United Nations Convention to Combat Desertification
Performance review and assessment of implementation system
Seventh reporting process

Report from Armenia

United Nations Convention to Combat Desertification

prais4

prais4

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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 (km²)	Water bodies (km²)	Total country area (km²)	Comments
2 000	28 463	1 315	29 778	In PRAIS 4, in the presented data, by default, the territory of Armenia was represented as 29.716 km2. Based on this fact, a map of Armenia's borders with a territory of 29,743km2 was uploaded to PRAIS 4. As a result, a relatively plausible option was chosen from the Trends Earth source code, which was installed in PRAIS 4. However, it turned out that after entering in PRAIS 4, the map of the borders of Armenia with the territory of 29,743km2, the territory of Armenia became 29,778km2.
2 001	28 462	1 316	29 778	In PRAIS 4, in the presented data, by default, the territory of Armenia was represented as 29.716 km2. Based on this fact, a map of Armenia's borders with a territory of 29,743km2 was uploaded to PRAIS 4. As a result, a relatively plausible option was chosen from the Trends Earth source code, which was installed in PRAIS 4. However, it turned out that after entering in PRAIS 4, the map of the borders of Armenia with the territory of 29,743km2, the territory of Armenia became 29,778km2.
2 005	28 458	1 320	29 778	In PRAIS 4, in the presented data, by default, the territory of Armenia was represented as 29.716 km2. Based on this fact, a map of Armenia's borders with a territory of 29,743km2 was uploaded to PRAISE 4. As a result, a relatively plausible option was chosen from the Trends Earth source code, which was installed in PRAIS 4. However, it turned out that after entering in PRAIS 4, the map of the borders of Armenia with the territory of 29,743km2, the territory of Armenia became 29,778km2.
2 010	28 458	1 320	29 778	In PRAIS 4, in the presented data, by default, the territory of Armenia was represented as 29.716 km2. Based on this fact, a map of Armenia's borders with a territory of 29,743km2 was uploaded to PRAIS 4. As a result, a relatively plausible option was chosen from the Trends Earth source code, which was installed in PRAIS 4. However, it turned out that after entering in PRAIS 4, the map of the borders of Armenia with the territory of 29,743km2, the territory of Armenia became 29,778km2.
2 015	28 458	1 320	29 778	In PRAIS 4, in the presented data, by default, the territory of Armenia was represented as 29.716 km2. Based on this fact, a map of Armenia's borders with a territory of 29,743km2 was uploaded to PRAIS 4. As a result, a relatively plausible option was chosen from the Trends Earth source code, which was installed in PRAIS 4. However, it turned out that after entering in PRAIS 4, the map of the borders of Armenia with the territory of 29,743km2, the territory of Armenia became 29,778km2.
2 019	28 458	1 320	29 778	In PRAIS 4, in the presented data, by default, the territory of Armenia was represented as 29.716 km2. Based on this fact, a map of Armenia's borders with a territory of 29,743km2 was uploaded to PRAISE 4. As a result, a relatively plausible option was chosen from the Trends Earth source code, which was installed in PRAIS 4. However, it turned out that after entering in PRAIS 4, the map of the borders of Armenia with the territory of 29,743km2, the territory of Armenia became 29,778km2.

Land cover legend and transition matrix

SO1-1.T2: Key Degradation Processes

Degradation Process	Starting Land Cover	Ending Land Cover

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

Original/ Final	Tree-covered areas	Grasslands	Croplands	Wetlands	Artificial surfaces	Other Lands	Water bodies
Tree-covered areas	0	-	-	0	-	0	-
Grasslands	+	0	+	0	-	-	-
Croplands	+	-	0	0	-	0	-
Wetlands	0	0	0	0	0	0	-
Artificial surfaces	0	0	0	0	0	0	0
Other Lands	0	+	+	0	-	0	0
Water bodies	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 (km²)	Grasslands (km²)	Croplands (km²)	Wetlands (km²)	Artificial surfaces (km²)	Other Lands (km²)	Water bodies (km²)	No data (km²)
2000	6 020	4 502	17 061	13	435	432	1 315	
2001	6 011	4 493	17 074	13	448	423	1 316	
2002	6 012	4 526	17 030	12	464	416	1 319	
2003	6 012	4 530	17 016	11	475	413	1 321	
2004	6 012	4 527	17 013	11	485	410	1 320	
2005	6 018	4 513	17 006	11	506	405	1 320	
2006	6 017	4 497	17 014	11	517	402	1 320	
2007	6 024	4 491	17 004	11	528	399	1 321	
2008	6 030	4 476	17 007	11	537	397	1 321	
2009	6 029	4 476	16 998	11	549	395	1 321	
2010	6 025	4 477	16 994	11	559	392	1 321	
2011	6 025	4 476	16 984	11	571	390	1 321	
2012	6 021	4 454	16 998	11	585	389	1 320	
2013	6 028	4 453	16 977	11	601	388	1 320	
2014	6 029	4 452	16 942	11	638	385	1 320	
2015	6 029	4 452	16 927	11	656	383	1 320	
2016	6 252	4 419	16 737	11	656	383	1 320	
2017	6 289	4 412	16 691	11	684	370	1 320	
2018	6 332	4 401	16 655	11	692	366	1 320	
2019	6 374	4 380	16 634	11	692	366	1 320	
2020	0	0	0	0	0	0	0	

