	Explanation
Year	In the report is presented information for the calendar year, and for the amounts received.
Recipient / Provider	Funds were received from the UN and several EU countries. The information we provide is not quite complete.
Title of project, programme, activity or other	The specific areas considered as DLDD activities are related to soil and water protection, forestry, agricultural land, climate change, drought, nature protection, biodiversity, flood control, wastewater treatment, land reclamation and remediation, wildfires, and agricultural activities such as organic agriculture and irrigation. We did not define which activities are directly or indirectly related to DLDD.
Total Amount USD	The average exchange rate of the National Bank of Serbia for the last days of each reporting year was used.

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

	Explanation
Sector	The suggested categories were used and some new ones were added.
Capacity Building	The information was obtained for the institutions/organizations responsible for the implementation of the projects/activities. The information we provided is not quite complete.
Technology Transfer	The information was obtained for the institutions/organizations responsible for the implementation of the projects/activities. The information we provided is not quite complete.
Gender Equality	The information was obtained for the institutions/organizations responsible for the implementation of the projects/activities. The information we provided is not quite complete.
Channel	Mostly bilateral. The information is incomplete.
Type of flow	
Financial Instrument	Mostly grants but we need time to complete this.
Type of support	The specific areas considered as related to DLDD activities are related to soil and water protection, forestry, agricultural land, climate change, drought, nature protection, biodiversity, flood control, wastewater treatment, land reclamation and remediation, wildfires, and agricultural activities such as organic agriculture and irrigation. We did not define which activities are directly or indirectly related to DLDD.
Amount mobilised through public interventions	
Additional Information	All the information is given in the table uploaded to the portal.

General comments

The table for SO5-1 is not quite complete. There is no data on committed amounts. The table is uploaded to the portal. The information about projects, programmes and activities is collected from the Reports on the Government Annual Work Programme, the default data provided by the Convention, and the ISDACON database.

S05-2 Domestic public resources

Tier 1: Please provide information on the domestic public expenditures, including subsidies, and revenues, including taxes, directly and indirectly related to the implementation of the Convention, including information on trends.

Trends in domestic public expenditures and national level financing for activities relevant to the implementation of the Convention

- Up ↑
 Stable ↔
 Down ↓
 Unknown ∞

Trends in domestic public revenues from activities related to the implementation of the Convention

- Up ↑
 Stable ↔
 Down ↓
 Unknown ∞

The Law on Fees for the Use of Public Goods, which includes environmental protection fees, was adopted in 2018. This law introduces fees for the use of public goods, which includes: 1) compensation for the conversion of agricultural land use. 2) fees for changing the purpose and use of forests and forest land: compensation for changing the use of forests and forest land and fees for the use of forests and forest land. 3) fees for water are defined as water: a) fee for water use; b) compensation for extracted river sediment; c) fee for drainage; d) fee for using water facilities and systems; e) compensation for discharged water. 4) fees for environmental protection related to land degradation are: a) fees for using the protected area; b) fees for environmental pollution; c) compensation for the protection and improvement of the environment. Taxes are defined according to the Law on the Republic's administrative taxes.

Domestic expenditures are planned in the annual Budget Law of the Republic of Serbia, which is adopted in the month of December of the current year, for the following year.

Tier 2: Table 2 Domestic public resources

	Year	Amounts	Additional Information
Government expenditures	2016	27 233 501 .39	
Directly related to combat DLDD			
Indirectly related to combat DLDD			
Subsidies			
Subsidies related to combat DLDD			
Government expenditures	2017	36 219 589 .74	
Government expenditures	2018	43 629 538 .57	
Government expenditures	2019	49 786 340 .39	
Total expenditures / total per year			

	Year	Amounts	Additional Information
Government revenues			
Environmental taxes for the conservation of land resources and taxes related to combat DLDD			Agricultural land use change fees are part of the environmental fees shown below. Their total amount for reporting period is 8744945.85 USD. The amounts for each year are: 1455325.59 USD in 2016 2149007.98 USD in 2017 2665169.41 USD in 2018 2475442.87 USD in 2019
Total revenues / total per year			

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

	Year	Amounts	Additional Information
Environmental fees	2016	93 062 381 .71	Environmental fees include: - CO2, NO2 emissions, particulate matter and disposed waste - Trade in protected wild species of flora and fauna - Use of fishing areas - Special fee for protection and improvement of the environment - Environmental pollution - Agricultural land use change - Ozone depleting substances and plastic bags - Products which become special waste streams - Placing the packaging on the market Source: Serbian Environmental Protection Agency, according to the data of the Treasury Administration
Environmental fees	2017	136 497 318 .78	Environmental fees include: - CO2, NO2 emissions, particulate matter and disposed waste - Trade in protected wild species of flora and fauna - Use of fishing areas - Special fee for protection and improvement of the environment - Environmental pollution - Agricultural land use change - Ozone depleting substances and plastic bags - Products which become special waste streams - Placing the packaging on the market Source: Serbian Environmental Protection Agency, according to the data of the Treasury Administration
Environmental fees	2018	139 879 562 .00	Environmental fees include: - CO2, NO2 emissions, particulate matter and disposed waste - Trade in protected wild species of flora and fauna - Use of fishing areas - Special fee for protection and improvement of the environment - Environmental pollution - Agricultural land use change - Ozone depleting substances and plastic bags - Products which become special waste streams - Placing the packaging on the market Source: Serbian Environmental Protection Agency, according to the data of the Treasury Administration
Environmental fees	2019	122 473 326 .94	Environmental fees include: - CO2, NO2 emissions, particulate matter and disposed waste - Trade in protected wild species of flora and fauna - Use of fishing areas - Special fee for protection and improvement of the environment - Environmental pollution - Agricultural land use change - Ozone depleting substances and plastic bags - Products which become special waste streams - Placing the packaging on the market Source: Serbian Environmental Protection Agency, according to the data of the Treasury Administration
Total revenues / total per year			

Documentation box

	Explanation
Government expenditures	The information about projects, programmes and activities is collected from the Reports on the Government Annual Work Programme and from the data provided by Provincial Secretariat for Urban Planning and Environmental Protection.
Subsidies	No information
Government revenues	Environmental fees shown in the table above are one of environmental economic instruments, aim of which is to promote reduction of environmental pressures by applying the "polluter pays" and "user pays" principles.
Domestic resources directly or indirectly related to combat DLDD	N/A

Has your country set a target for increasing and mobilizing domestic resources for the implementation of the Convention?

Yes

No

General comments

The specific areas considered as DLDD activities are related to soil and water protection, forestry, agricultural land, climate change, drought, nature protection, biodiversity, flood control, wastewater treatment, land reclamation and remediation, wildfires, and agricultural activities such as organic agriculture and irrigation. It was not defined which activities are directly or indirectly related to DLDD.

SO5-3 International and domestic private resources

Tier 1: Please provide information on the international and domestic private resources mobilized by the private sector of your country for the implementation of the Convention, including information on trends.

Trends in international private resources

- Up ↑
- Stable ↔
- Down ↓
- Unknown ∞

Trends in domestic private resources

- Up ↑
- Stable ↔
- Down ↓
- Unknown ∞

Tier 2: Table 3 International and domestic private resources

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2016	Reconstruction and extension of the sewage system and wastewater treatment plant at the petroleum products warehouse in Novi Sad	55 087 .07	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC - Sales and Distribution Department
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2016	Capacity expansion, water treatment and modernization of the Novo Miloševo drilling fluid landfill	461 340	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC - Oilfield Services
2016	Historical pollution remediation project - primary mud pits (10 primary mud pits)	621 341 .39	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC - Exploration and Production Department
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2017	Remediation project of historical pollution - primary mud pits (14 primary mud pits and 1 absorption basin in Jermenovci)	1 095 844 .74	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC - Exploration and Production Department
2018	Continuation of the project of reconstruction of the wastewater treatment plant at the storage of petroleum products in Novi Sad	10 134 .41	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC - Sales and Distribution Department
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2018	Remediation project of historical pollution - primary mud pits (4 primary mud pits)	380 381 .1	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC - Exploration and Production Department
2019	Continuation of the project of reconstruction of the wastewater treatment plant at the storage of petroleum products in Novi Sad	844 097 .25	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC - Sales and Distribution Department
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2019	Historical pollution remediation project - primary mud pits (8 primary mud pits and 1 absorption basin Kikinda)	4 170 629 .55	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC - Exploration and Production Department
2016	Other activities	138 499 .13	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2017	Other activities	877 781 .02	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC
2018	Other activities	1 417 949 .25	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2019	Other activities	1 563 031 .27	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	NIS LLC
2016	Investments in the pollution prevention during the production process	11 106 .45	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Jaffa Ad
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2016	Wastewater quality examination	660 .11	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Simpo A.D. - received by Institute for Public Health Niš
2017	Up to Farm pilot project for disposal of wastewater contaminated with residues of plant protection products	15 133 .85	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Institute Tamiš - Pančevo
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2017	Protective tanks for storing the chemical HCl	2 225 .38	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	CARNEX D.O.O.
2017	Construction/drilling of a monitoring network of piezometers for groundwater quality control	1 816 .06	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	CARNEX D.O.O.
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2017	Installation of impurities separators at the end of the stormwater line	2 274 .61	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	CARNEX D.O.O.
2017	Construction of a protective layer/tank in a warehouse for temporary storage of hazardous waste	1 751 .70	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	CARNEX D.O.O.
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2017	Investments in the prevention of pollution during the production process	20 766 .68	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Jaffa Ad
2017	Wastewater quality examination	1 884 .66	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Simpo A.D. - received by Institute for Public Health Niš
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2018	Development of an irrigation system on an area of 21 ha	9 672 .18	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Institute Tamiš - Pančevo
2018	Protective tank for fuel oil storage tank	2 976 .51	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	CARNEX D.O.O.
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2018	Investments in the prevention of pollution during the production process	26 340 .20	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Jaffa Ad
2018	Wastewater quality examination	3 947 .41	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Simpo A.D. - received by Institute for Public Health Niš
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2018	Investigation of physical and chemical properties of the soil	1 218 .69	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Simpo A.D. - received by Institute for Public Health Niš
2018	Wastewater examination for the dependent factory of children's cribs in Radovnica	207 .75	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Simpo A.D. - received by Institute for Public Health Niš
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2019	Afforestation action	953 .11	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	CARNEX D.O.O.
2019	Investments in the prevention of pollution during the production process	24 833 .60	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Jaffa Ad
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2019	Investigation of physical and chemical properties of the soil	686 .24	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Simpo A.D. - received by Institute for Public Health Niš
2019	Wastewater examination for the dependent factory of children's cribs in Radovnica	727 .04	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Simpo A.D. - received by Institute for Public Health Niš
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2019	Wastewater quality examination	3 659 .98	<input type="checkbox"/> Charitable grant <input type="checkbox"/> Commercial loans <input type="checkbox"/> Non-concessional loan <input type="checkbox"/> Private Export <input type="checkbox"/> Credit <input type="checkbox"/> Private Equities <input type="checkbox"/> Private Insurance <input checked="" type="checkbox"/> Other(specify) Own investment funds	Private corporation	Serbia <input type="checkbox"/> Domestic mobilization	Simpo A.D. - received by Institute for Public Health Niš
Total		11 768 958 .39				
Total per year 2016:		1 288 034 .15				
Total per year 2017:		2 019 478 .7				
Total per year 2018:		1 852 827 .5				
Total per year 2019:		6 608 618 .04				

Please provide methodological information relevant to data presented in table 3

The requests in tabular form were sent to the NIS (Petroleum Industry of Serbia) and Chamber of Commerce of the Republic of Serbia in order to collect all relevant information. Trends in domestic private resources are up for the information elaborated. The information is incomplete as there is an assumption that there is much more work on DLDD in the private sector, so the general trend is set to be unknown.

Has your country taken measures to encourage the private sector as well as non-governmental organizations, foundations and academia to provide international and domestic resources for the implementation of the Convention?

Each year, the Ministry of Environmental Protection allocates the funds and announces a call for proposals for civil society organizations (CSO) for the domain of environmental protection which includes soil and water protection and climate change, as well. The annual budgets are presented under sub-indicator 5-2. Through this investment, the country encourages CSO to give their contribution to environmental protection. Also, in 2018 the Ministry of Environmental Protection allocated the funds and announced a call for proposals for academia and scientific organizations for the domain of environmental protection.

General comments

S05-4 Technology transfer

Tier 1: Please provide information relevant to the resources provided, received for the transfer of technology for the implementation of the Convention, including information on trends.

Trends in international bilateral and multilateral public resources provided

- Up ↑
- Stable ↔
- Down ↓
- Unknown ↻

Trends in international bilateral and multilateral public resources received

- Up ↑
- Stable ↔
- Down ↓
- Unknown ↻

Information on technology transfer was not available for all the projects (see Table SO5-1). It was very difficult to collect information about the exact amount of funds dedicated directly to the technology transfer. The collection of information for this sub-indicator is time-consuming and overpasses the time span for the preparation of this report. One of the examples is the 2017/2018 project "Supporting the Western Balkan Region in implementation of EU Environmental Obligations and MEAs through Strengthening of Institutional Framework and Capacity Building" funded by the (former) Italian Ministry of Environment, Land and Sea as a contribution to the larger GEF-funded project intervention, technology transfer was reflected in the development of the national Cadaster of Contaminated Sites as a dedicated module within SEPA IT reporting platform, along with specialized trainings at the national and local level for the usage of the module, development of rulebook/manual for reporting and preparation of Site Characterization Plans (i.e. plans for detailed investigation), based on successful application and best practices from across Europe.

Tier 2: Table 4 Resources provided and received for technology transfer measures or activities

Provided Received	Year	Title of project, programme, activity or other	Amount	Recipient Provider	Description and objectives	Sector	Type of technology	Activities undertaken by	Status of measure or activity	Timeframe of measure or activity	Use, impact and estimated results	Additional Information
Total provided:			0	Total received:			0					

Please provide methodological information relevant to data presented in table 4

Include information on underlying assumptions, definitions and methodologies used to identify and report on technology transfer support provided and/or received and/or required. Please include links to relevant documentation.

Please provide information on the types of new or current technologies required by your country to address desertification, land degradation and drought (DLDD), and the challenges encountered in acquiring or developing such technologies.

General comments

The collection of information for this sub-indicator is time-consuming and overpasses the time span for the preparation of this report.

SO5-5 Future support for activities related to the implementation of the Convention

SO5-5.1: Planned provision and mobilization of domestic public and private resources

Please provide information relevant to the planned provision and mobilization of domestic resources for the implementation of the Convention, including information relevant to indicator SO5-2, as well as information on projected levels of public financial resources, target sectors and planned domestic policies.

In the strategic framework of the Republic of Serbia, there are several strategies with action plans which are directly or indirectly related to DLDD measures with planned financial resources for their implementation. Some of the most important policy documents are given below. The strategy of Agriculture and Rural Development of the Republic of Serbia is the umbrella national policy document which further specifies effective sustainable soil management for the period 2014-2024. More information is available at: <https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/strategija/2014/85/1> The Law on Subsidies for Agriculture and Rural Development among others prescribes the following list of subsidies which are directly or indirectly related to DLDD: subsidies for agri-environmental measures, good agricultural practices and environmental protection, subsidies for organic production, subsidies for sustainable use of land, and subsidies for sustainable use of forests. More information is available at: https://www.paragraf.rs/propisi/zakon_o_podsticajima_u_poljoprivredi_i_ruralnom_razvoju.html The Ministry of Agriculture, Forestry and Water Management, Directorate for Agricultural Land, has been allocating funds for the protection, arrangement and use of agricultural land in the territory of the Republic of Serbia (except in the territory of the autonomous provinces) based on the regulation on the programme of protection, arrangement and use of agricultural land which is adopted annually. The Programme defines the type and scope of protection works, arrangement and use of agricultural land and other investments, control of arable soil fertility, land consolidation issues, purchase of new irrigation equipment, and water bore drilling for irrigation purposes. A total sum of approximately 3,160,000.00 USD was planned for the mentioned activities for 2022. Further information for 2022 is available at: <https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/uredba/2022/88/3> The Ministry of Agriculture, Forestry and Water Management, Forest Directorate, has been allocating funds for sustainable development and improvement of forestry based on the annual regulation determining the Annual Programme for the use of funds for sustainable development and improvement of forestry. A planned sum for forest protection, afforestation and forest care amount to approximately 1,280,000.00 USD for 2022. Further information for 2022 is available at: <http://www.minpolj.gov.rs/download/uredba-o-utvrdivanju-godisnjeg-programa-koriscenja-sredstava-za-odrzivi-razvoj-i-unapredjenje-sumarstva-u-2022-godini/> Nature Protection Programme of the Republic of Serbia for the period 2021-2023 includes an Action Plan which among others contains activities, measures, as well as required amounts and timeframe for specific activities. The Ministry of Environmental Protection has been allocating funds to support nature protection in 2023 based on the Regulation on the allocation and use of subsidy funds for nature-protected properties of national interest in 2023. The total planned amount is approximately 3,420,000.00 USD. Further information is available at: <https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/drugiakt/2021/53/1> The water Management Strategy for the territory of the Republic of Serbia until 2034 with the Action Plan for the period 2021 to 2023 is a planning document that determines the long-term directions of water management. The Strategy presents the amounts of resources required for good functioning and development of the water sector in the Republic of Serbia, for the future 10 years. Some of the activities in the water sector are directly or indirectly related to DLDD, such as irrigation, drainage, flood protection, protection of water from pollution, and protection against erosion and torrential floods. The required investments for mentioned measures (excluding operational costs) in the forthcoming 10 years is approximately 60,450,000.00 USD. More information is available at: <https://www.paragraf.rs/propisi/strategija-upravljanja-vodama-u-srbiji-do-2034.html> <http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/drugiakt/2021/79/1/reg> The Waste Management Programme of the Republic of Serbia for the period 2022-2031 determines the measure related to DLDD such as identification, rehabilitation and remediation of contaminated sites. More information is available at: https://www.ekologija.gov.rs/sites/default/files/2022-02/program_upravljanja_otpadom_u_rs_za_period_2022-2031_god_0_2.pdf The Sector for Emergency Management developed an Action Plan for the implementation of the National Disaster Risk Management Program 2017-2020. The objective of the adoption of the National Programme was a development of an adequate, long-term disaster risk management system in the Republic of Serbia which would be the basis for cooperation among different institutions, as well as the basis for their joint work on risk reduction and efficient response to disasters. More information is available at: <https://www.cadri.net/system/files/2021-06/SERBIA-National-Plan-DRR-final-29-02-16-ENG.pdf> Most recently, the Republic of Serbia has adopted Gender Equality Strategy for the period 2021 to 2030, with Action Plan for 2022 and 2023. More information is available at: <https://www.minjppdd.gov.rs/strateska-dokumenta.php>

SO5-5.2: Planned provision and mobilization of international public and private resources

Please provide information relevant to the planned provision and mobilization of international resources for the implementation of the Convention, including information on projected levels of public financial resources and support to capacity building and transfer of technology, target regions or countries, and planned programmes, policies and priorities.

The Republic of Serbia will continue to use multilateral and bilateral funding sources to address DLDD (GEF, EU, bilateral cooperation etc.) and will strive to improve other sectors/activities related to the implementation of the Convention. Also, the Republic of Serbia is set to continue to benefit from IPARD Programme - Instrument for Pre-Accession Assistance for rural development. The Agri-environment-climate measure in the IPARD III Programme for the Republic of Serbia (2021-2027) consists of four operations that aim to enhance cultivation methods adapted to the environment and the features of landscapes, and enhance biodiversity and ecosystem services, promote water conservation and water quality improvement, and contribute to climate change adaptation and mitigation principally by sustainable use of inputs and improvement of soil management. Three of four operations are related to DLDD: crop rotation on arable land, grassing in the inter-row areas in permanent cropland, and sustainable management of meadows and pastures. The total contribution is 16,941,176.47 EUR, of which 85% is EU contribution and 15% is national contribution. More information is available at: <http://www.minpolj.gov.rs/download/IPARD-III-Programme-for-the-Republic-of-Serbia-for-the-period-2021-2027-CLEAN-21-Jan-2022.pdf>

SO5-5.3: Resources needed

Please provide information relevant to the financial resources needed for the implementation of the

Convention, including on the projects and regions which needs most support and on which your country has focused to the greatest extent.

The planned annual or multi-annual resources for various sectors are presented under SO5-5.1: Planned provision and mobilization of domestic public and private resources. Further to recent efforts in addressing DLDD in the policy framework, it needs to be strengthened, and its implementation needs to be enforced. The following activities have been identified as further steps to enhance the implementation of the Convention: - Revision of the LDN national voluntary targets. - Harmonization of afforestation activities in accordance with existing LDN voluntary targets. - Improvement of drought management. - Encourage communication on drought as a risk to land degradation. - Support enhanced monitoring, data collection and research for various drought-related indices. - Promotion of gender equality in the activities related to the implementation of the Convention. - Introduction of gender-balanced tenure security. - Enhancing synergies between three Rio Conventions (UNCCD, CBD, UNFCCC) at the national level. - More efforts need to be done for the restoration of degraded land. - Erosion is one of the main causes of land degradation in the Republic of Serbia. It is necessary to prepare the new soil erosion map and plans for soil protection. - It is necessary to prepare risk maps related to land degradation and drought. - The low level of awareness is one of the biggest obstacles to the proper implementation of SLM practices. It is essential to demonstrate the benefits of improved soil and land management. - Building human and technical capacities is further needed. Capacity building should be conducted for all stakeholders from policymakers to farmers. - It is necessary to harmonize the goals set within the national strategic documents with the requirements set in the new EU Soil Strategy for 2030 and measure progress towards goals. - There is an urgent need to establish inter-institutional arrangements, and protocols in the process of exchange of existing data and access to databases between institutions, and setting in place functional monitoring, reporting and verification (MRV) systems for soils, as well as develop a long-term programme to support the implementation of SLM practices in all sectors acting as drivers of land degradation. - It is recommended to improve the inventory of both contaminated sites and diffuse sources of pollution. This could be addressed through a harmonized approach to improve the quantification of soil pollution risks and impacts, among others. - More efforts need to be done to identify and remediate contaminated sites, together with the establishment of a priority watch list for soil contaminants and prevention of new soil pollution. - Contaminants of emerging concern (PFAS, micro/nanoplastics, additives (biphenyls, phthalates), novel flame retardants, nanoparticles etc.) pose new regulatory challenges and environmental risks. The first step towards understanding the risks and challenges is developing a national soil monitoring programme. - There are still several knowledge gaps regarding soil threats due to a lack of investments in monitoring, research, systematic inventory and reporting obligations. A surveillance and control system is needed in ensuring that soil monitoring is conducted in accordance with the legal requirements and on a regular basis.

General comments

Financial and Non-Financial Sources

Increasing the mobilization of resources:

Would you like to share an experience on how your country has increased the mobilization of resources within the reporting period?

- Yes
- No

Using Land Degradation Neutrality as a framework to increase investment:

From your perspective, would you consider that you have taken advantage of the LDN concept to enhance the coherence, effectiveness and multiple benefits of investments?

- Yes
- No

Improving existing and/or innovative financial processes and institutions

From your perspective, do you consider that your country has improved the use of existing and/or innovative financial processes and institutions?

- Yes
- No

Policy and Planning

Action Programmes:

Has your country developed or helped develop, implement, revise or regularly monitor your national action programme?

- Yes
 No

Policies and enabling environment:

During the reporting period, has your country established or helped establish policies and enabling environments to promote and/or implement solutions to combat desertification/land degradation and mitigate the effects of drought?

- Yes
 No

Synergies:

From your perspective, has your country leveraged synergies and integrated DLDD into national plans related to other MEAs, particularly the other Rio Conventions and other international commitments?

- Yes
 No

Mainstreaming desertification, land degradation and drought:

From your perspective, did your country take specific actions to mainstream, DLDD in economic, environmental and social policies, with a view to increasing the impact and effectiveness of the implementation of the Convention?

- Yes
 No

Drought-related policies:

Has your country established or is your country establishing national policies, measures and governance for drought preparedness and management?

- Yes
 No

Has your country supported other countries in establishing policies, measures and governance for drought preparedness and management, in accordance with the mandate of the Convention?

- Yes
 No

Action on the Ground

Sustainable land management practices:

Has your country implemented or is your country implementing sustainable land management (SLM) practices to address DLDD?

- Yes
 No

Has your country supported other countries in the implementation of SLM practices?

- Yes
 No

Restoration and Rehabilitation:

Has your country implemented or is your country implementing restoration and rehabilitation practices in order to assist with the recovery of ecosystem functions and services?

- Yes
 No

Drought risk management and early warning systems:

Is your country developing a drought risk management plan, monitoring or early warning systems and safety net programmes to address DLDD?

- Yes
 No

Has your country supported other countries in developing drought risk management, monitoring and early warning systems and safety net programmes to address DLDD?

- Yes
 No

Alternative livelihoods:

Does your country promote alternative livelihoods practice in the context of DLDD?

- Yes
 No

Do you consider your country to be taking special measures to engage women and youth in promoting alternative livelihoods?

- Yes
 No

Establishing knowledge sharing systems:

Has your country established systems for sharing information and knowledge and facilitating networking on best practices and approaches to drought management?

- Yes
 No

Do you consider that your country has implemented specific actions that promote women's access to knowledge and technology?

Yes

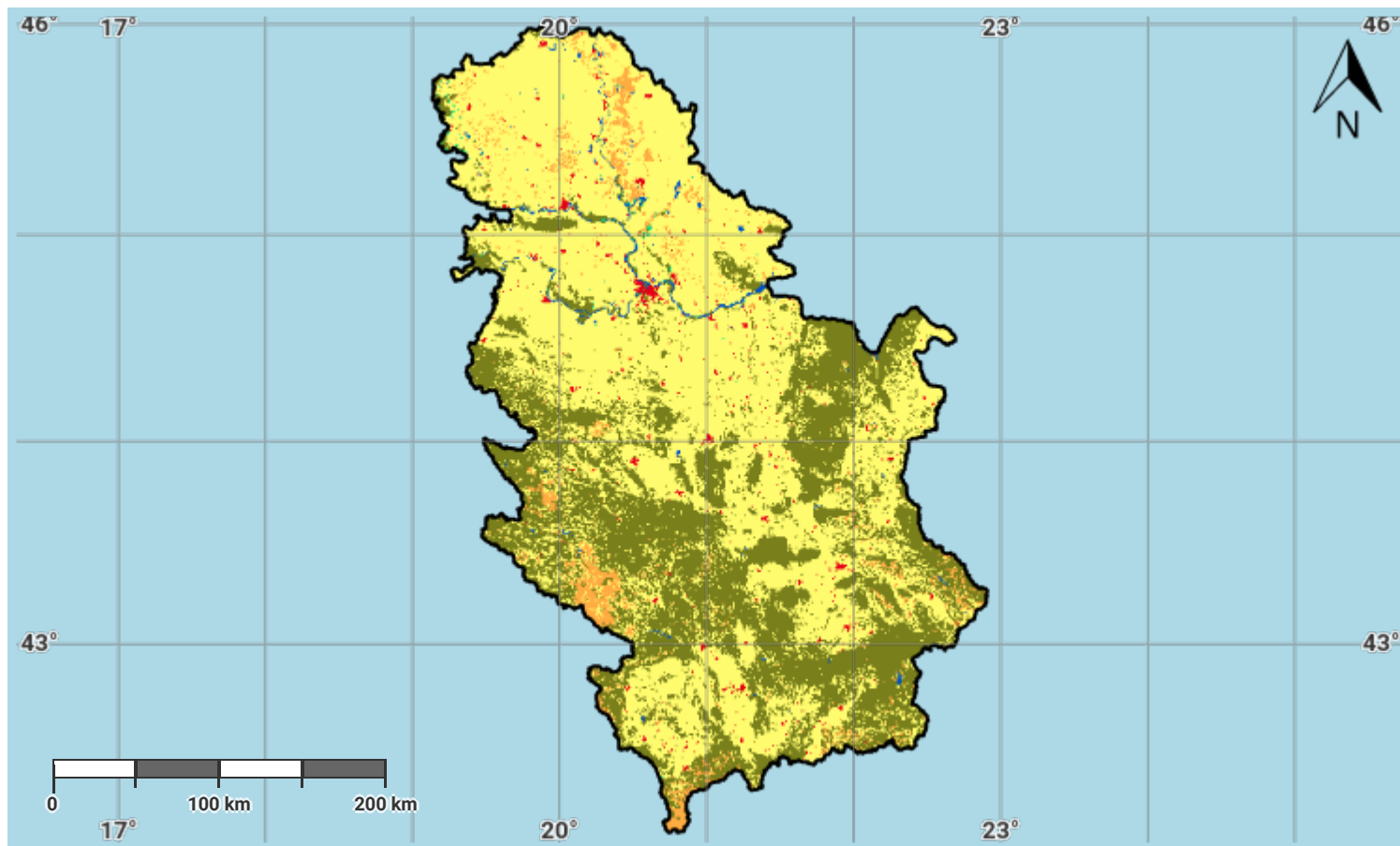
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Other files for Reporting

Serbia - S05-1 recipient	Download	16.0 KB
Table S05-2 Final	Download	20.4 KB
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Serbia – S01-1.M1

Land cover in the initial year of the baseline period



Projection: EPSG:3857 (Web Mercator)

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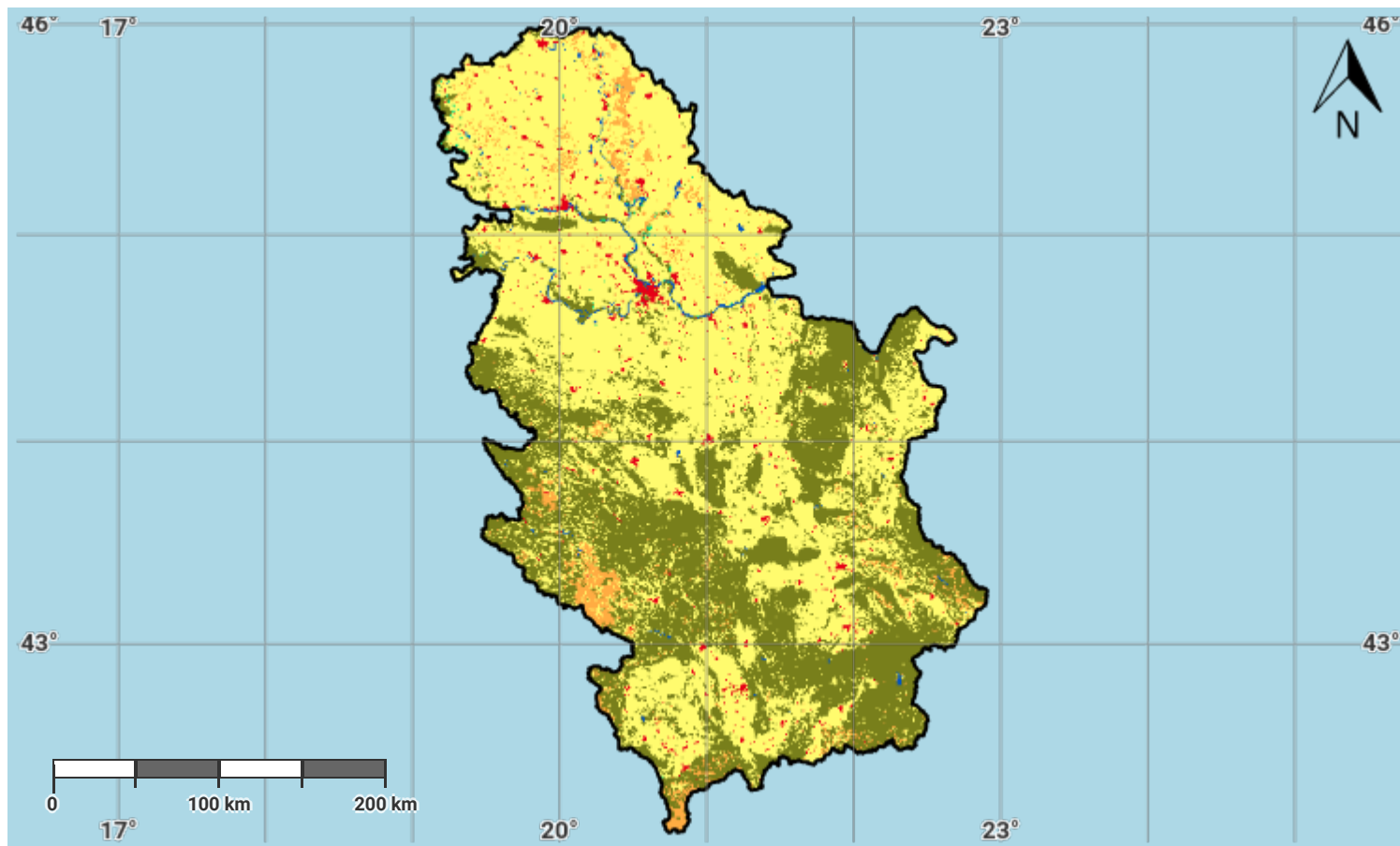
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Serbia – S01-1.M2

Land cover in the baseline year



Projection: EPSG:3857 (Web Mercator)

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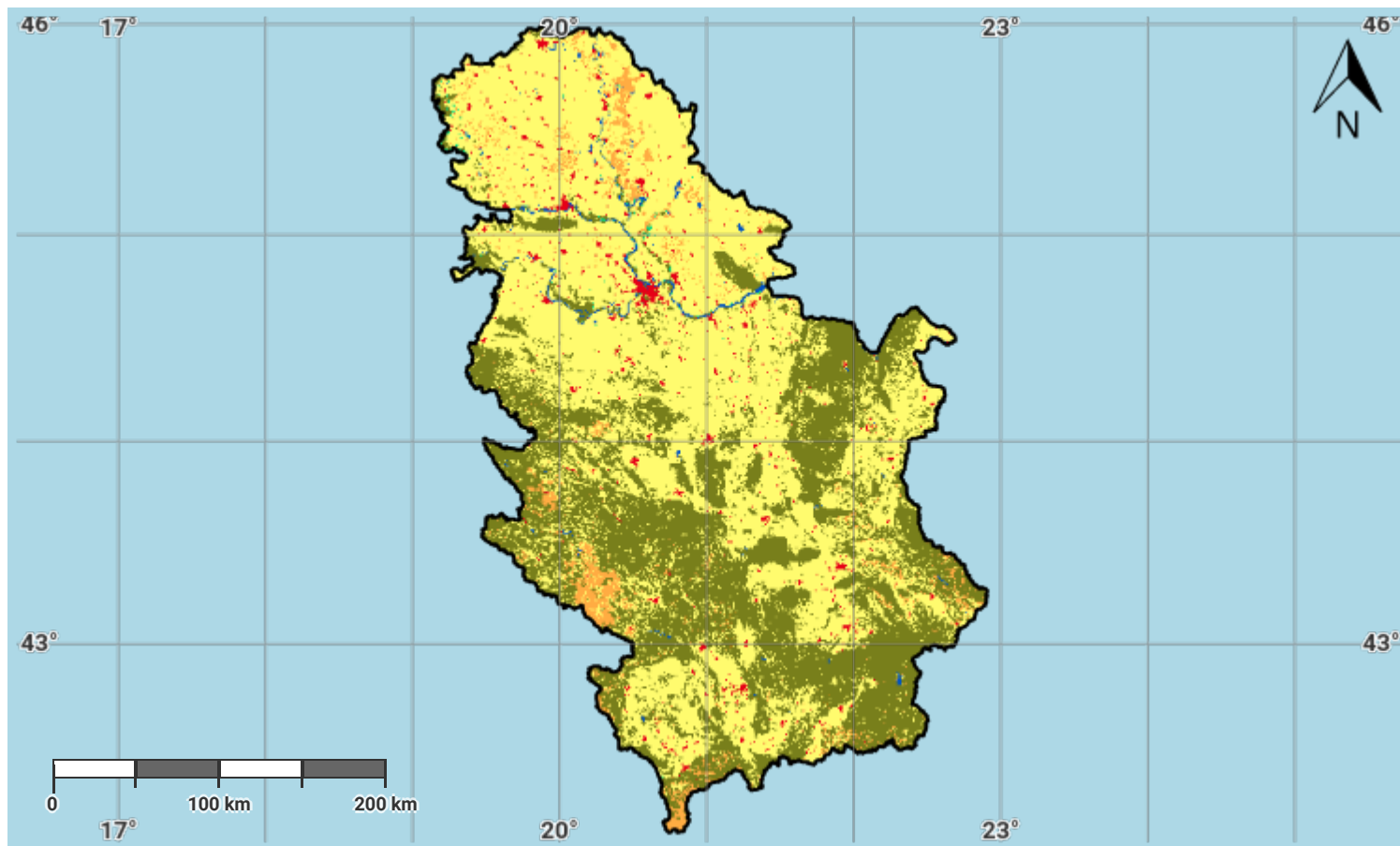
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Serbia – S01-1.M3

Land cover in the latest reporting year



Projection: EPSG:3857 (Web Mercator)

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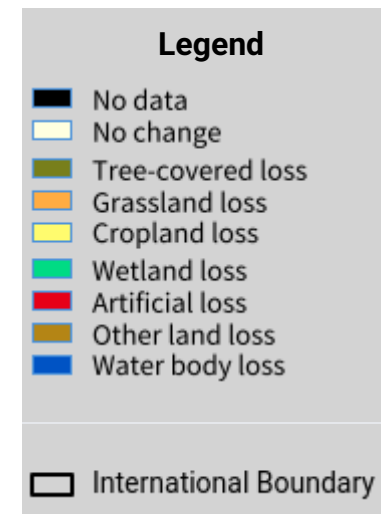
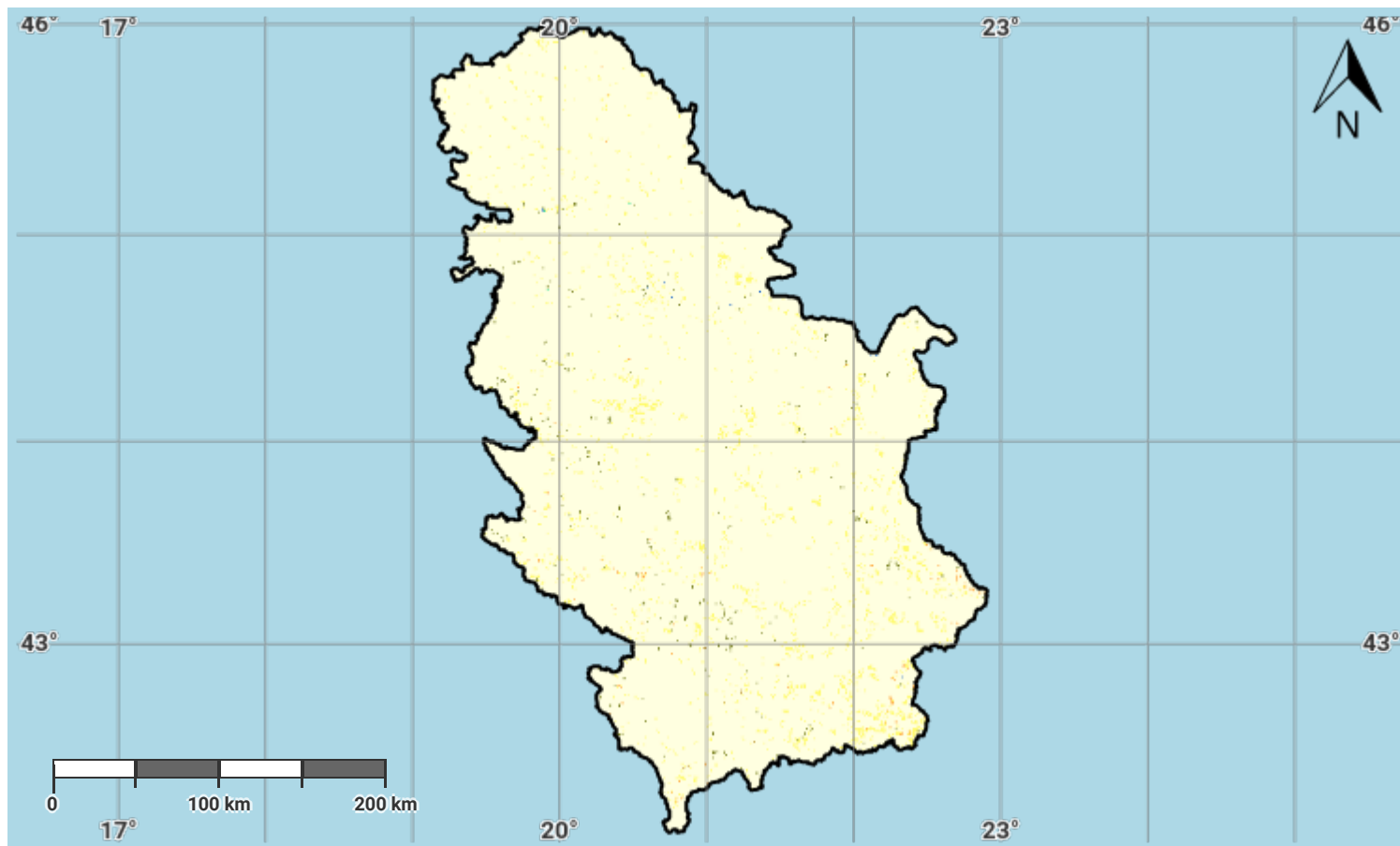
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Serbia – S01-1.M4

Land cover change in the baseline period



Projection: EPSG:3857 (Web Mercator)

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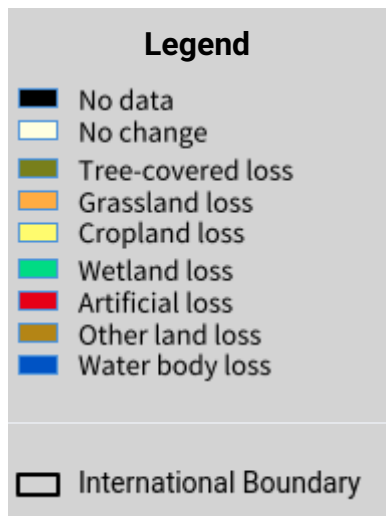
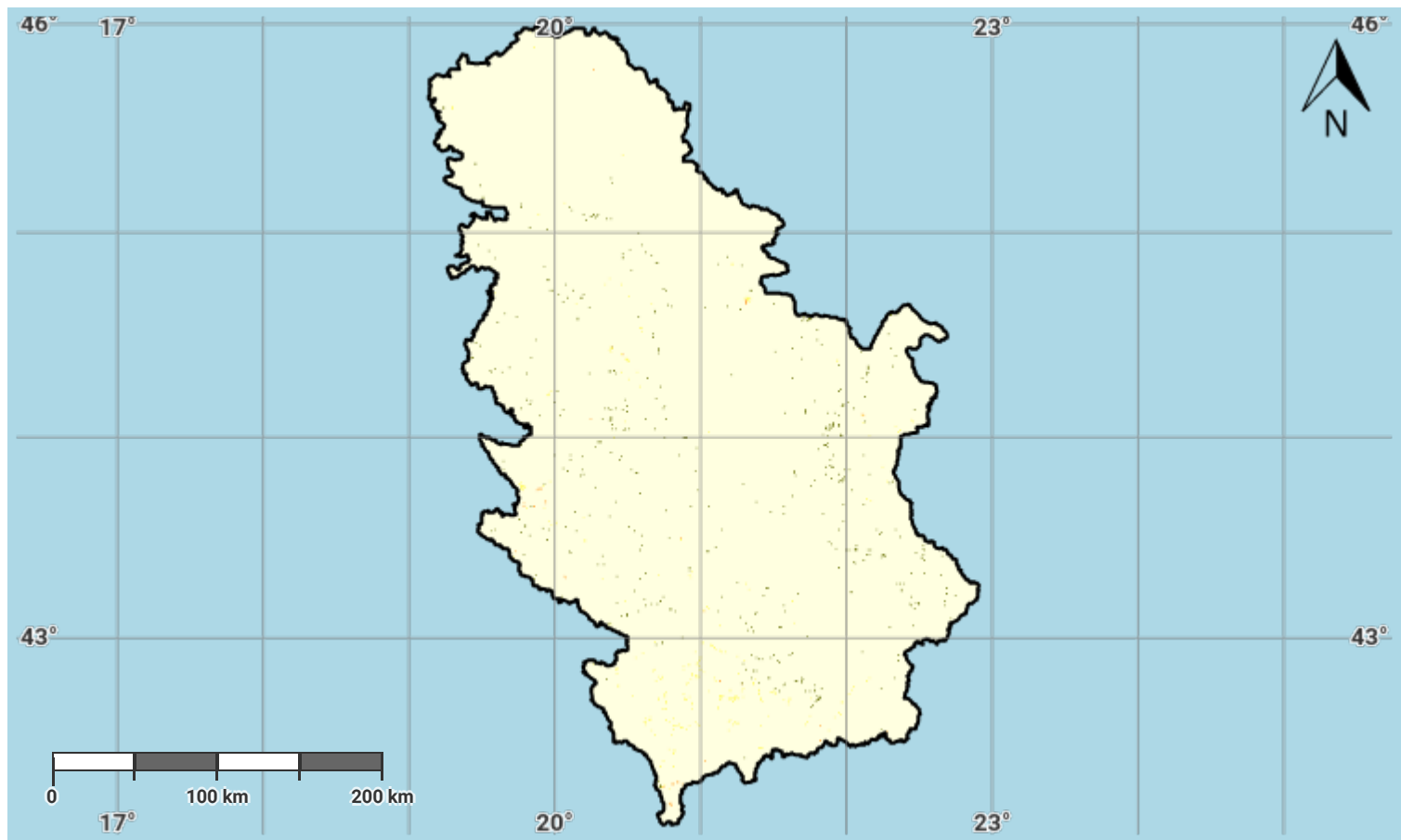
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Serbia – S01-1.M5

Land cover change in the reporting period



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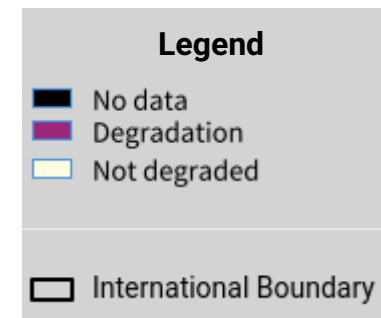
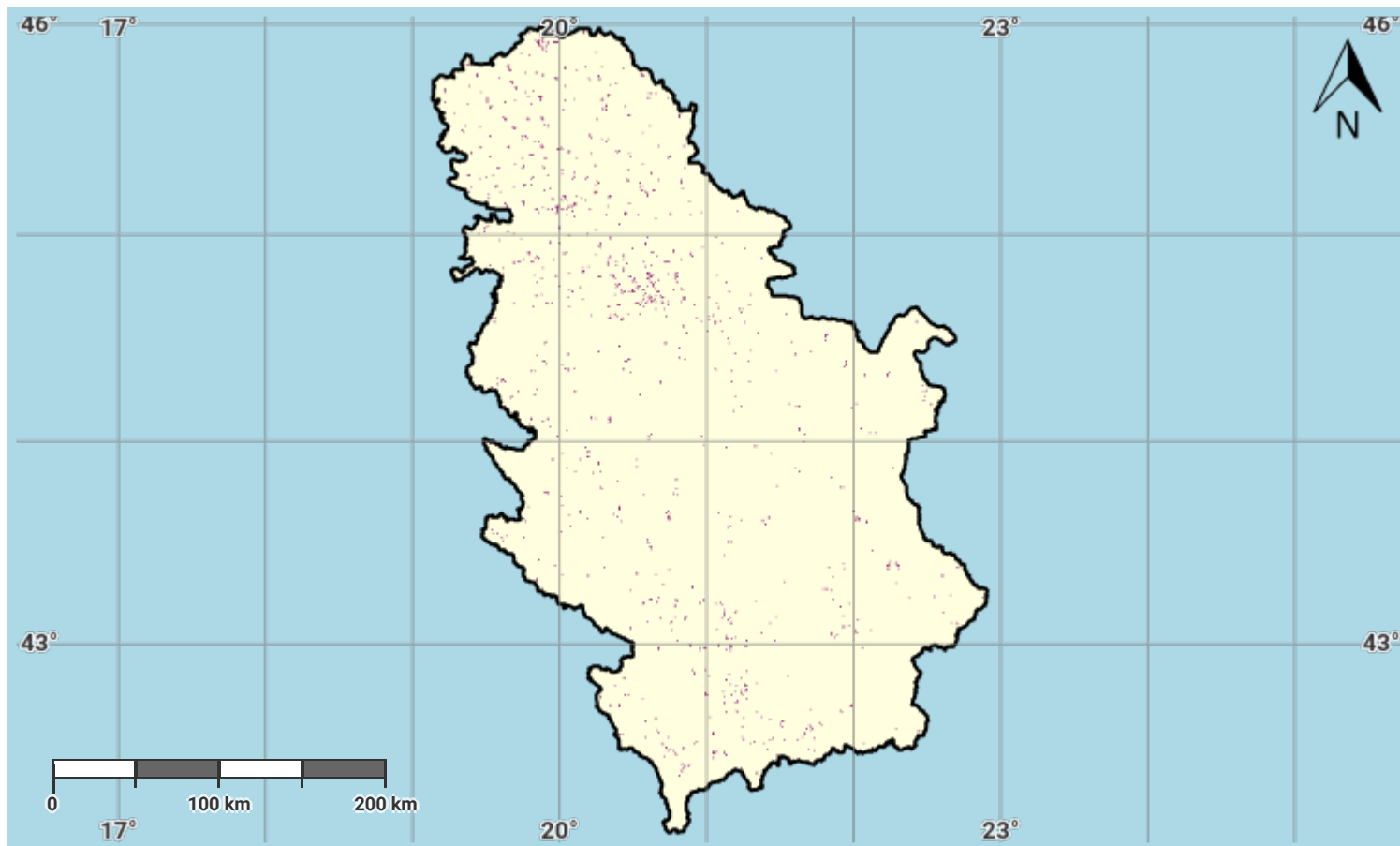
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Serbia – S01-1.M6

Land cover degradation in the baseline period



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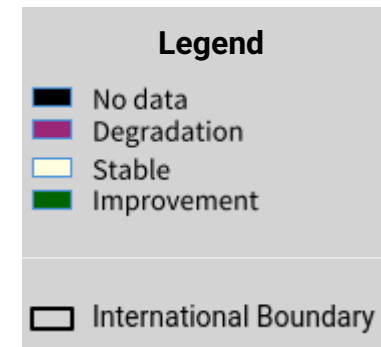
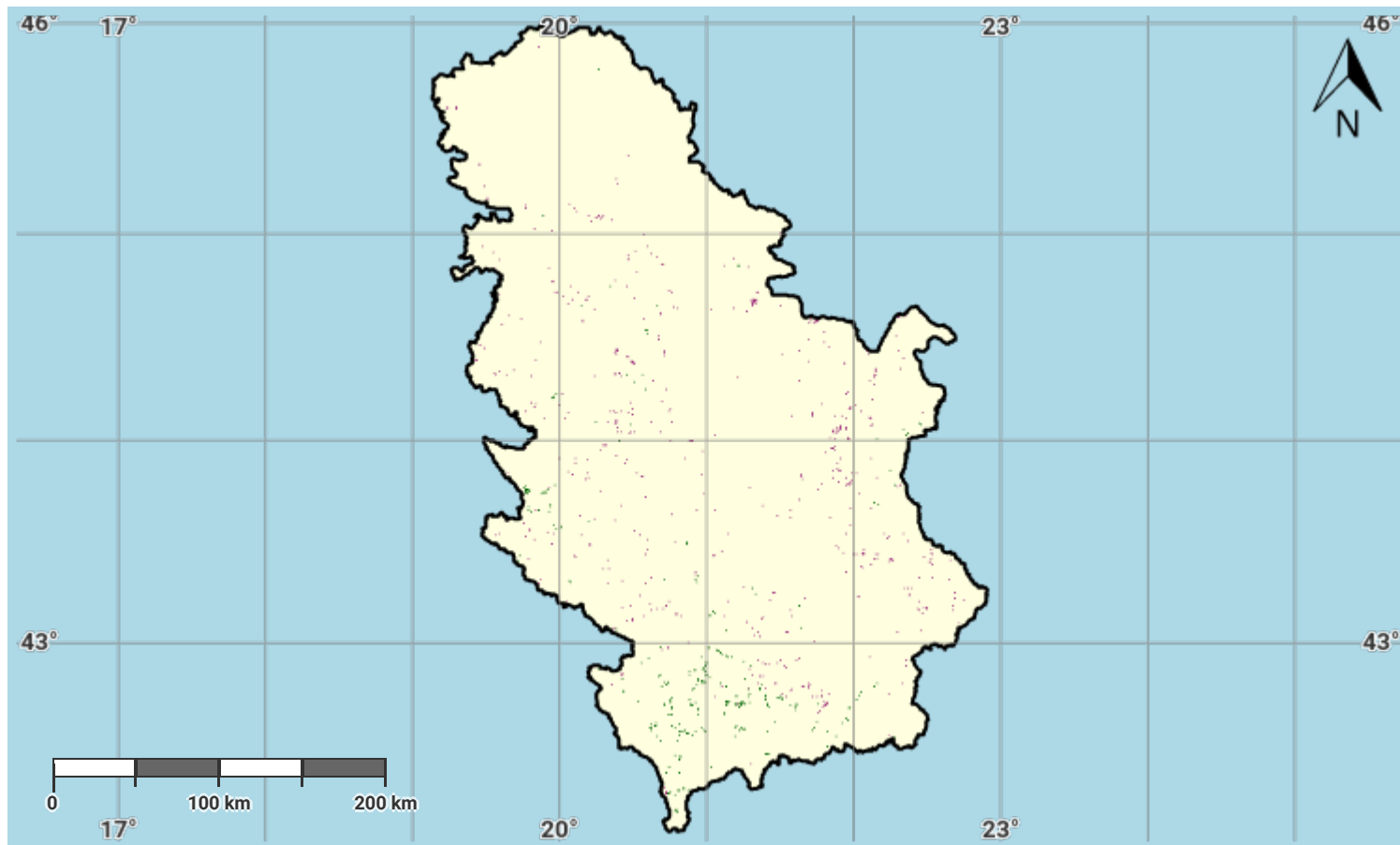
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Serbia – S01-1.M7

Land cover degradation in the reporting period



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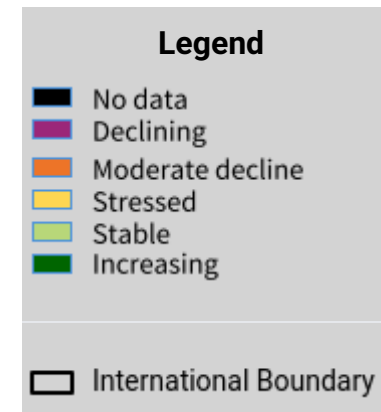
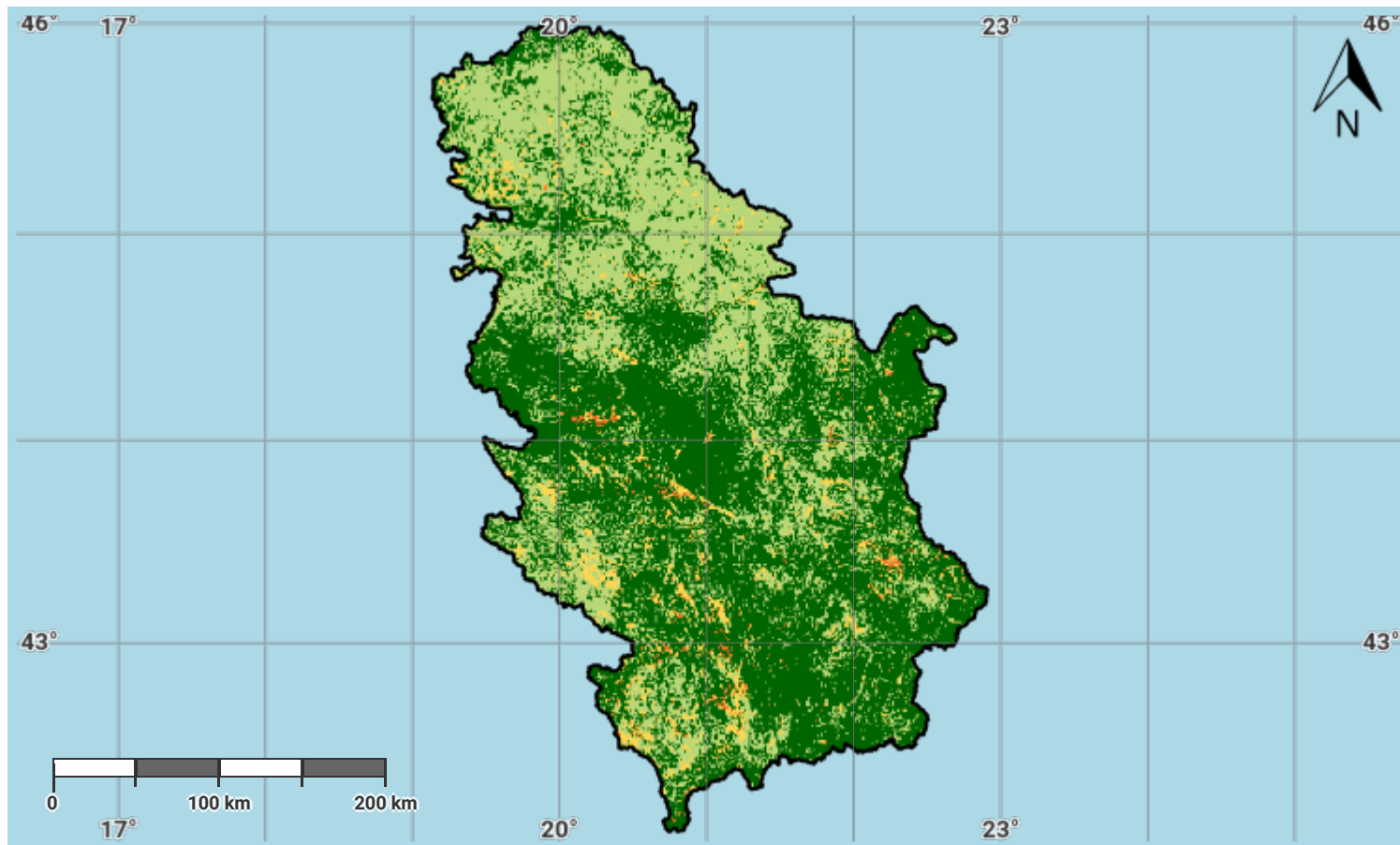
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Serbia – S01-2.M1

Land productivity dynamics in the baseline period



Projection: EPSG:3857 (Web Mercator)

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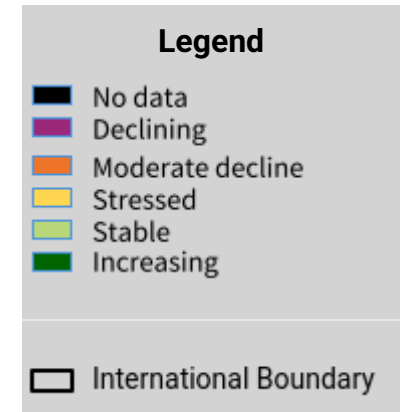
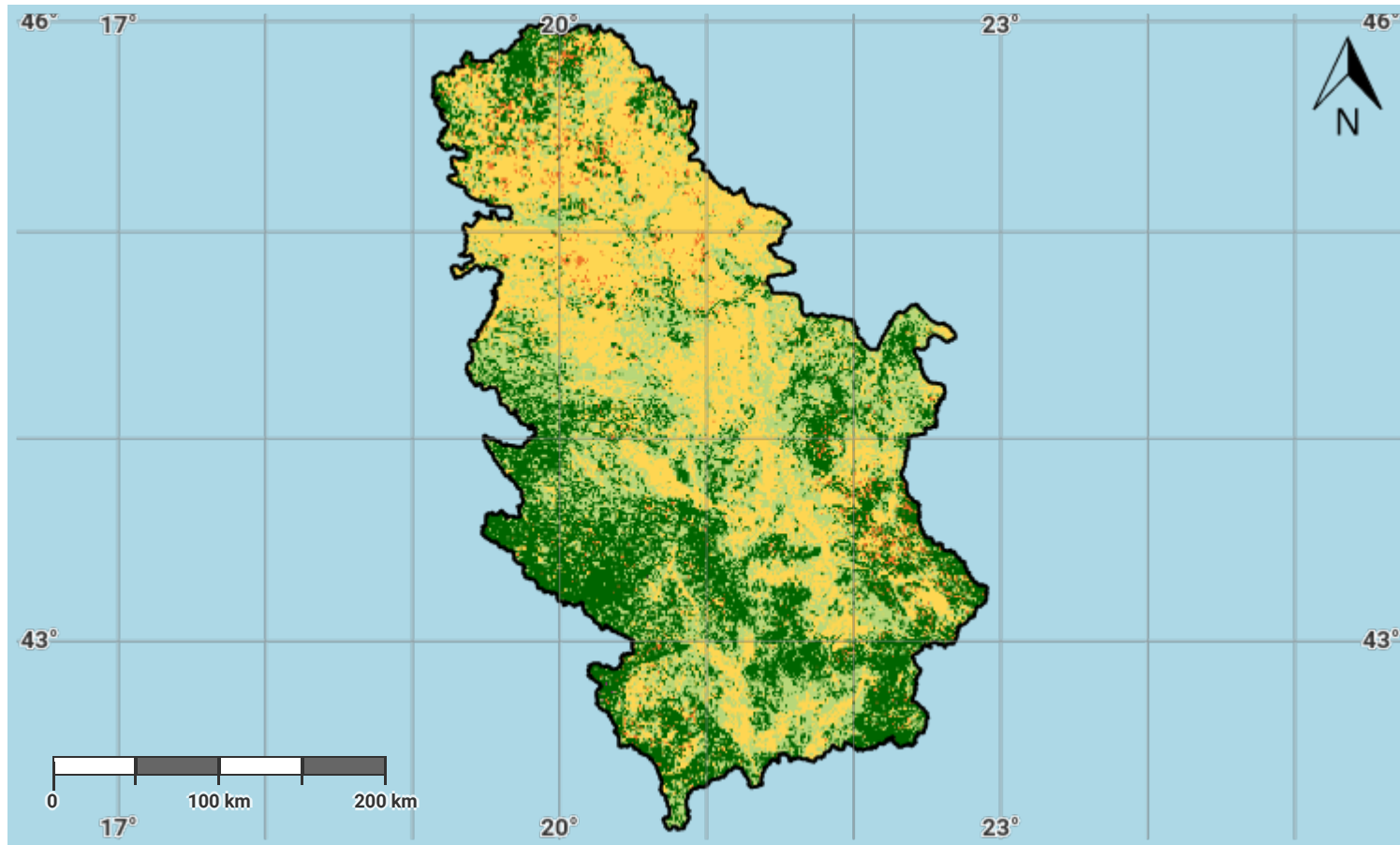
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Serbia – S01-2.M2

Land productivity dynamics in the reporting period



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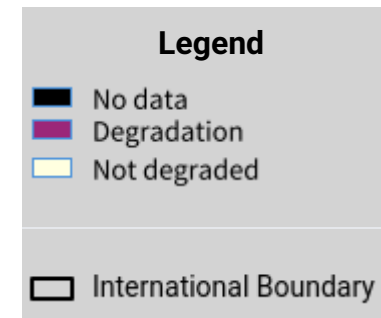
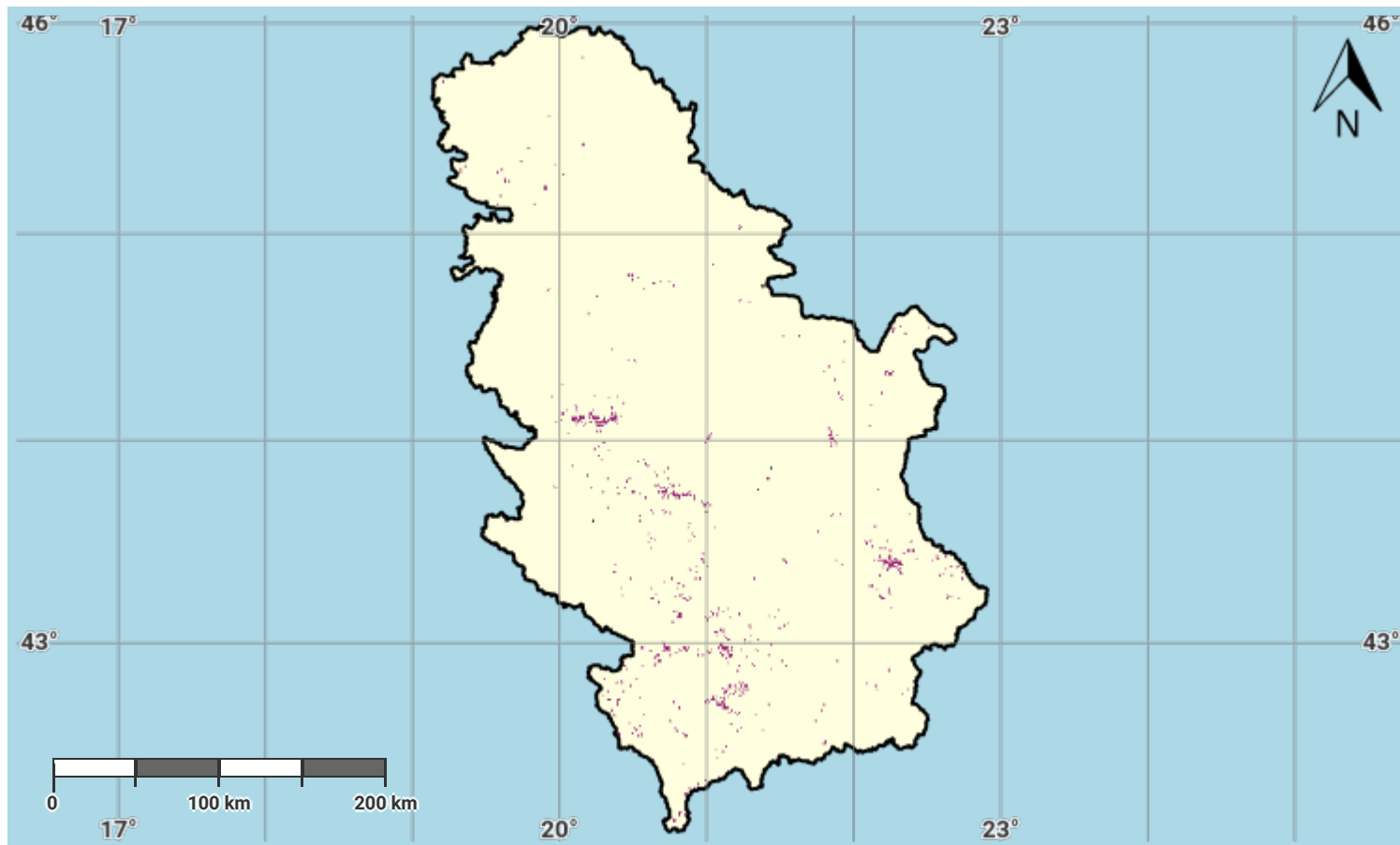
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Serbia – S01-2.M3

Land productivity degradation in the baseline period



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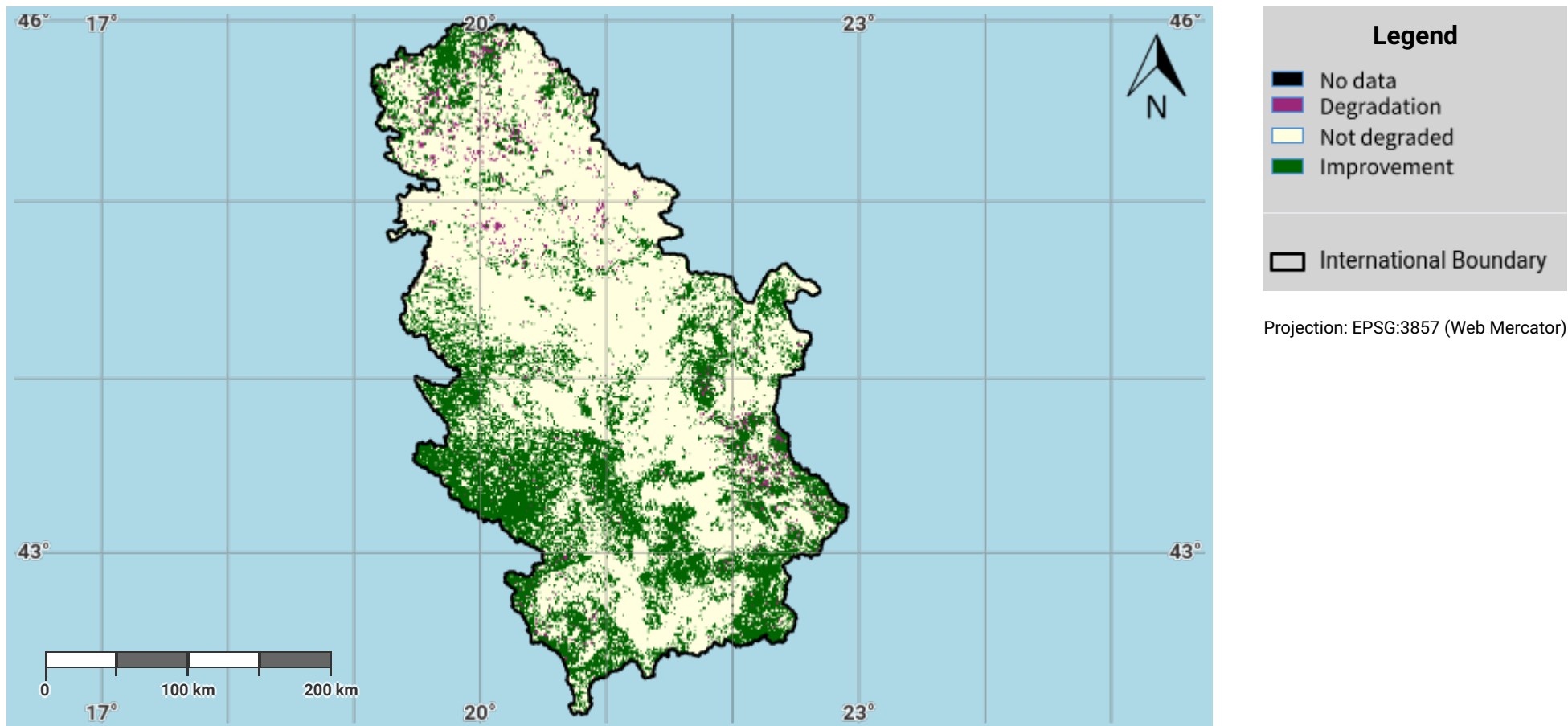
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Serbia – S01-2.M4

Land productivity degradation in the reporting period



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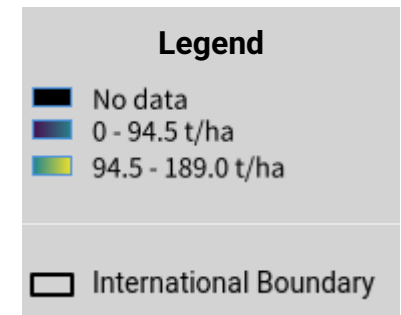
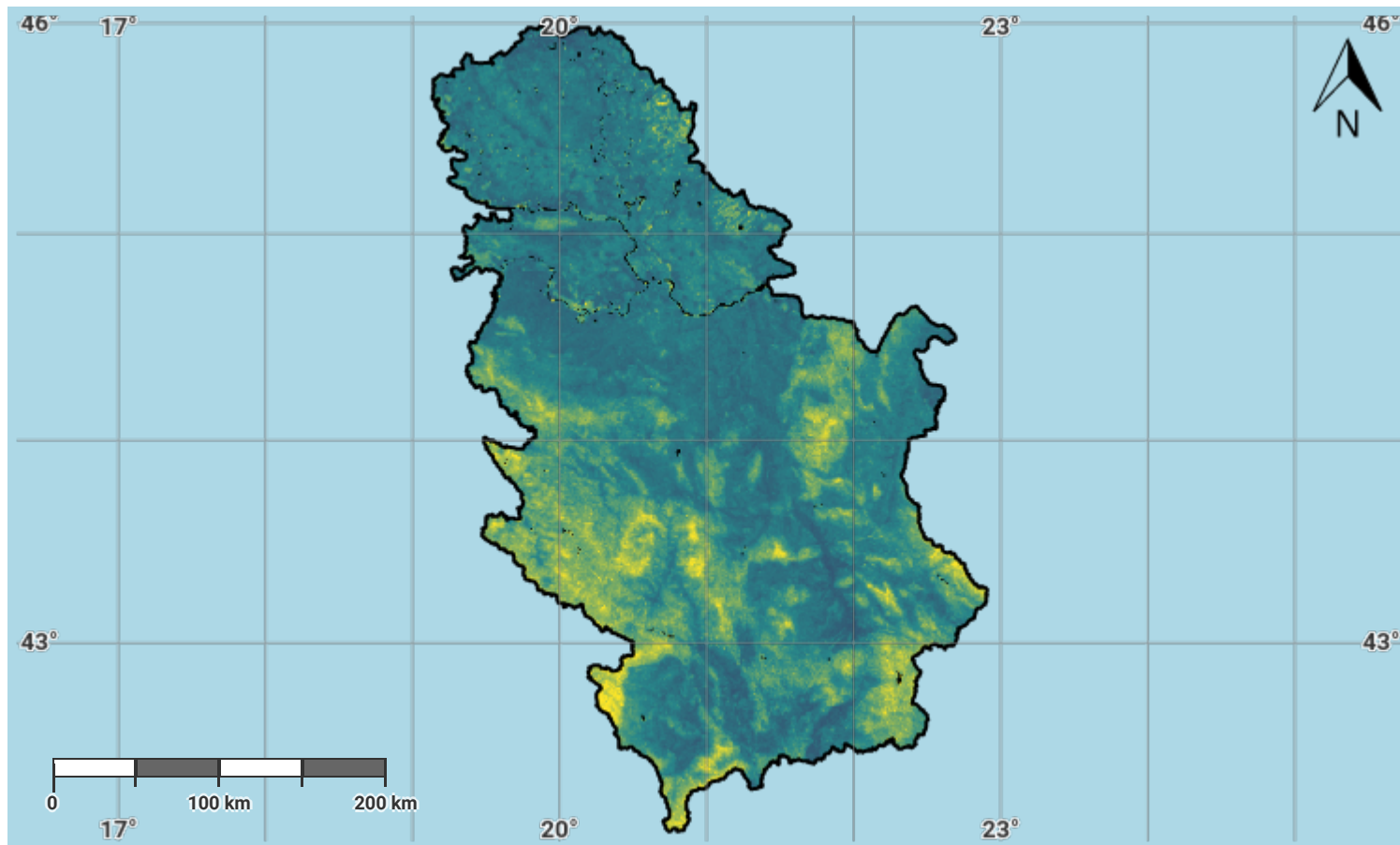
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Serbia – S01-3.M1

Soil organic carbon stock in the initial year of the baseline period



Projection: EPSG:3857 (Web Mercator)

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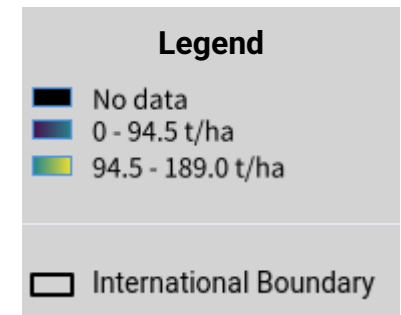
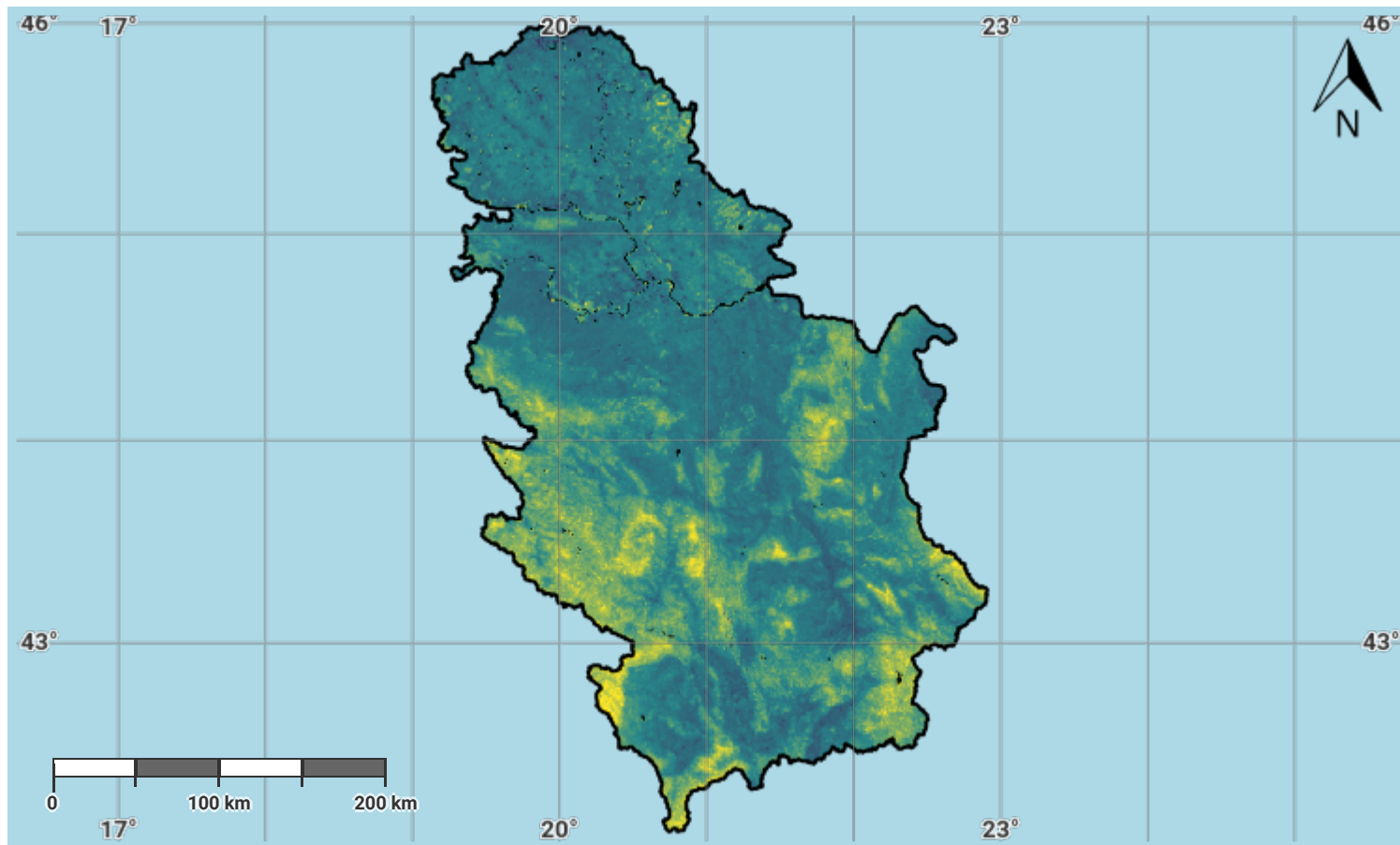
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Serbia – S01-3.M2

Soil organic carbon stock in the baseline year



Projection: EPSG:3857 (Web Mercator)

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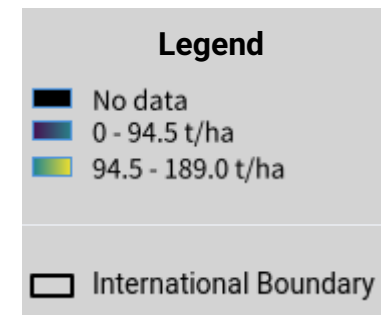
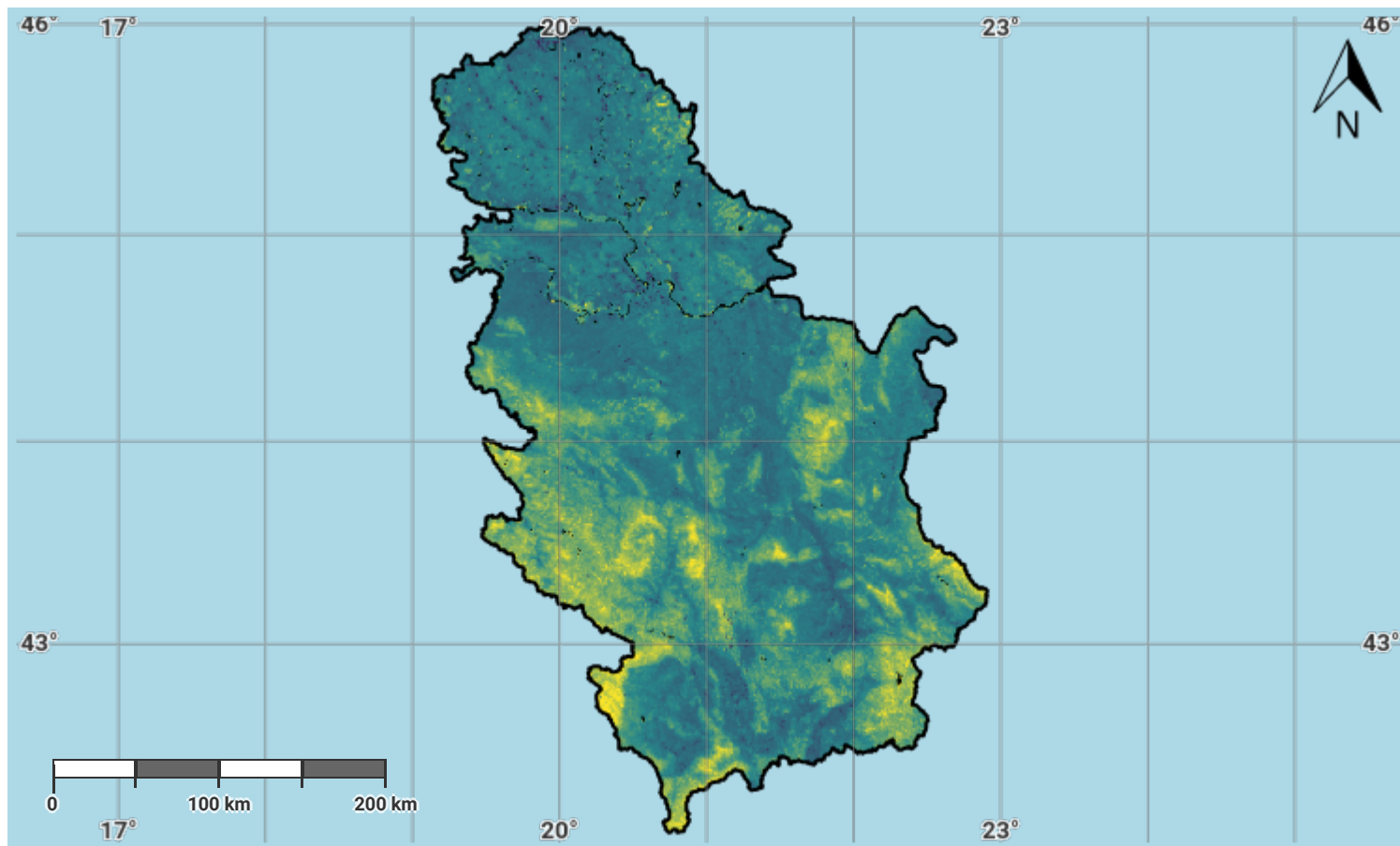
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Serbia – S01-3.M3

Soil organic carbon stock in the latest reporting year



Projection: EPSG:3857 (Web Mercator)

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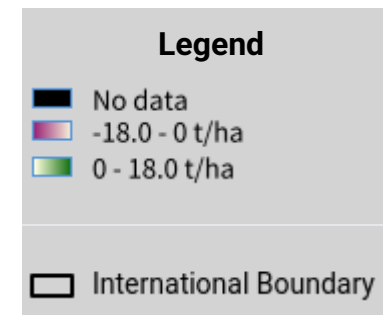
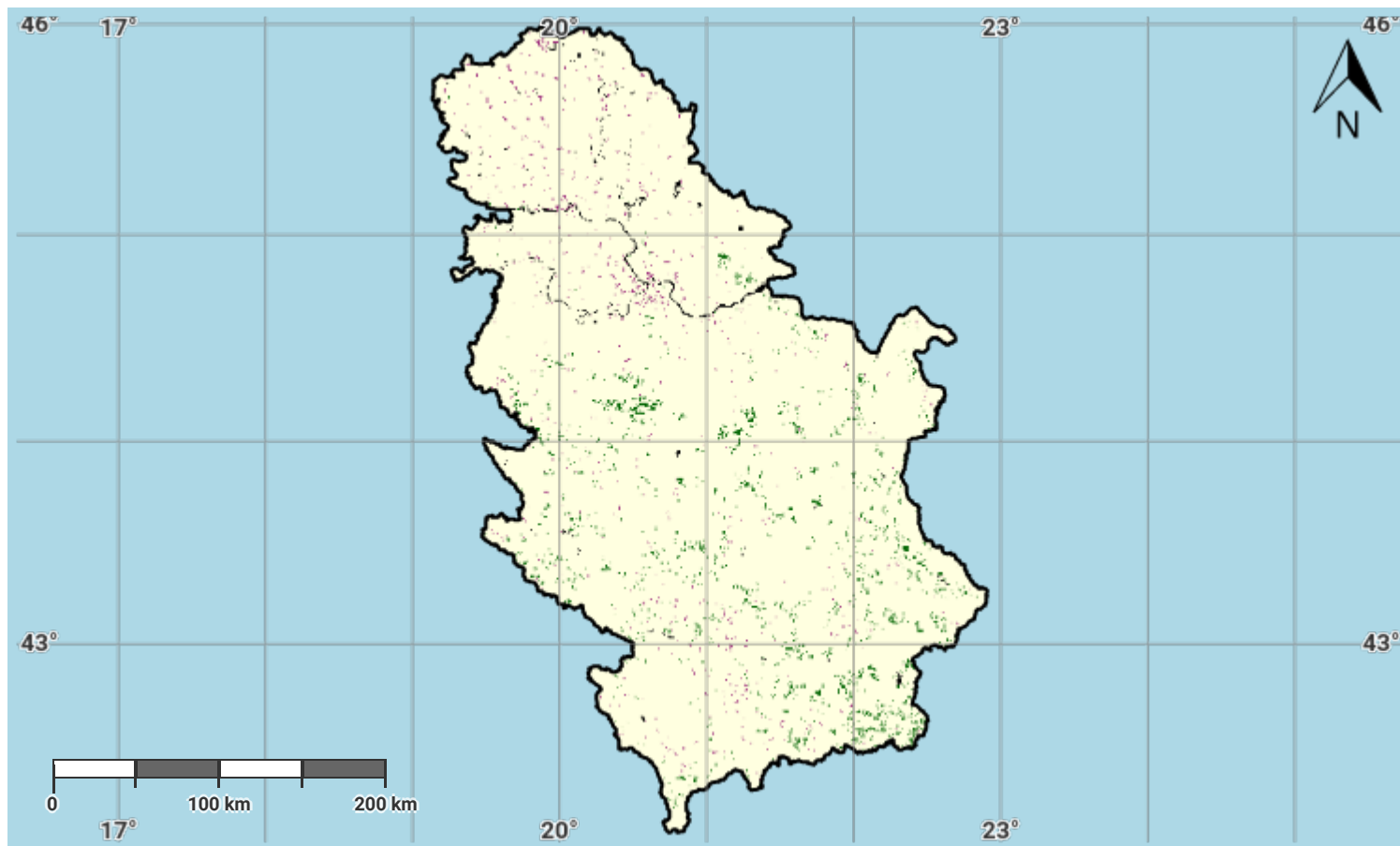
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Serbia – S01-3.M4

Change in soil organic carbon stock in the baseline period



Projection: EPSG:3857 (Web Mercator)

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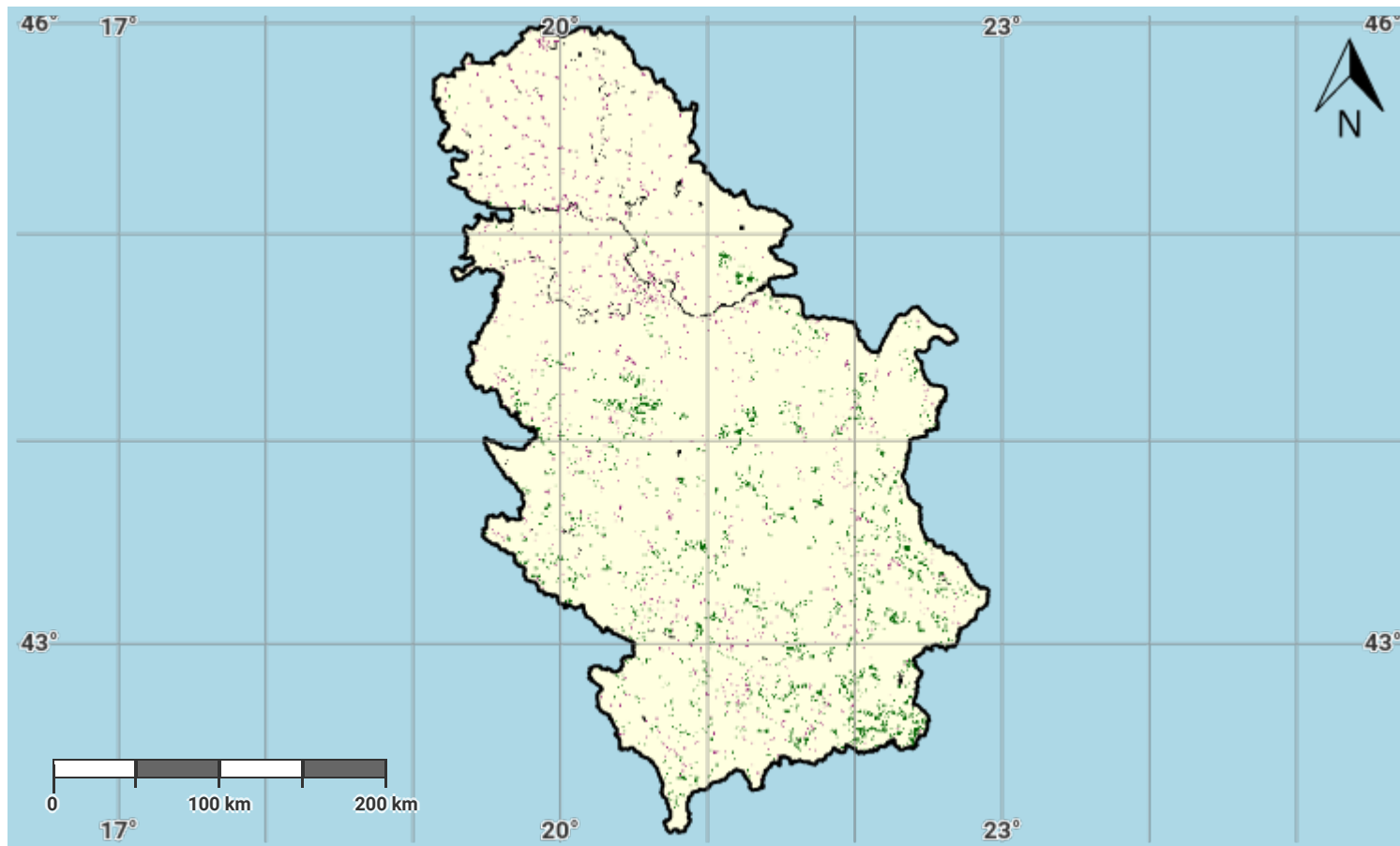
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Serbia – S01-3.M5

Change in soil organic carbon stock in the reporting period



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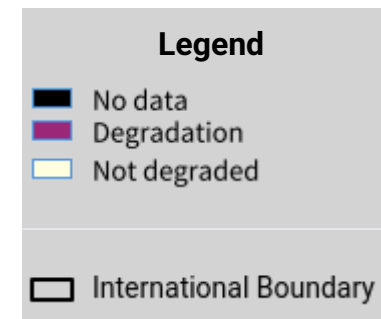
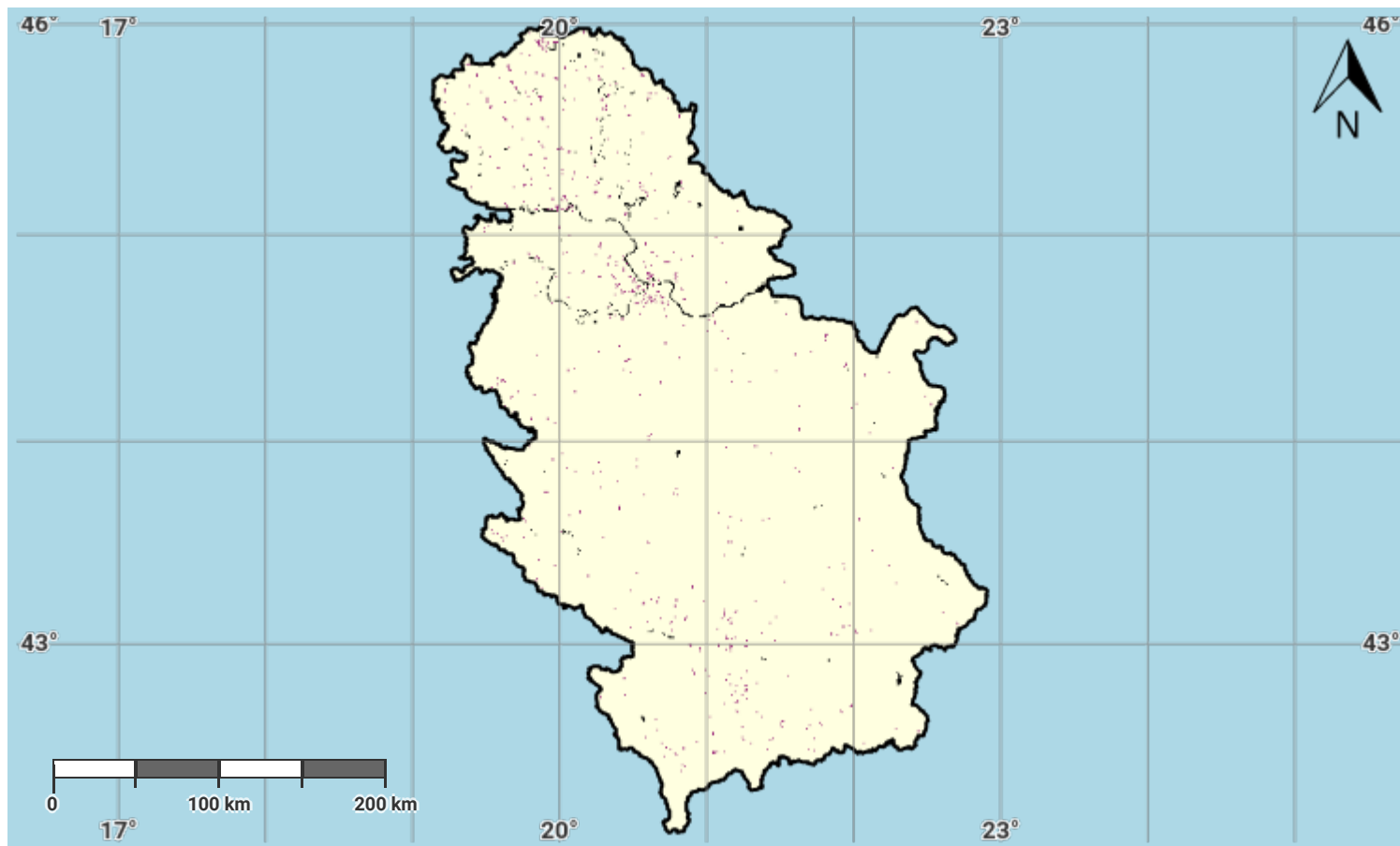
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Serbia – S01-3.M6

Soil organic carbon degradation in the baseline period



Projection: EPSG:3857 (Web Mercator)

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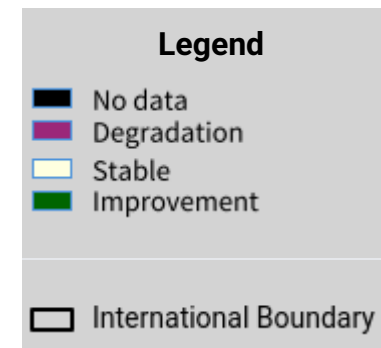
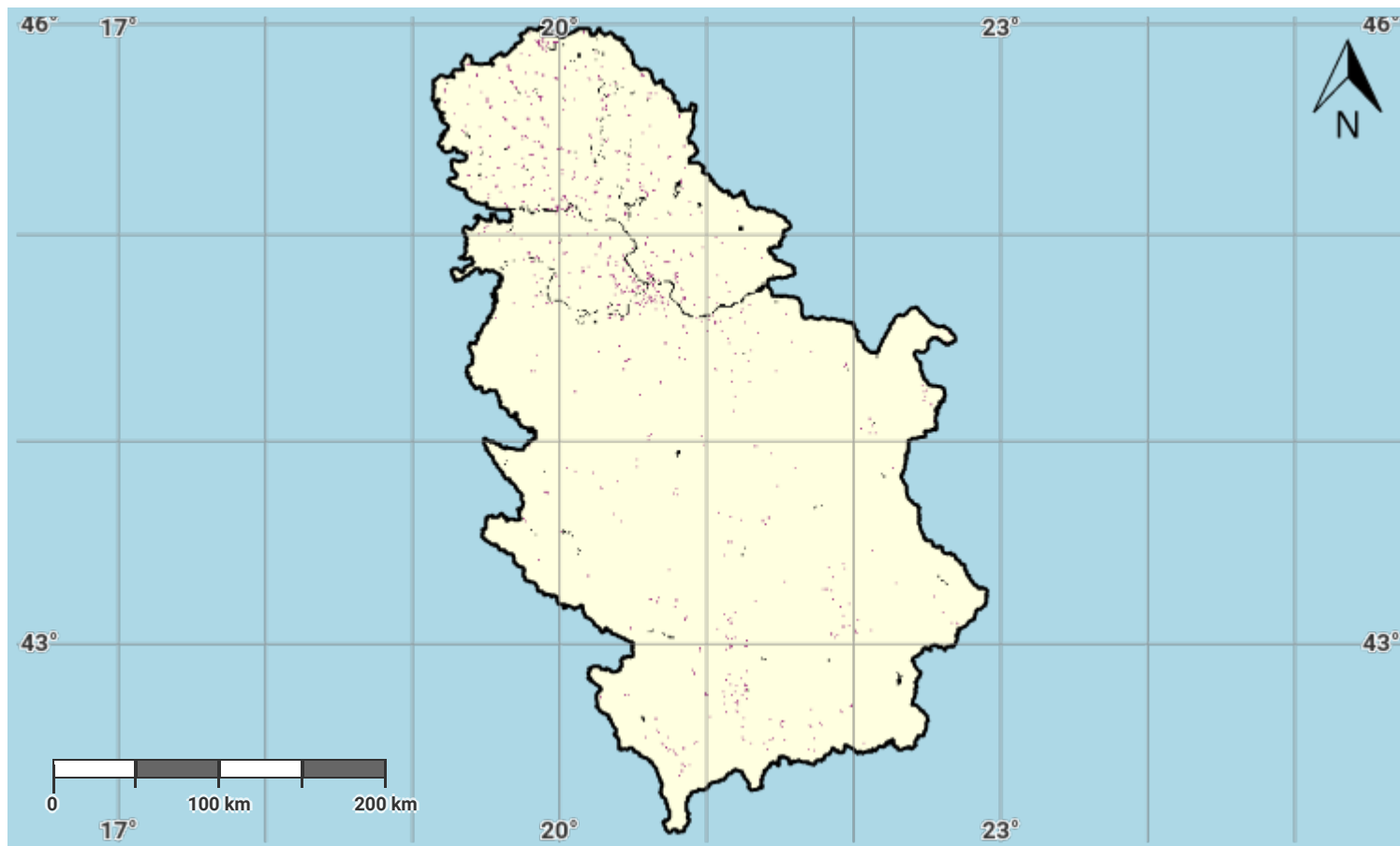
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Serbia – S01-3.M7

Soil organic carbon degradation in the reporting period



Projection: EPSG:3857 (Web Mercator)

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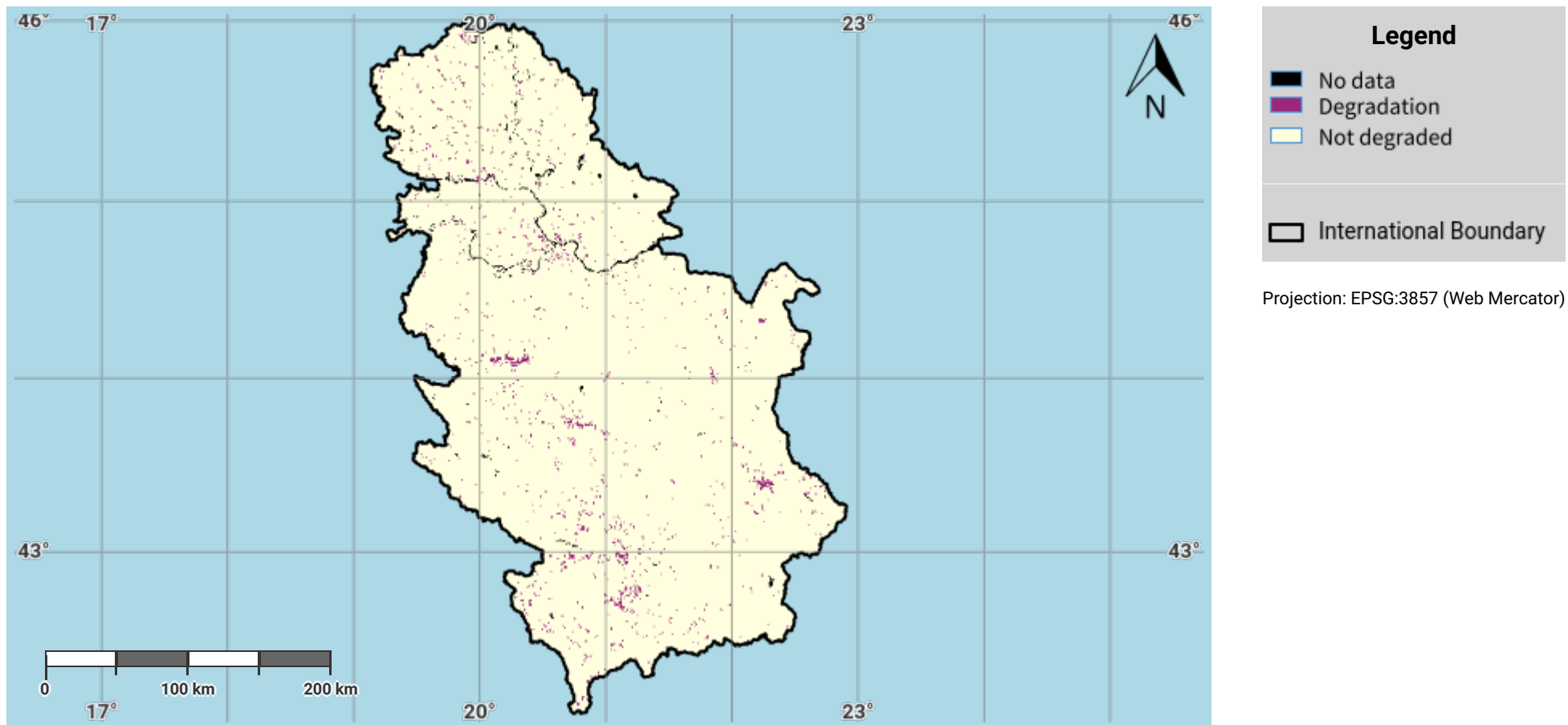
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Serbia – S01-4.M1

Proportion of land that is degraded over total land area (SDG Indicator 15.3.1) in the baseline period



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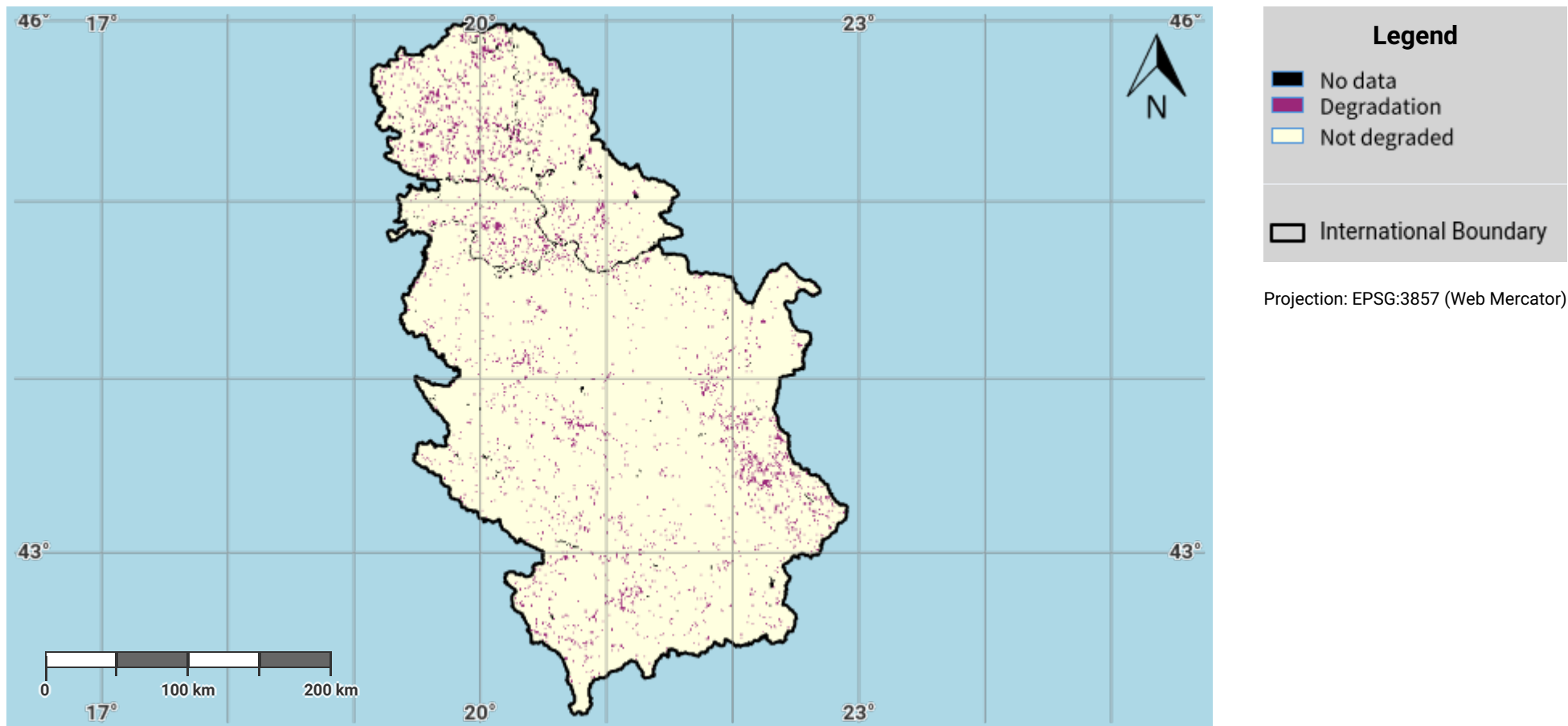
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Source Data Credits

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- Derived based on the methodology in the Good Practice Guidance Version 2 for Sustainable Development Goal (SDG) indicator 15.3.1 - Proportion of land that is degraded over total land area. URL: <https://www.unccd.int/publications/good-practice-guidance-sdg-indicator-1531-proportion-land-degraded-over-total-land>

Serbia – S01-4.M2

Proportion of land that is degraded over total land area (SDG Indicator 15.3.1) in the reporting period



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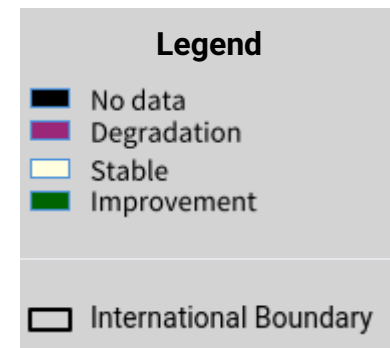
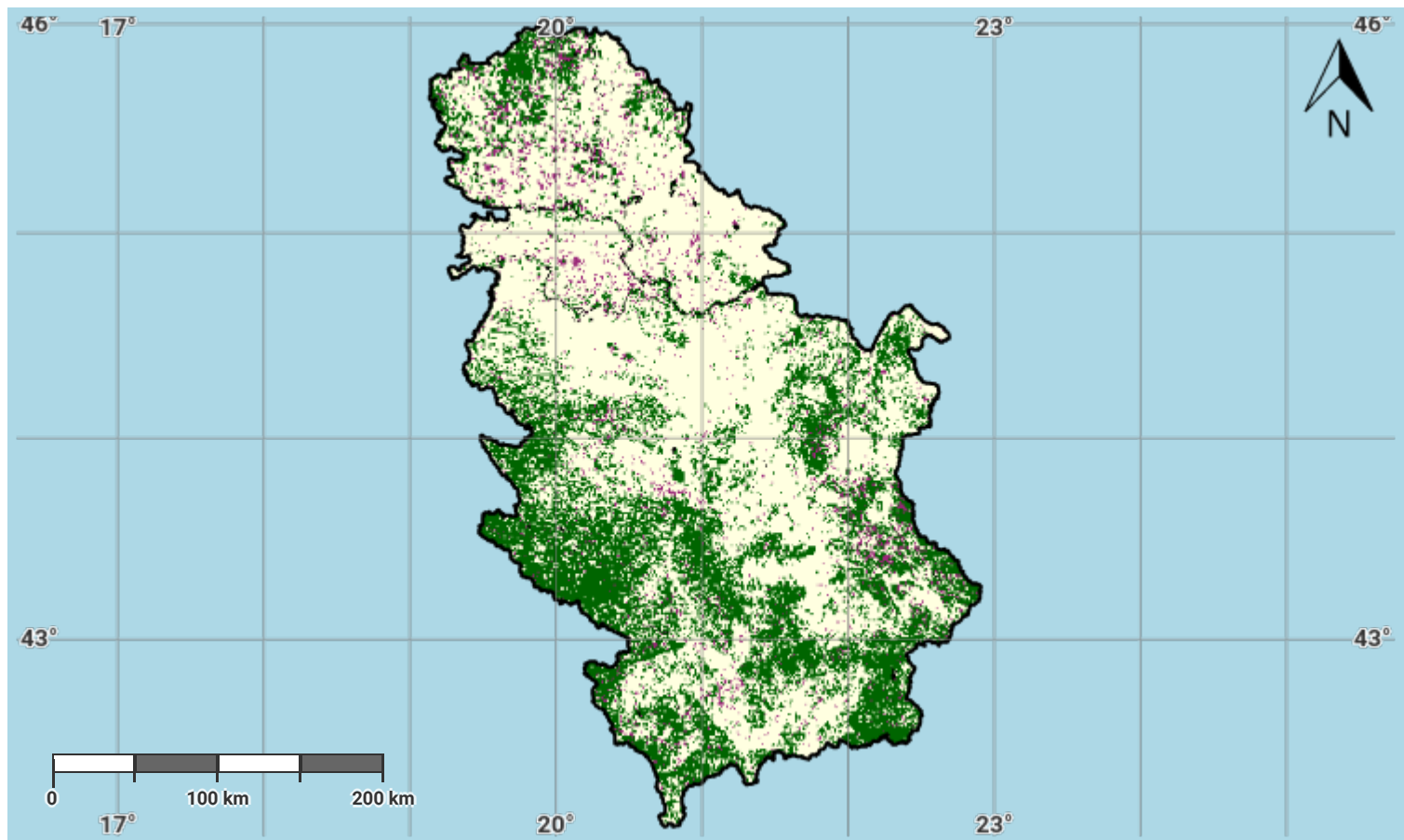
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Serbia – S01-4.M3

Progress towards Land Degradation Neutrality (LDN) in the reporting period



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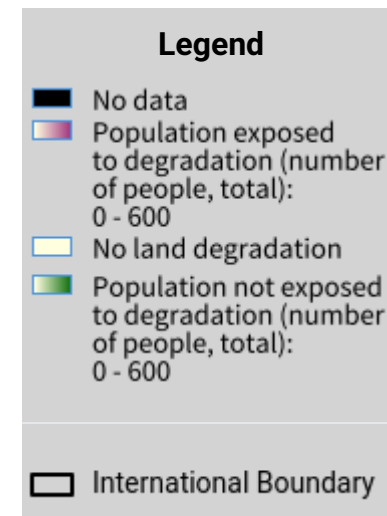
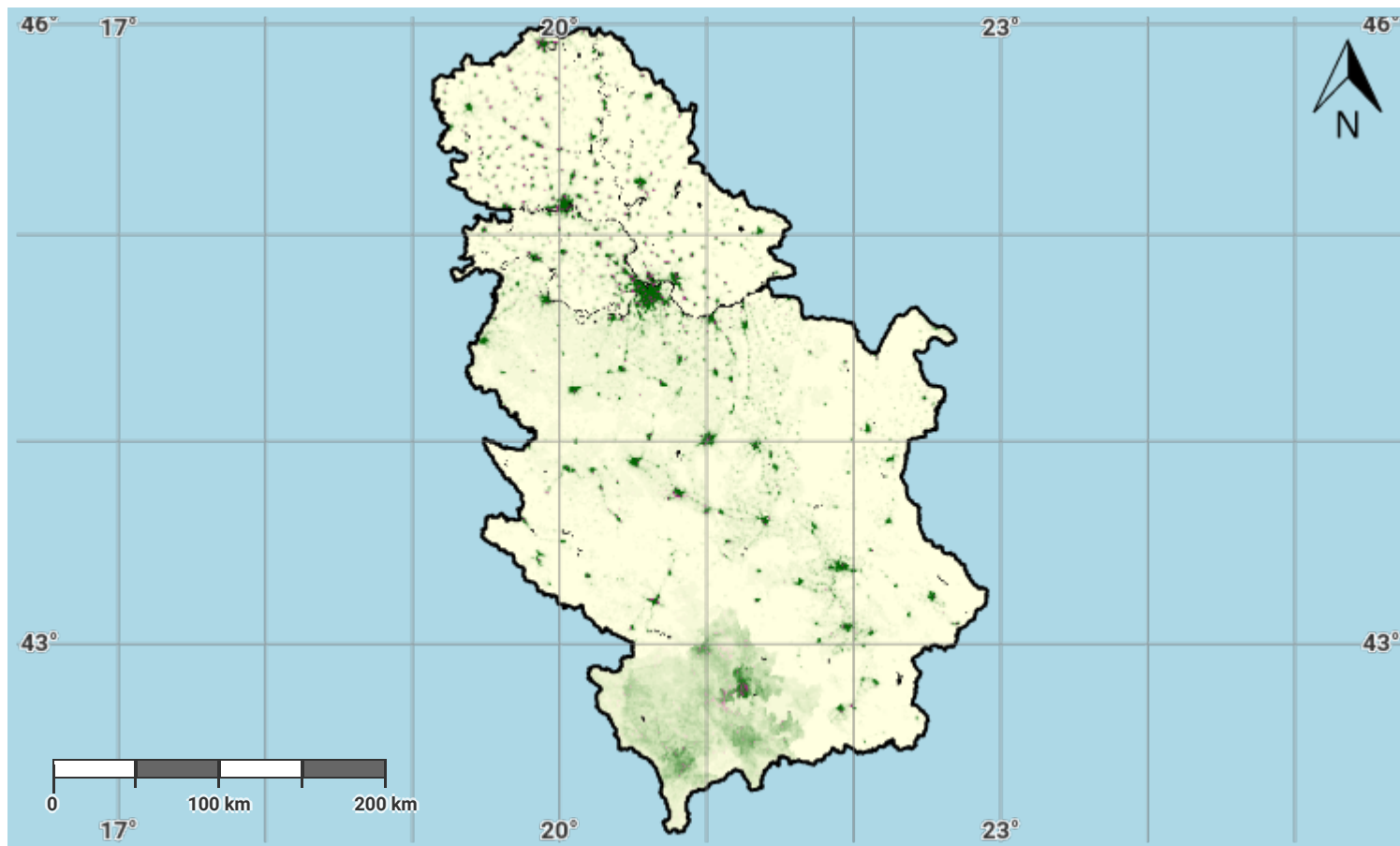
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Source Data Credits

- United Nations Clear Map, United Nations Geospatial.
- Derived based on the methodology in the Good Practice Guidance Version 2 for Sustainable Development Goal (SDG) indicator 15.3.1 - Proportion of land that is degraded over total land area. URL: <https://www.unccd.int/publications/good-practice-guidance-sdg-indicator-1531-proportion-land-degraded-over-total-land>

Serbia – S02-3.M1

Total Population exposed to land degradation (baseline)



Projection: EPSG:3857 (Web Mercator)

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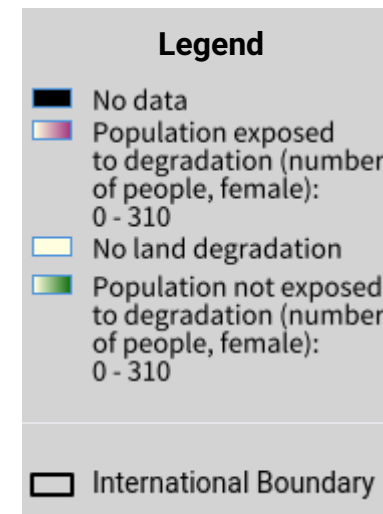
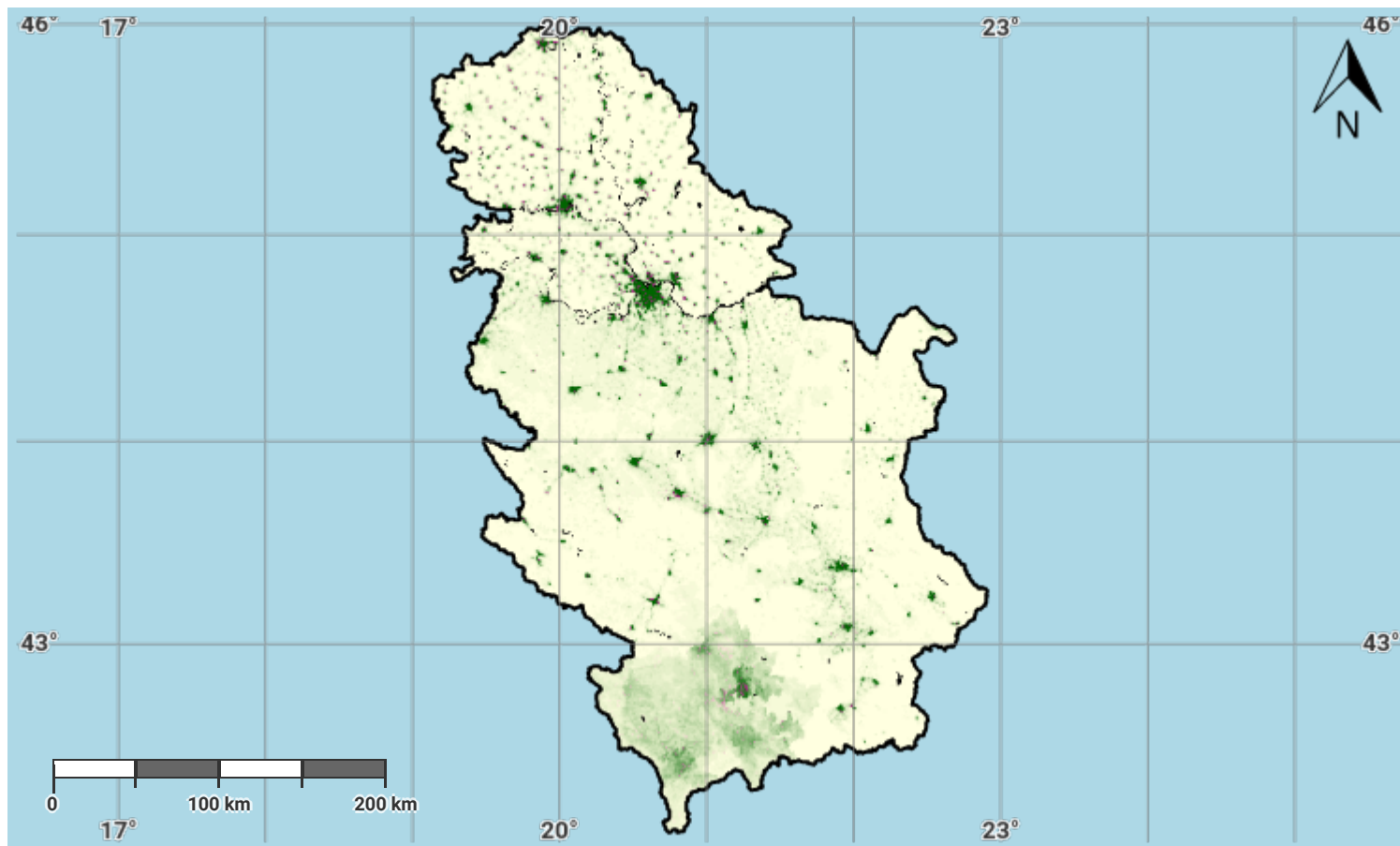
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Source Data Credits

- United Nations Clear Map, United Nations Geospatial.
- WorldPop project URL: <https://www.worldpop.org>

Serbia – SO2-3.M2

Female Population exposed to land degradation (baseline)



Projection: EPSG:3857 (Web Mercator)

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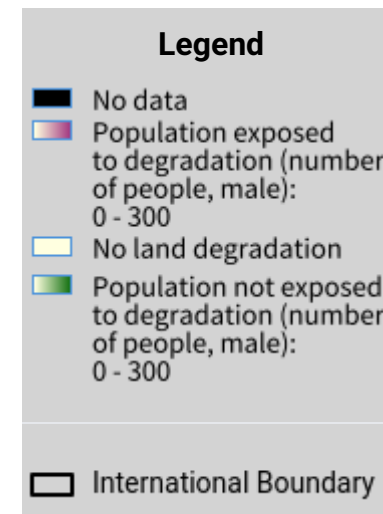
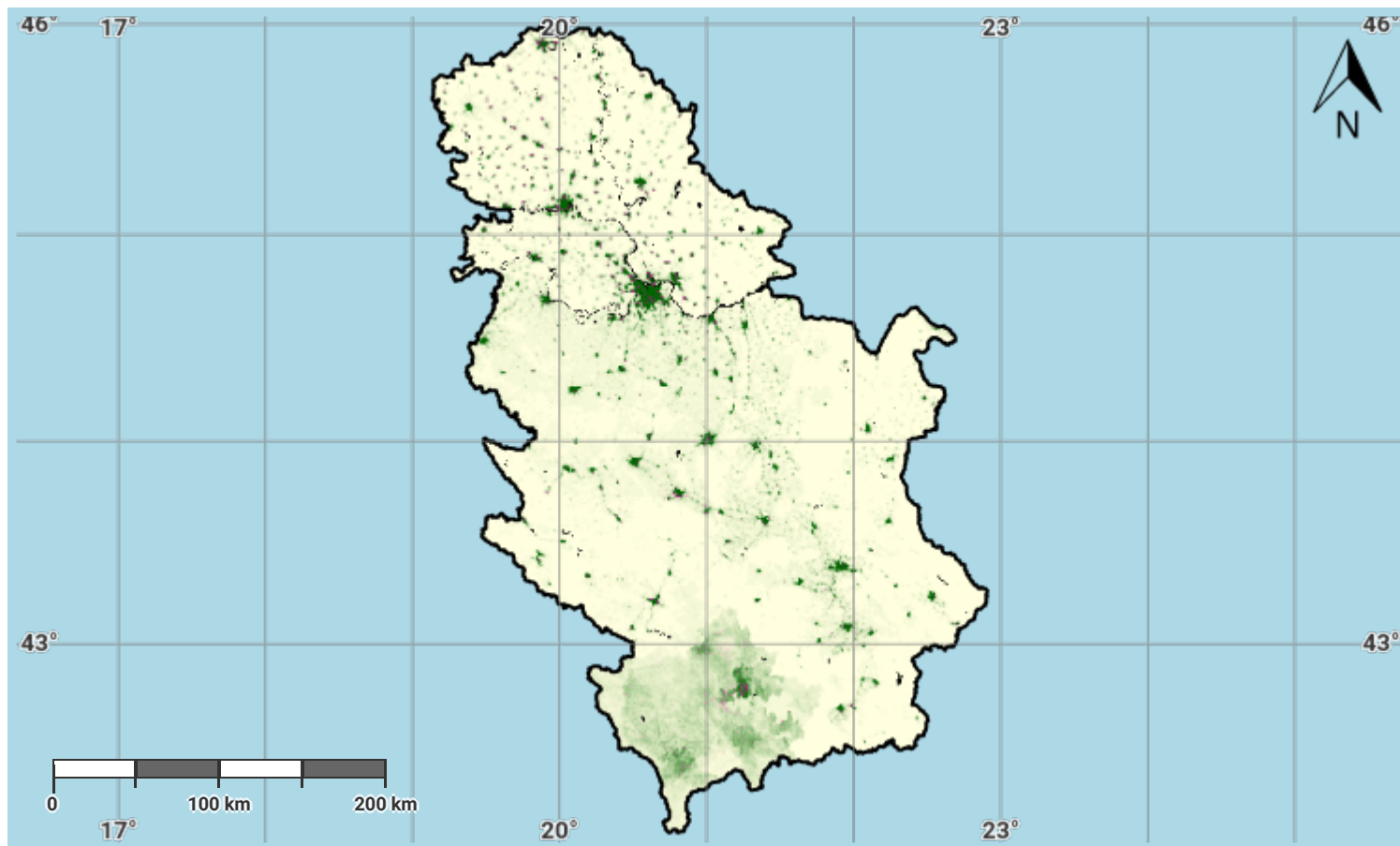
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- WorldPop project URL: <https://www.worldpop.org>

Serbia – SO2-3.M3

Male Population exposed to land degradation (baseline)



Projection: EPSG:3857 (Web Mercator)

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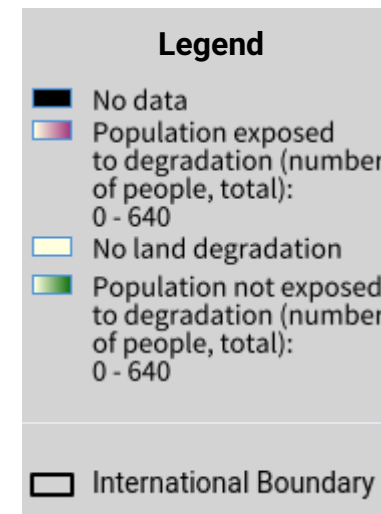
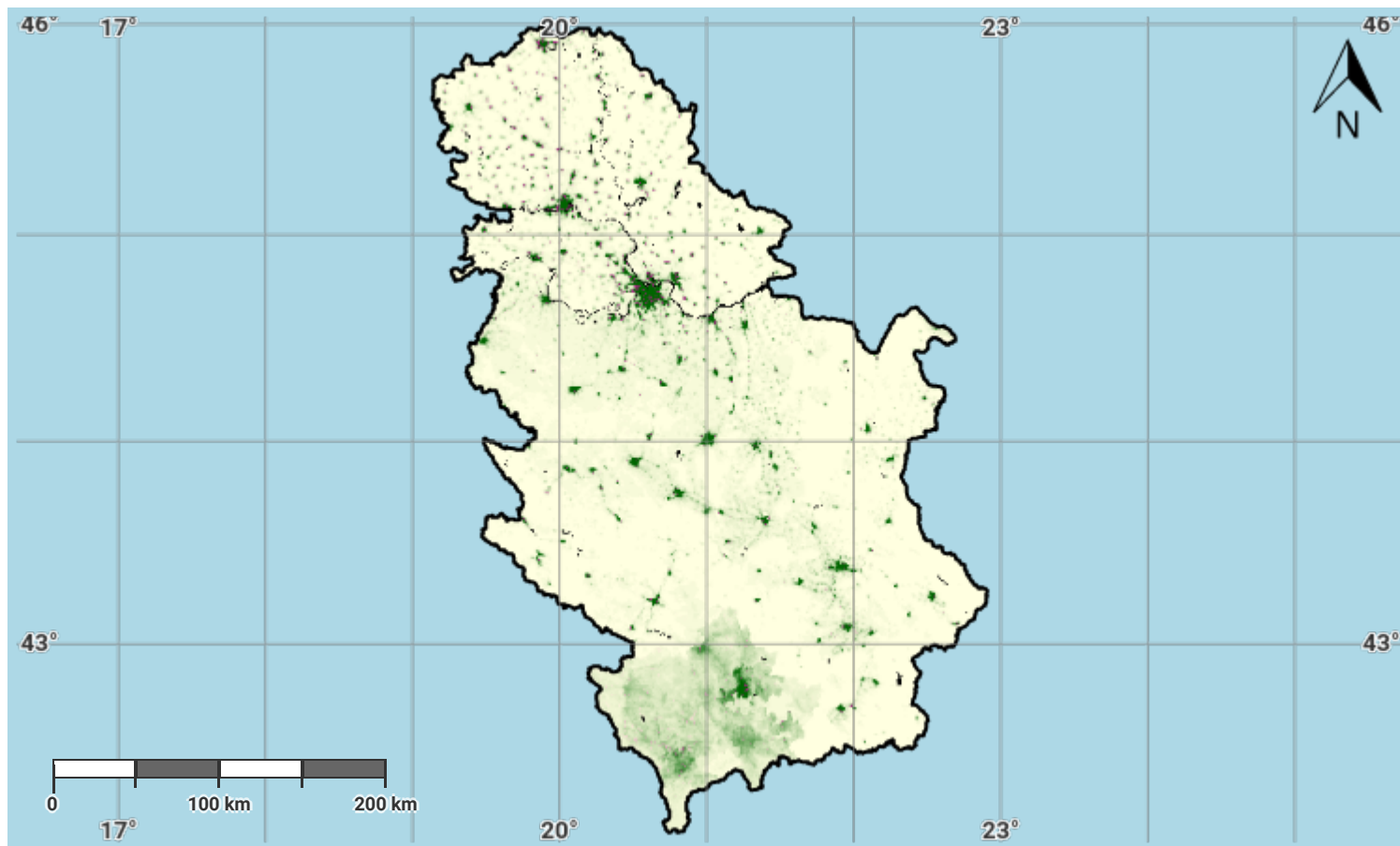
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- WorldPop project URL: <https://www.worldpop.org>

Serbia – SO2-3.M4

Total Population exposed to land degradation (reporting)



Projection: EPSG:3857 (Web Mercator)

Disclaimer

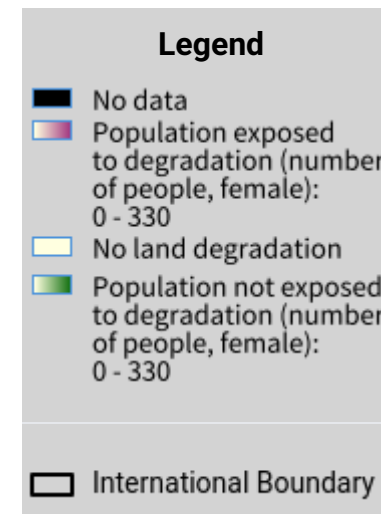
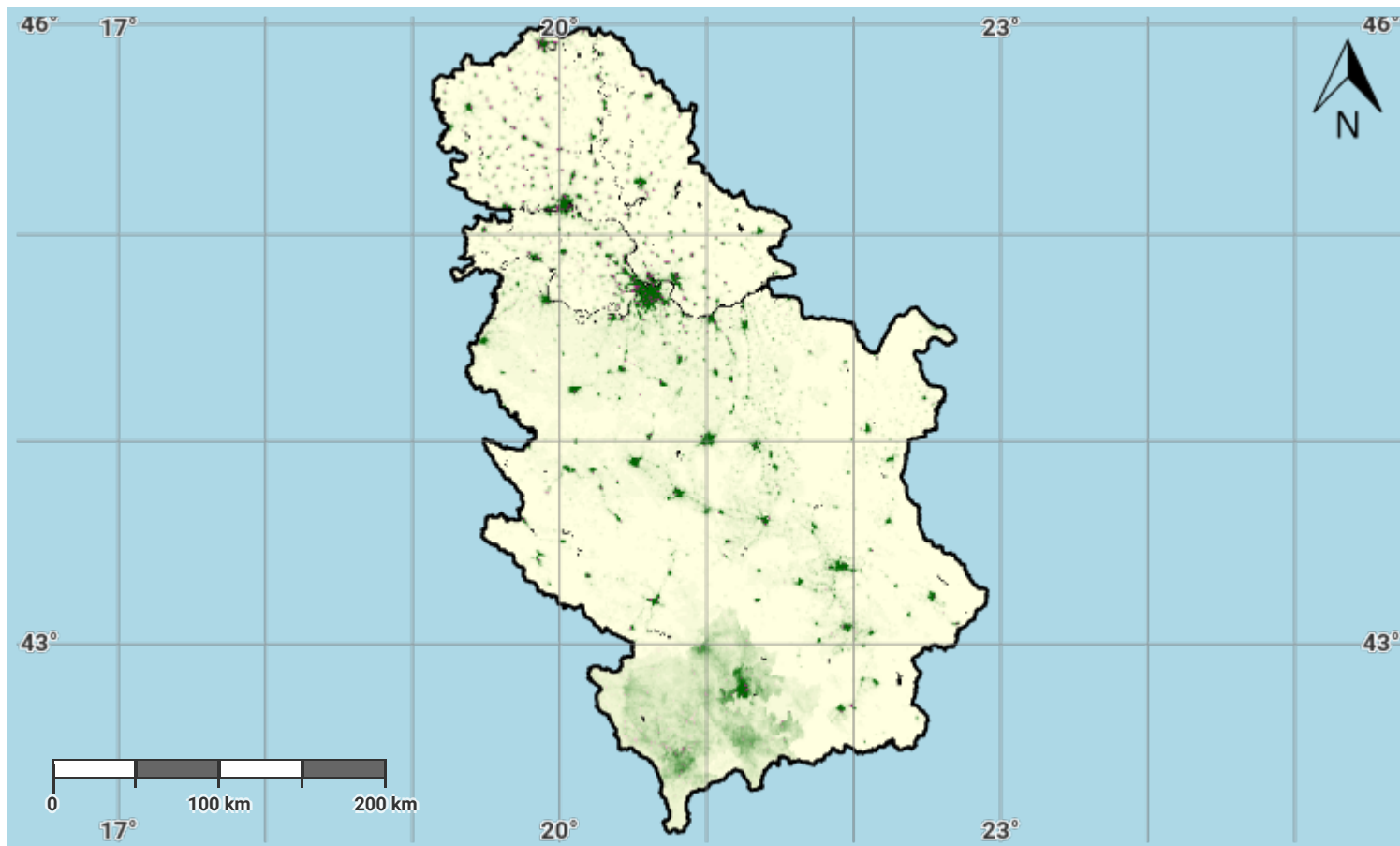
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- WorldPop project URL: <https://www.worldpop.org>

Serbia – SO2-3.M5

Female Population exposed to land degradation (reporting)



Projection: EPSG:3857 (Web Mercator)

Disclaimer

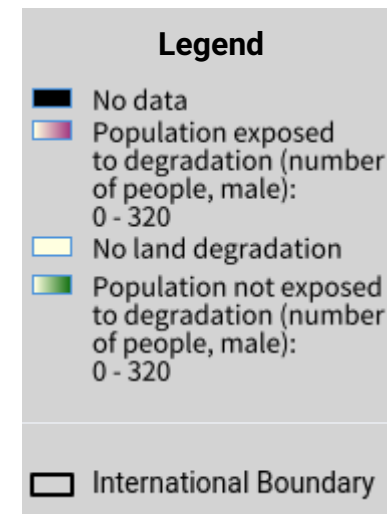
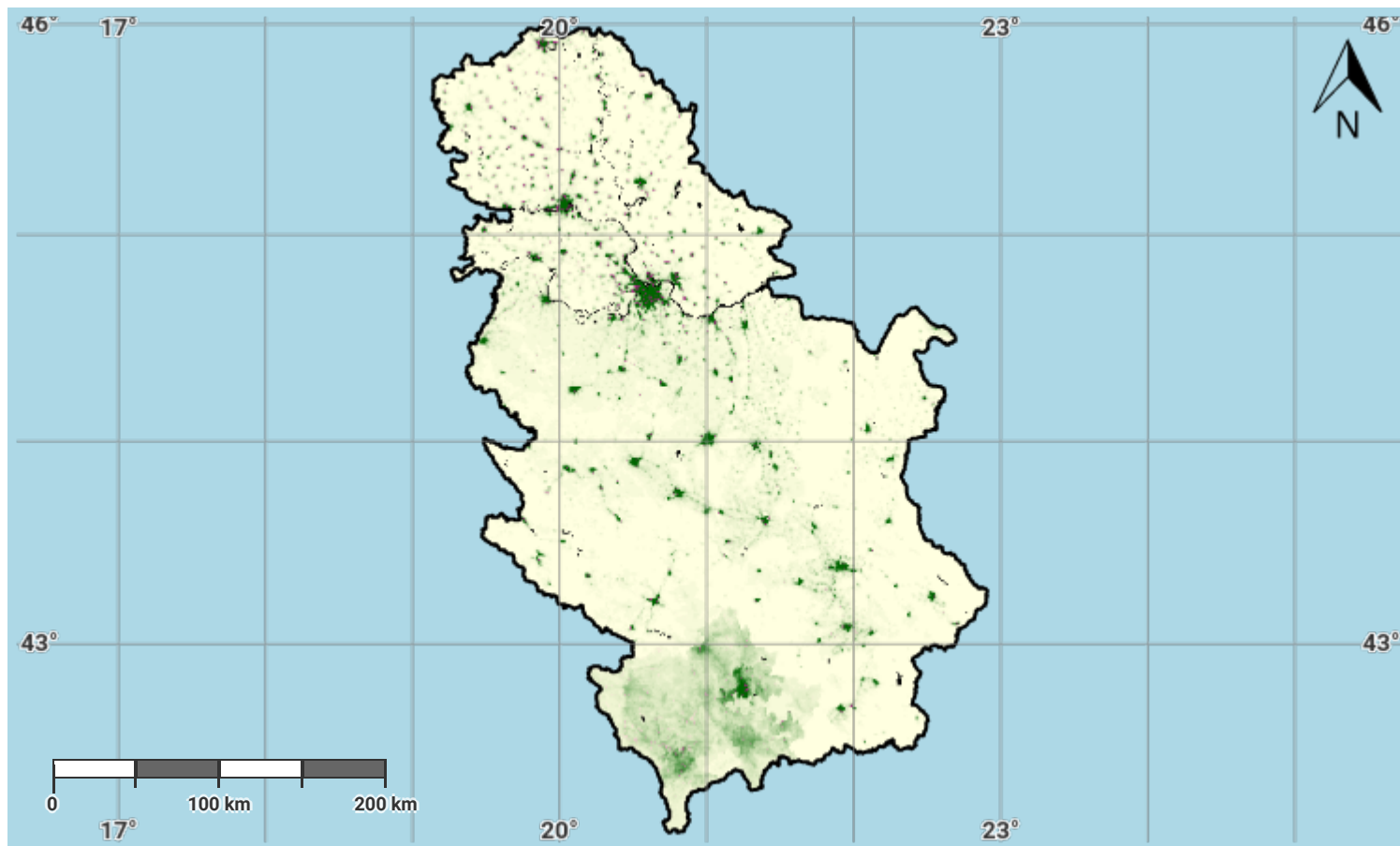
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- WorldPop project URL: <https://www.worldpop.org>

Serbia – SO2-3.M6

Male Population exposed to land degradation (reporting)



Projection: EPSG:3857 (Web Mercator)

Disclaimer

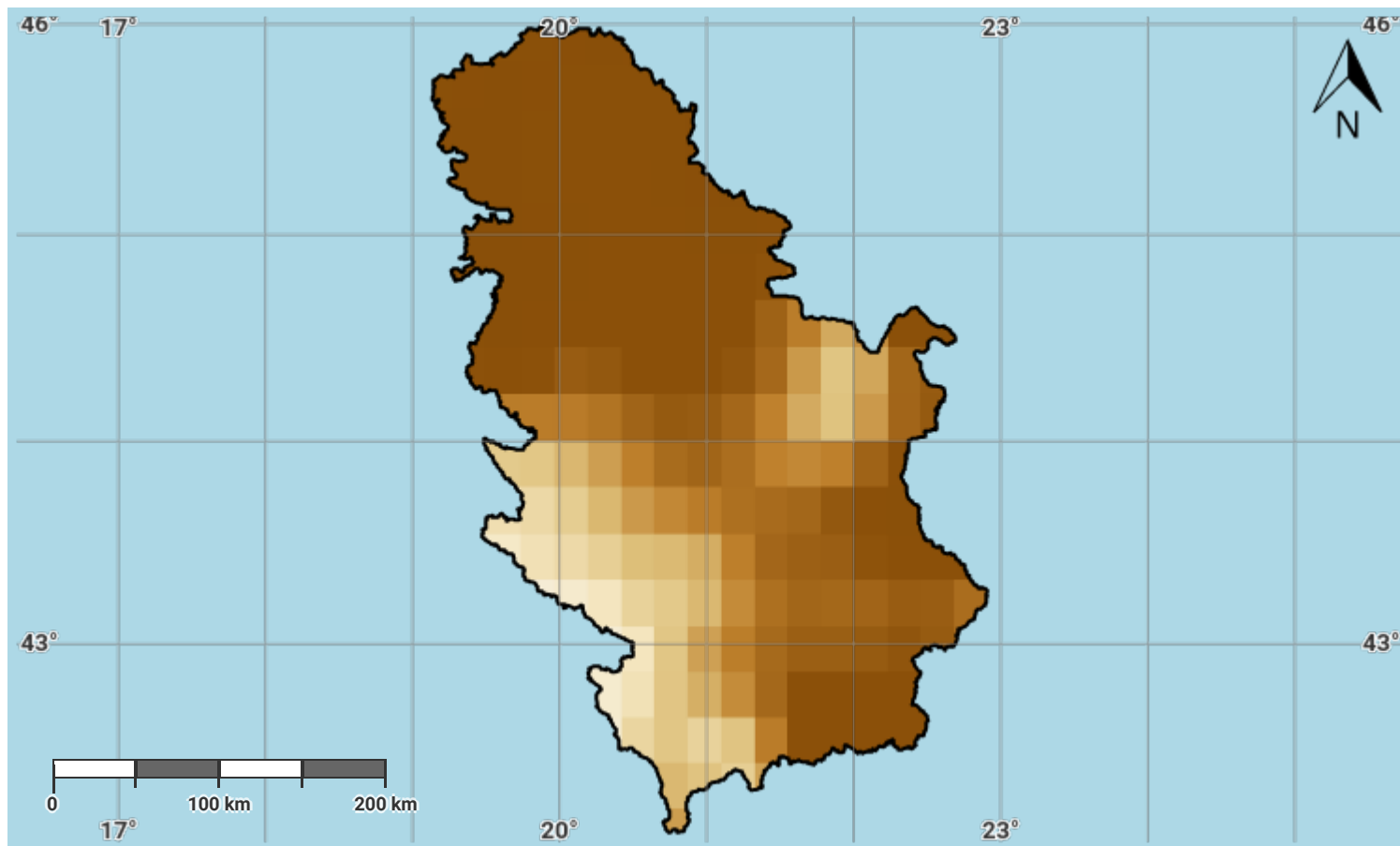
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Serbia – S03-1.M1

Drought hazard in first epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

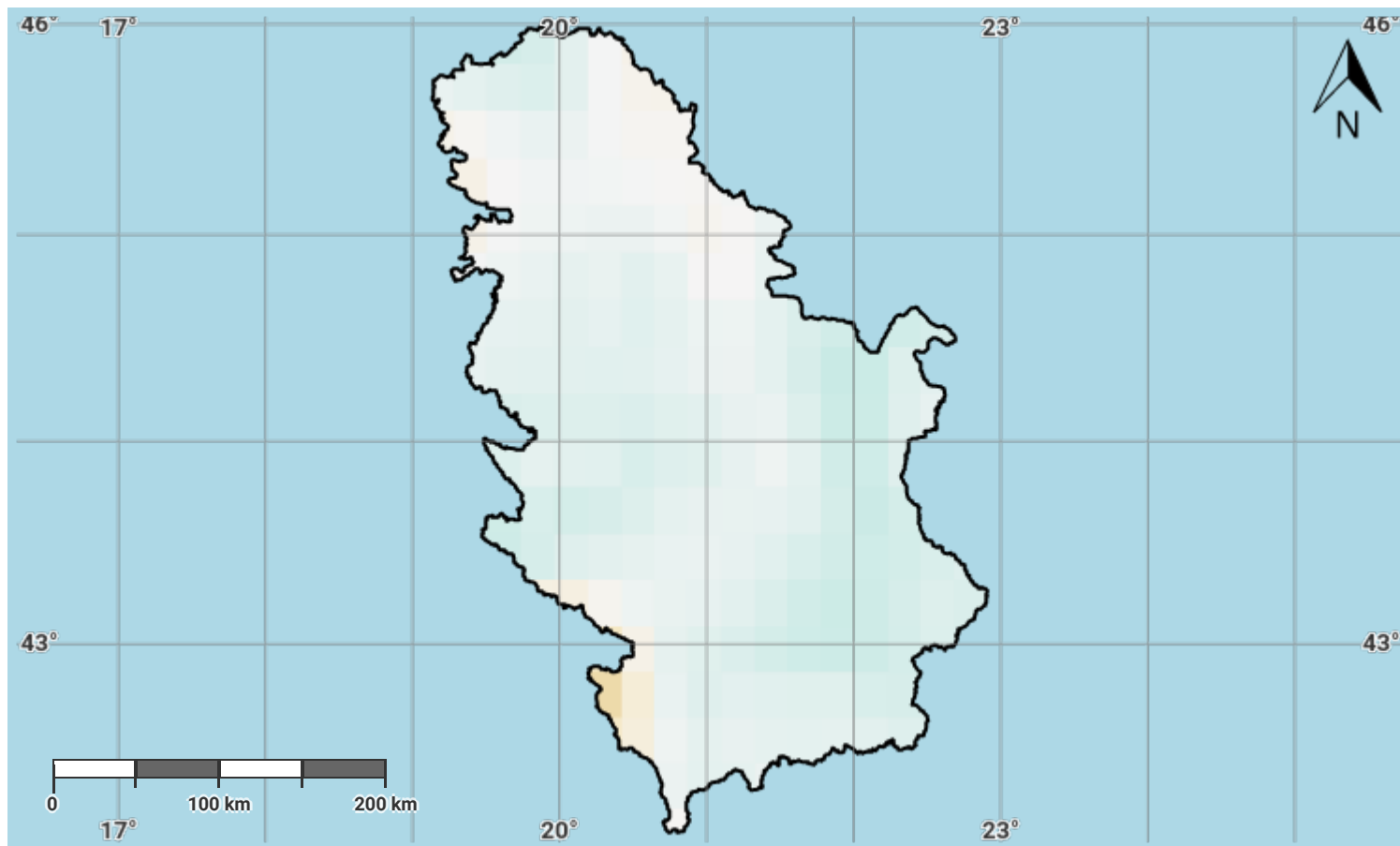
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Serbia – S03-1.M2

Drought hazard in second epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

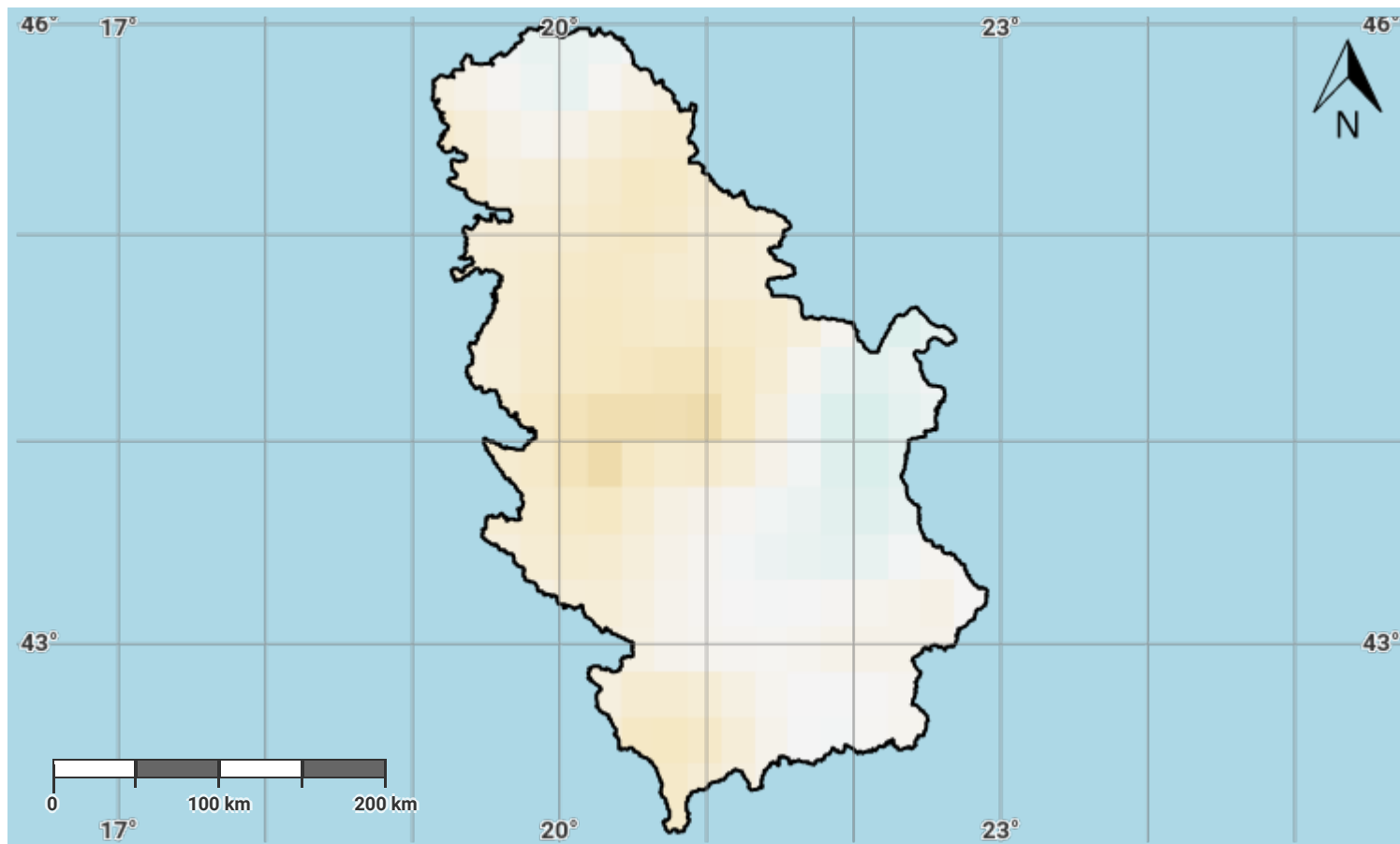
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Serbia – S03-1.M3

Drought hazard in third epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

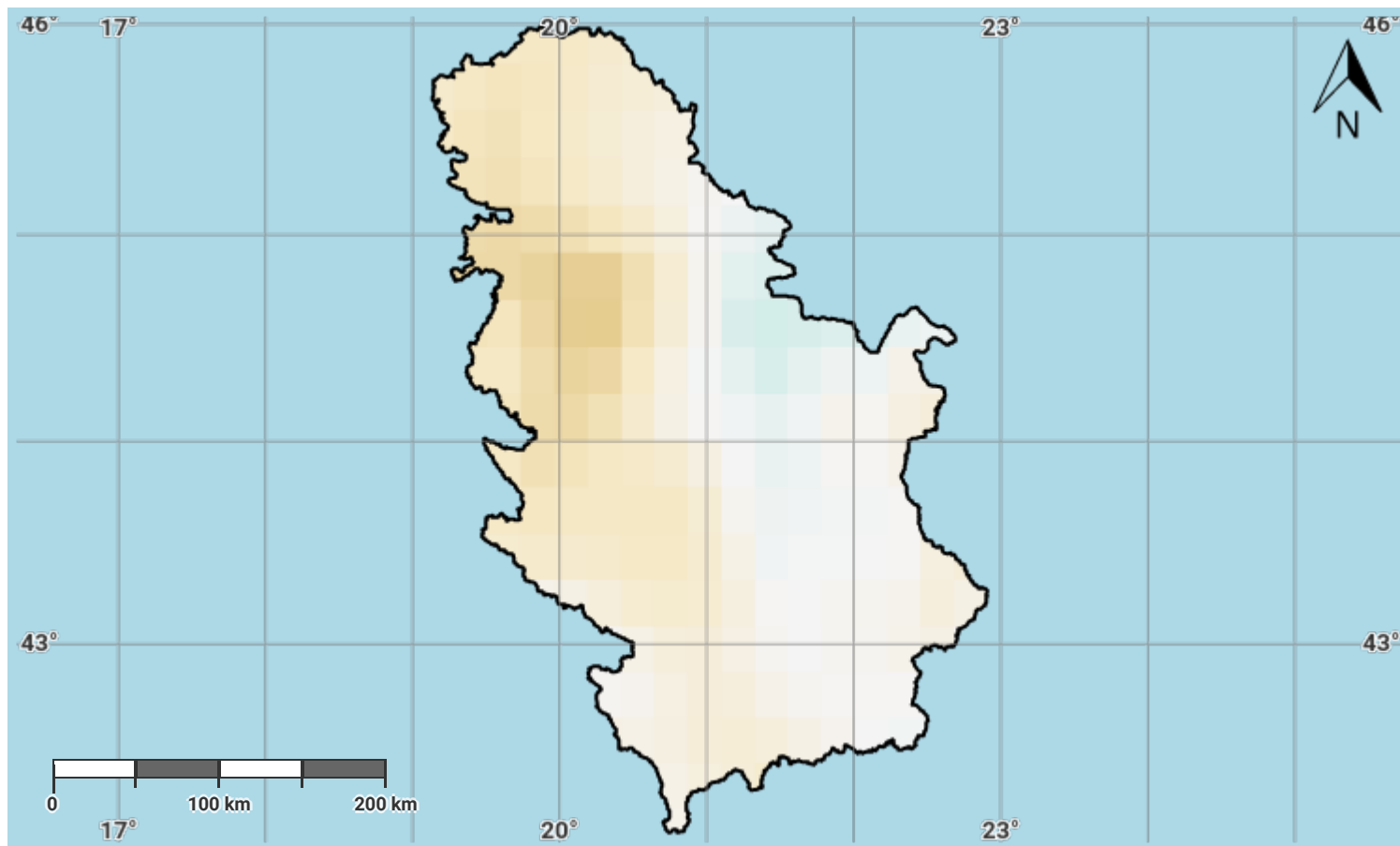
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Serbia – S03-1.M4

Drought hazard in fourth epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

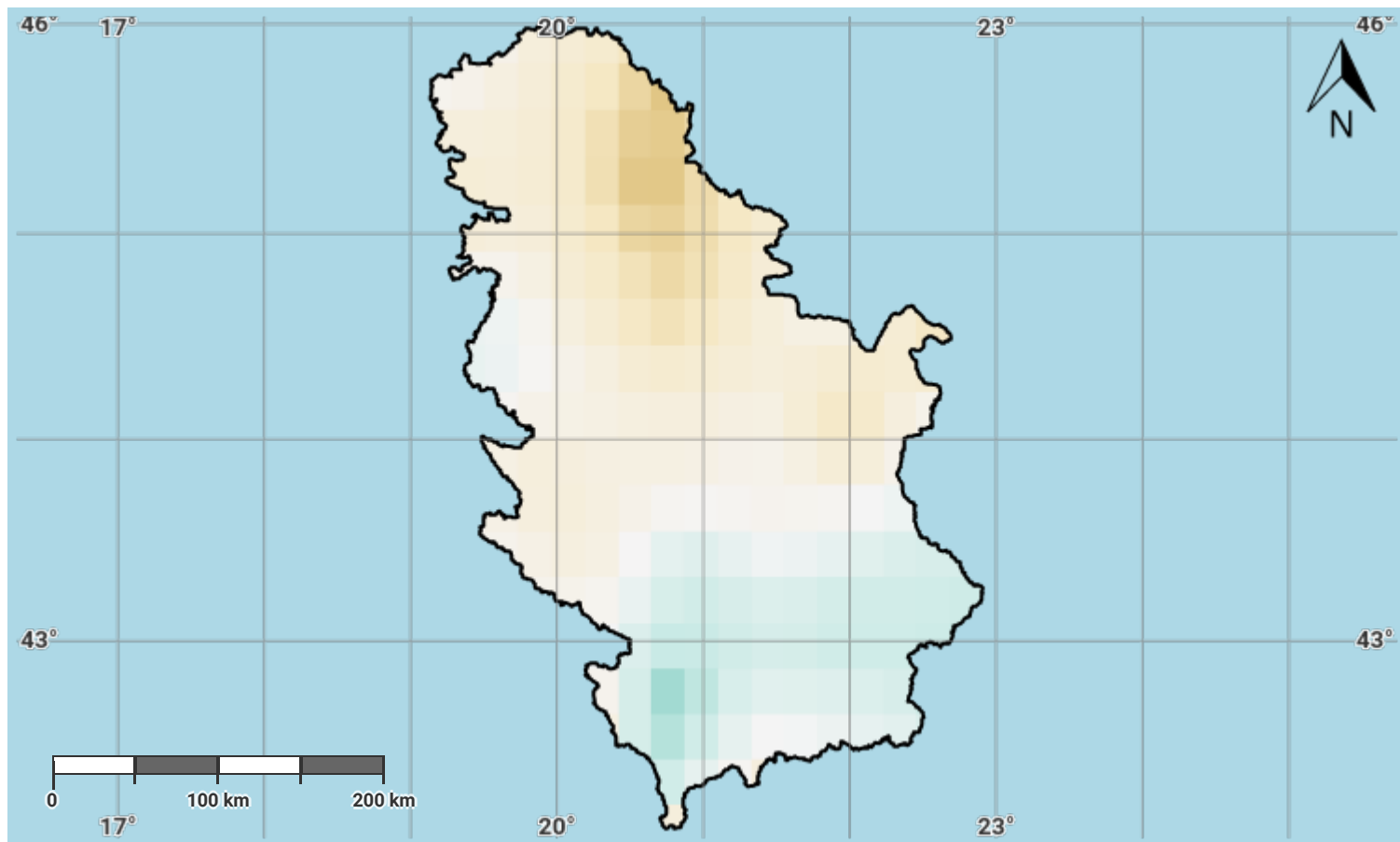
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Serbia – S03-1.M5

Drought hazard in the reporting period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

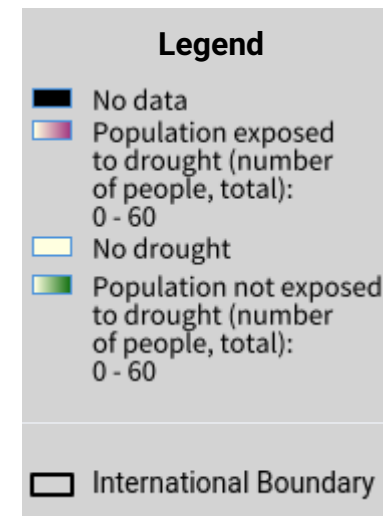
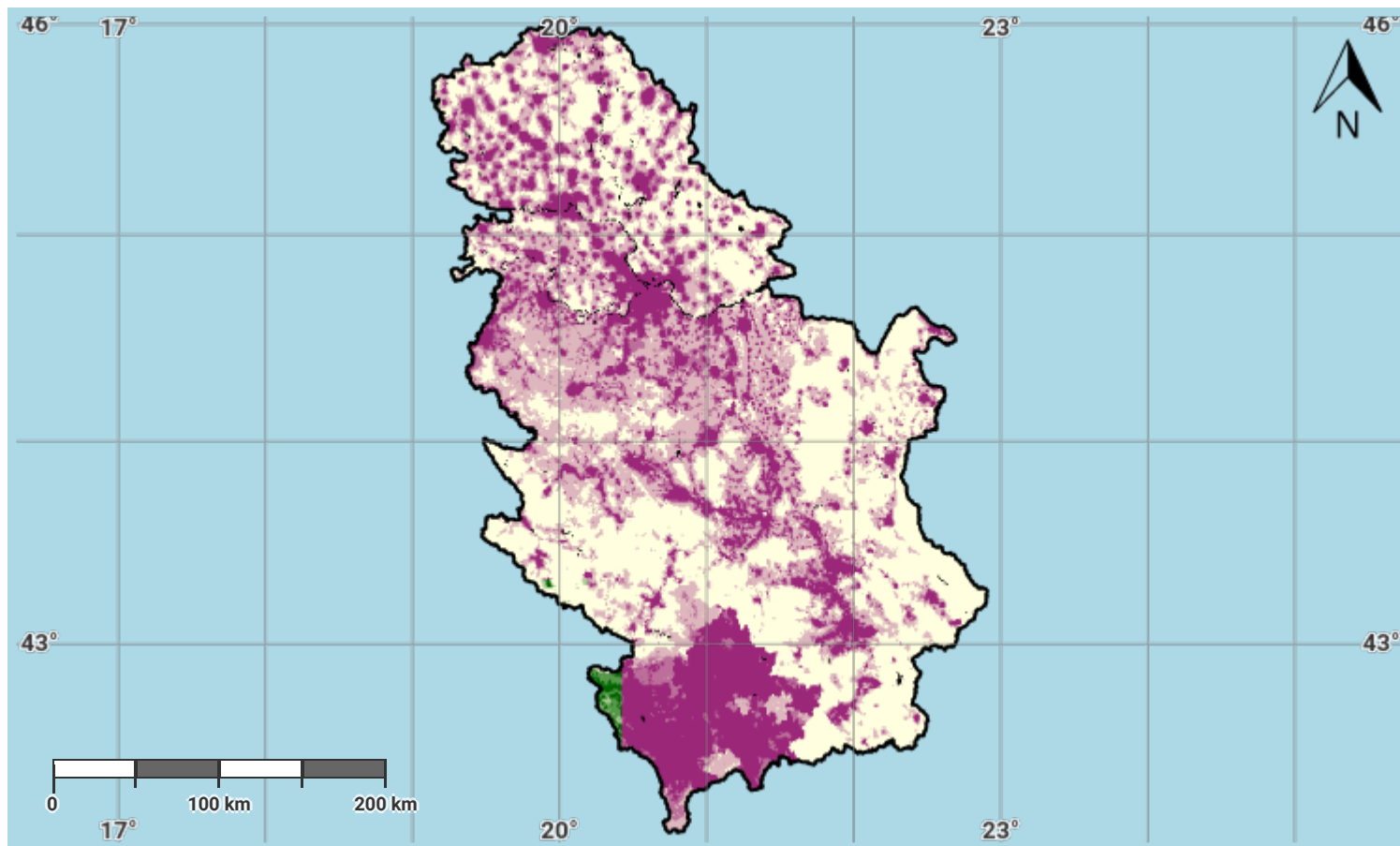
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Serbia – S03-2.M1

Drought exposure in first epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

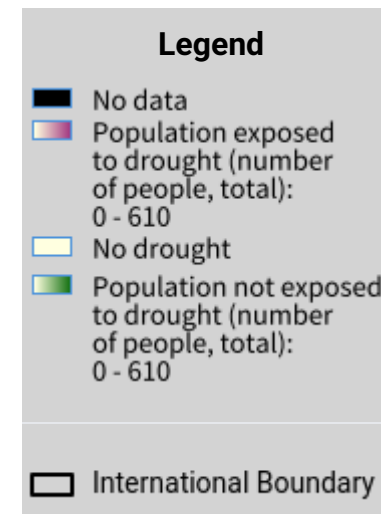
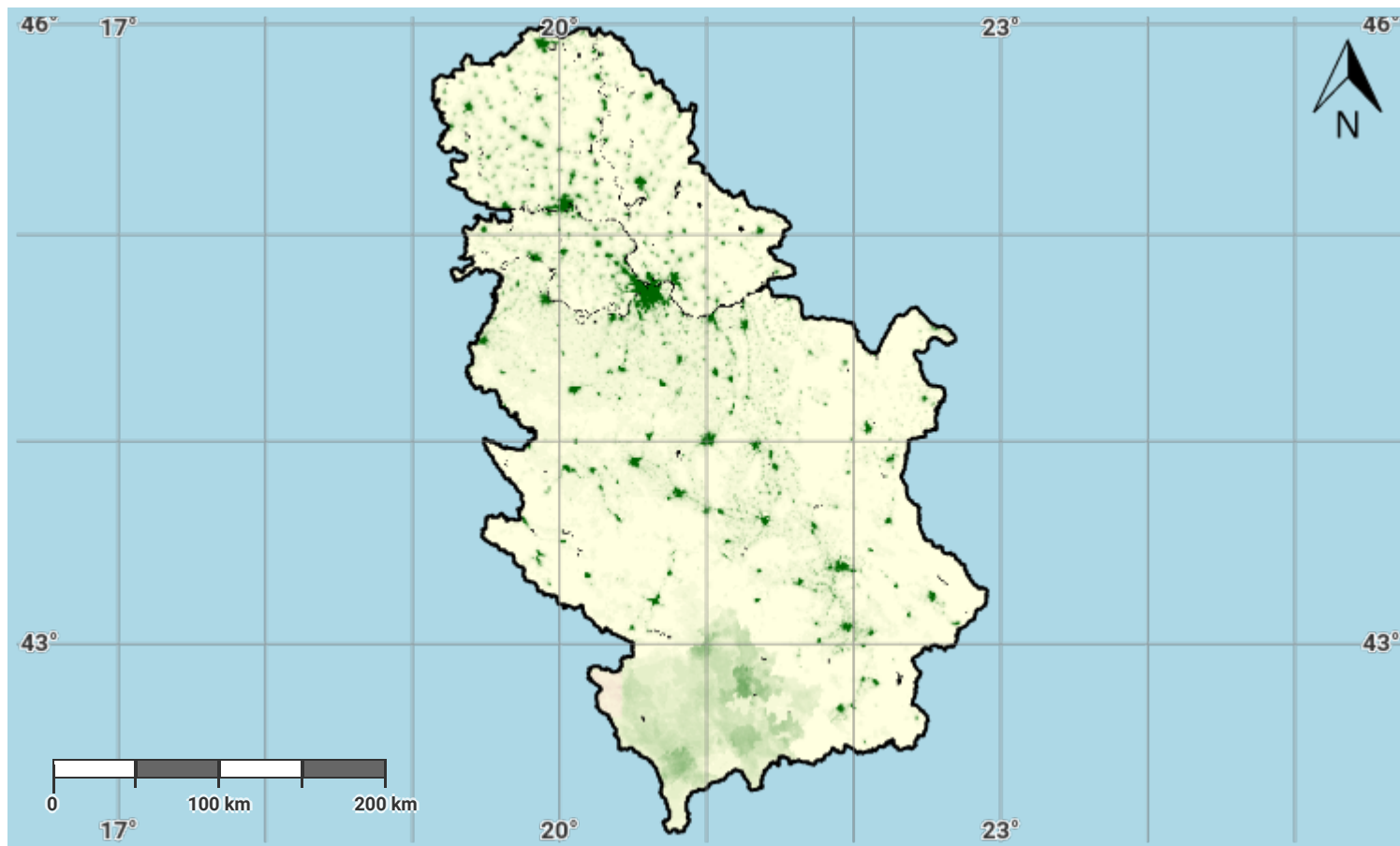
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Serbia – S03-2.M2

Drought exposure in second epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

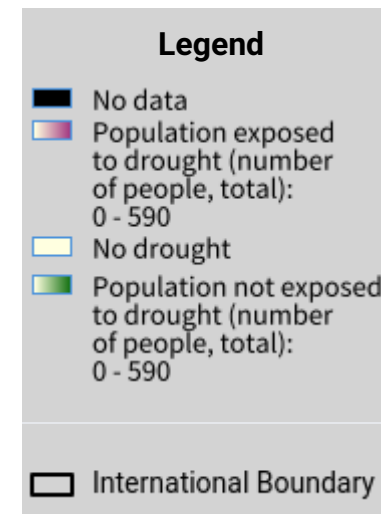
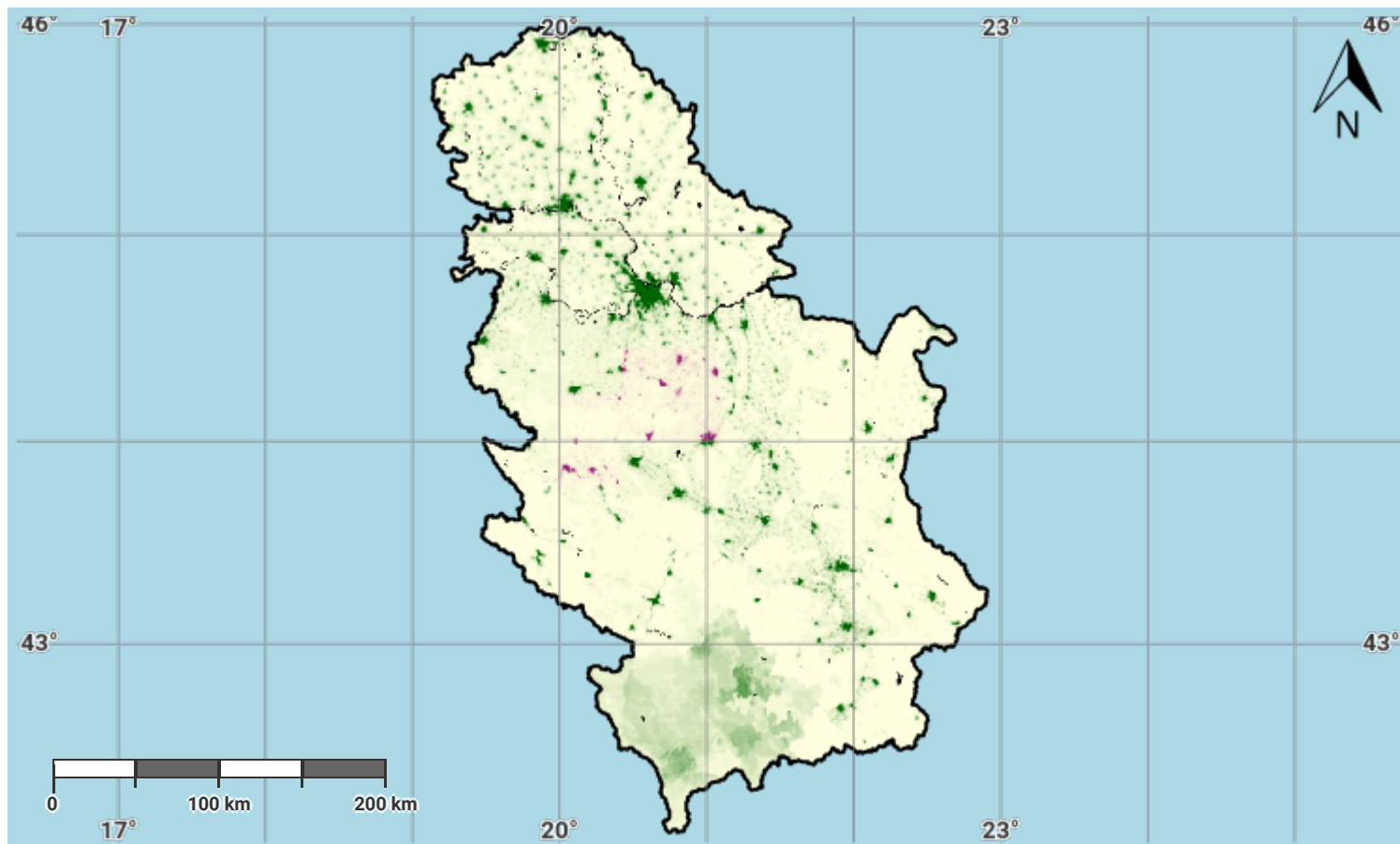
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Serbia – S03-2.M3

Drought exposure in third epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

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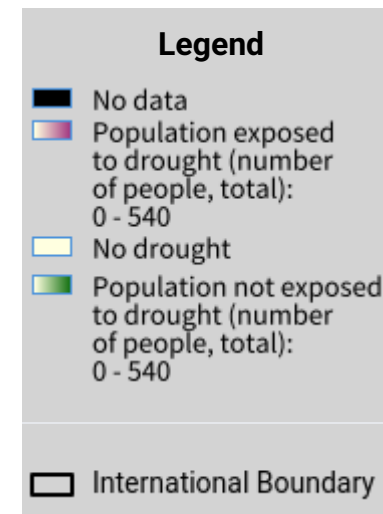
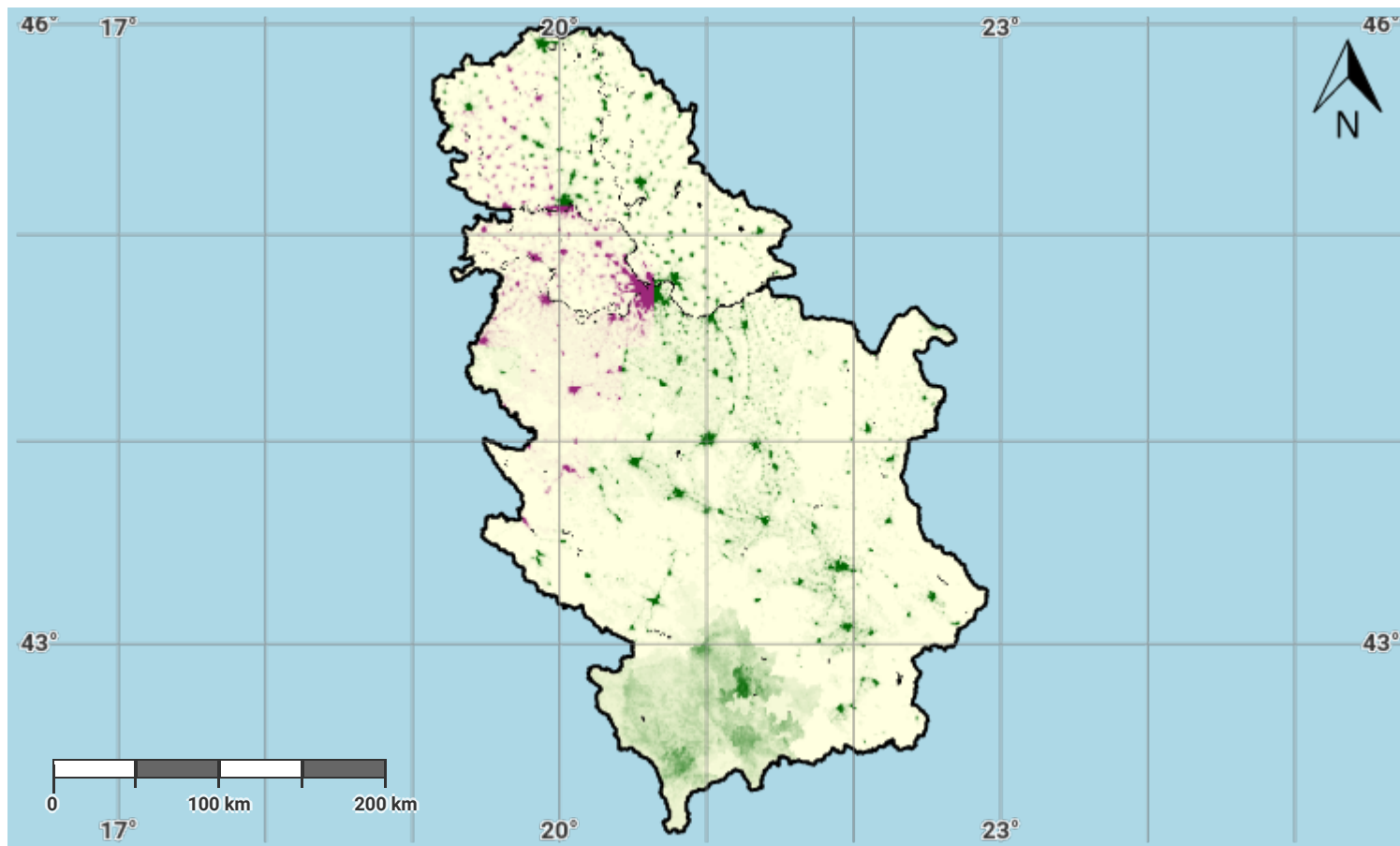
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Serbia – S03-2.M4

Drought exposure in fourth epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

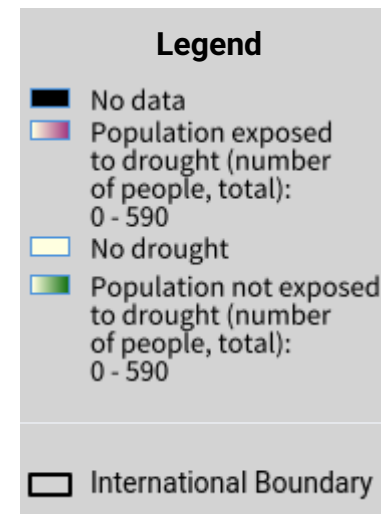
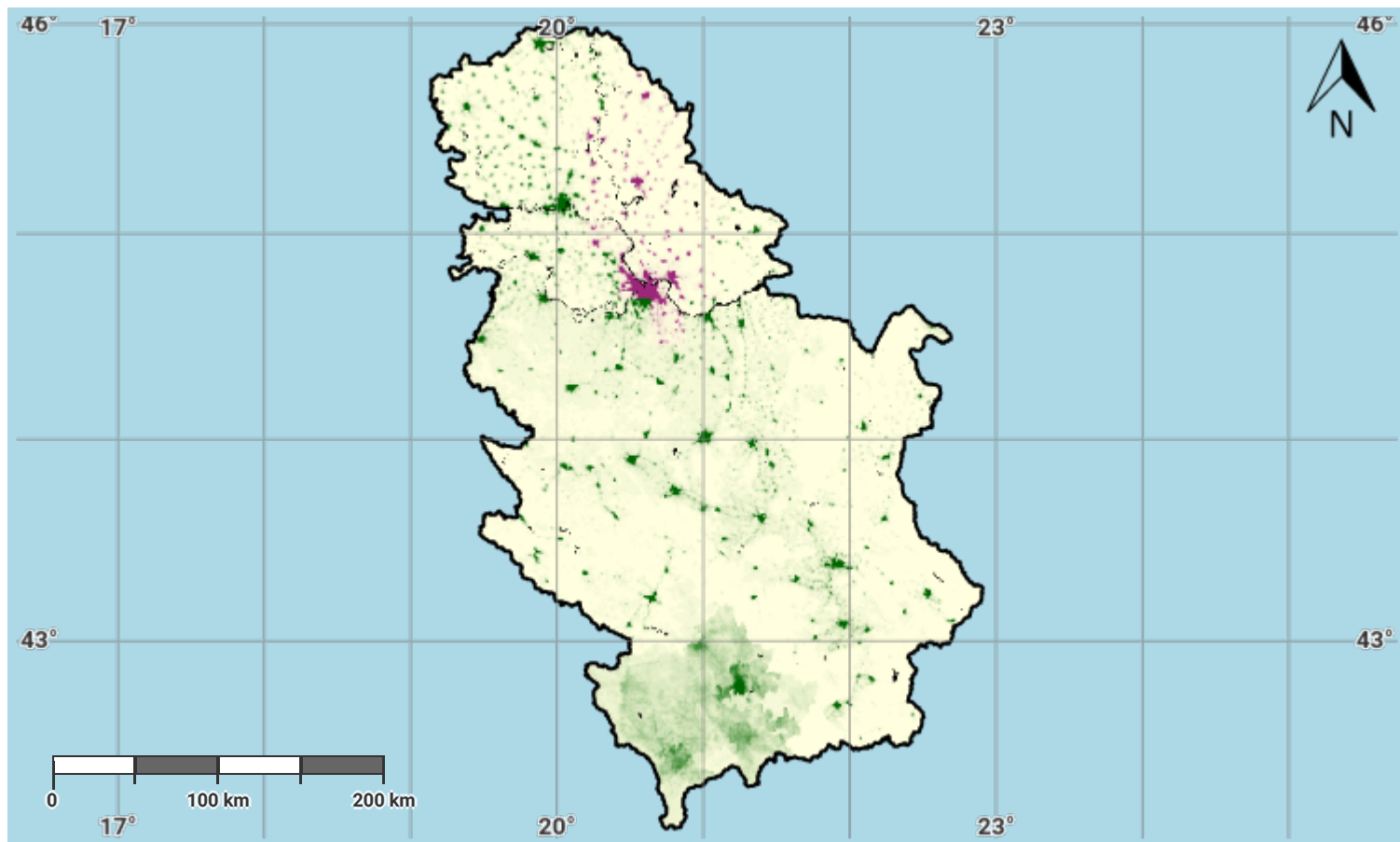
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Serbia – S03-2.M5

Drought exposure in the reporting period



Projection: EPSG:3857 (Web Mercator)

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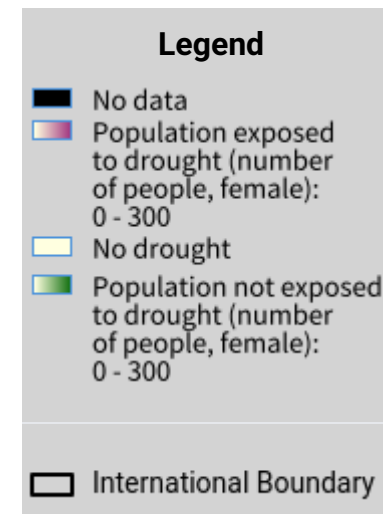
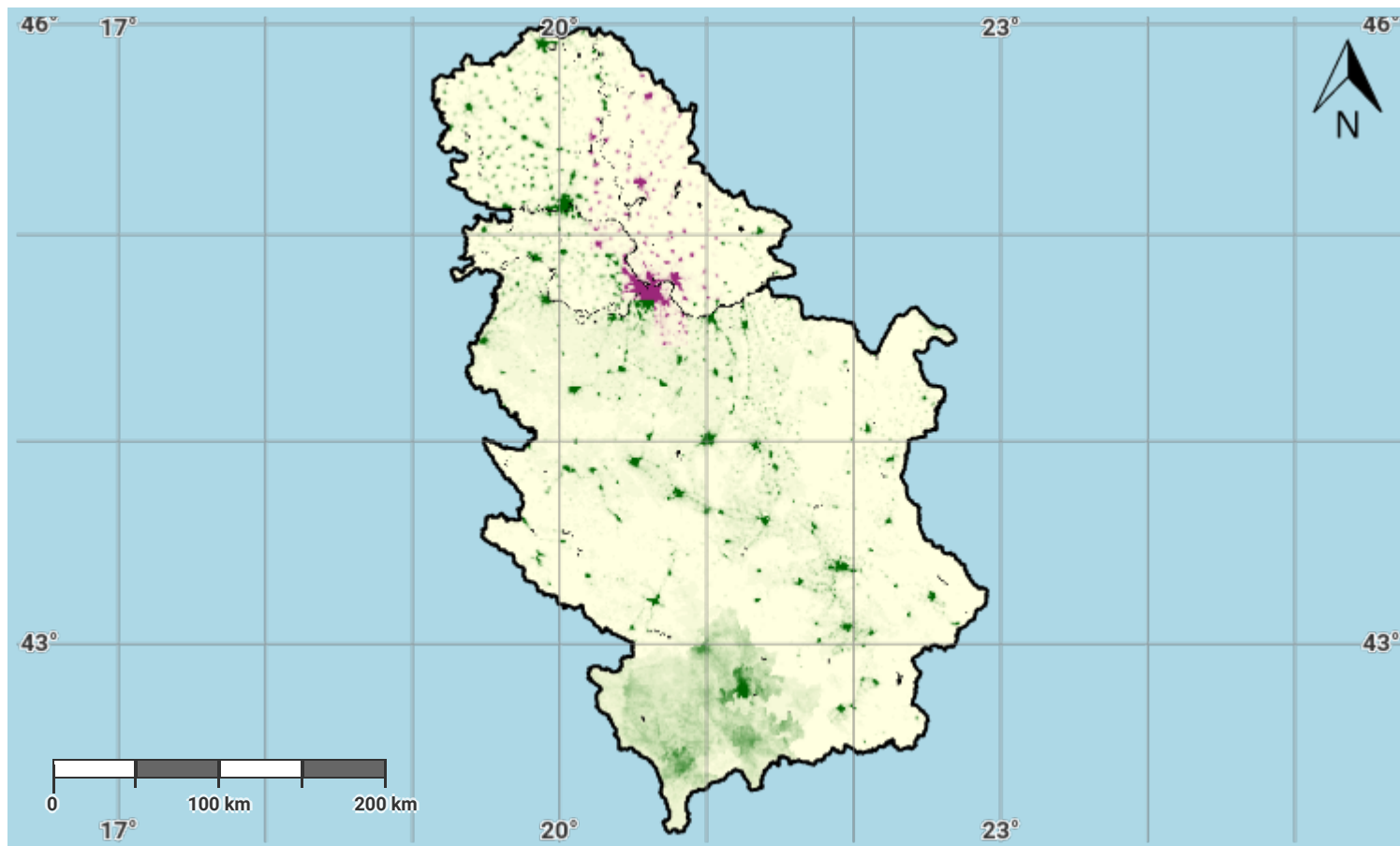
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Serbia – S03-2.M6

Female drought exposure in the reporting period



Projection: EPSG:3857 (Web Mercator)

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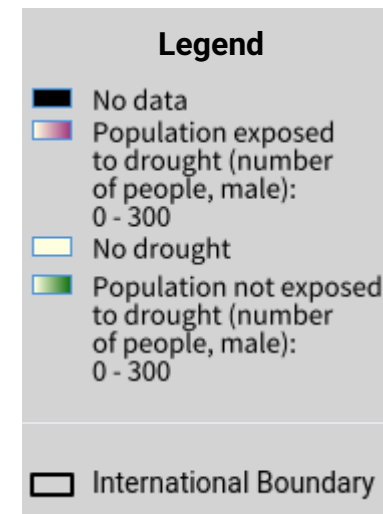
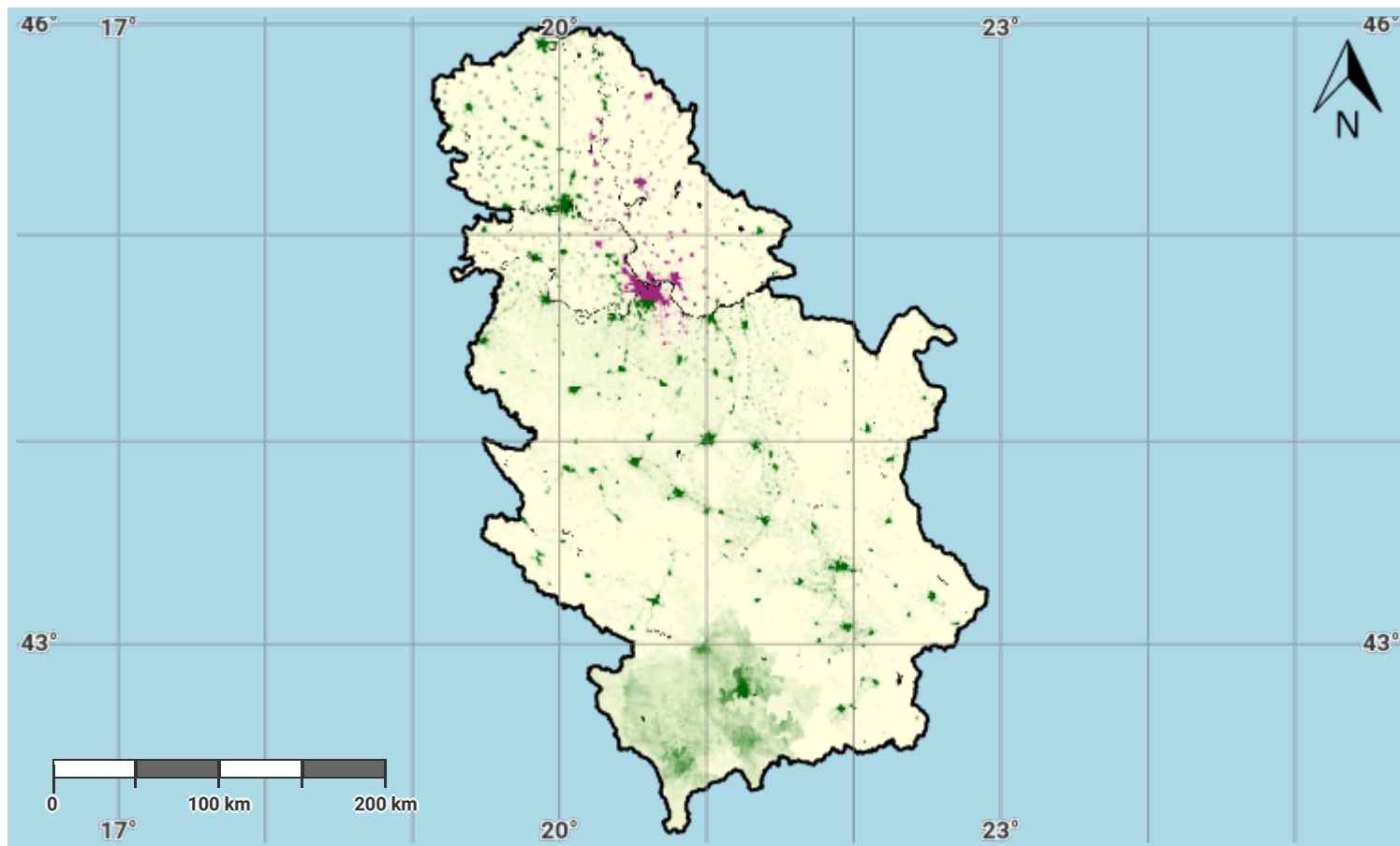
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Serbia – S03-2.M7

Male drought exposure in the reporting period



Projection: EPSG:3857 (Web Mercator)

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