Land cover change

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

	Tree-covered areas (km²)	Grasslands (km²)	Croplands (km²)	Wetlands (km²)	Artificial surfaces (km²)	Other Lands (km²)	Water bodies (km²)	Total (km²)

	Tree-covered areas (km²)	Grasslands (km²)	Croplands (km²)	Wetlands (km²)	Artificial surfaces (km²)	Other Lands (km²)	Water bodies (km²)	Total (km²)
Tree-covered areas (km²)	5 937	8	59	0	6	0	1	6 011
Grasslands (km²)	12	4 380	97	0	2	1	1	4 493
Croplands (km²)	80	63	16 768	0	161	0	1	17 073
Wetlands (km²)	0	0	0	11	0	0	2	13
Artificial surfaces (km²)	0	0	0	0	448	0	0	448
Other Lands (km²)	0	1	2	0	39	382	0	424
Water bodies (km²)	0	0	1	0	0	0	1 314	1 315
Total	6 029	4 452	16 927	11	656	383	1 319	

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

	Tree-covered areas (km²)	Grasslands (km²)	Croplands (km²)	Wetlands (km²)	Artificial surfaces (km²)	Other Lands (km²)	Water bodies (km²)	Total land area (km²)
Tree-covered areas (km²)	6 026	0	1	0	1	0	0	6 028
Grasslands (km²)	57	4 376	19	0	1	0	0	4 453
Croplands (km²)	292	4	16 613	0	17	0	0	16 926
Wetlands (km²)	0	0	0	11	0	0	0	11
Artificial surfaces (km²)	0	0	0	0	656	0	0	656
Other Lands (km²)	0	0	0	0	17	365	0	382
Water bodies (km²)	0	0	0	0	0	0	1 320	1 320
Total	6 375	4 380	16 633	11	692	365	1 320	

Land cover degradation

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

	Area (km²)	Percent of total land area (%)
Land area with degraded land cover	383	1 .3
Land area with non-degraded land cover	29 394	98 .7
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 (km²)	Percent of total land area (%)
Land area with improved land cover	367	1 .2
Land area with stable land cover	29 369	98 .6
Land area with degraded land cover	41	0 .1

	Area (km²)	Percent of total land area (%)
Land area with no land cover data	0	0 .0

General comments

In PRAIS 4, in the presented data, by default, the territory of Armenia was represented as 29.716 km2. We could not take this as a basis, since according to the Law of the Republic of Armenia "On Approval of the Land Balance of the Republic of Armenia by categories and land plots as of January 1, 1997", the total area of the territory of the Republic of Armenia is 29743 km2. 29,743km2 appears in all official documents. Based on this fact, a map of Armenia's borders with a territory of 29,743km2 was uploaded to PRAIS 4 (Source: "Hakobyan Environment Center" (American University of Armenia). After the border of the Republic of Armenia was established in version 4, a sequence of algorithms from QGIS with the TREND ERTS tool was launched. Calculations were made on the basis of different sources of initial data. As a result, a relatively plausible option was chosen from the Trends Earth source code, which was installed in PRAIS 4. However, it turned out that after entering in PRAIS 4, the map of the borders of Armenia with the territory of 29,743km2, the territory of Armenia became 29,778km2. It can be confidently stated that the rate of degradation of land cover during the reporting period decreased by more than 3 times compared to the base period.

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 (km²) for the baseline period					
	Declining (km²)	Moderate Decline (km²)	Stressed (km²)	Stable (km²)	Increasing (km²)	No Data (km²)
Tree-covered areas	89	700	136	3 208	1 799	5
Grasslands	191	800	63	2 312	1 011	3
Croplands	658	2 420	226	8 371	5 090	3
Wetlands	5	2	1	1	1	1
Artificial surfaces	75	25	23	165	160	0
Other Lands	20	42	20	155	142	3
Water bodies	4	5	3	13	13	1 278

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 (km²) for the reporting period					
	Declining (km²)	Moderate Decline (km²)	Stressed (km²)	Stable (km²)	Increasing (km²)	No Data (km²)
Tree-covered areas						
Grasslands						
Croplands						
Wetlands						
Artificial surfaces						
Other Lands						
Water bodies						

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 (km²) for the baseline period					
From	To	Net area change (km²)	Declining (km²)	Moderate Decline (km²)	Stressed (km²)	Stable (km²)	Increasing (km²)
Croplands	Artificial surfaces	161	15	10	0	55	81
Grasslands	Croplands	97	1	26	0	45	25
Croplands	Tree-covered areas	80	1	10	0	42	27
Croplands	Grasslands	63	2	19	6	30	6

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.

Land Conversion		Net land productivity dynamics (km²) for the reporting period					
From	To	Net area change (km²)	Declining (km²)	Moderate Decline (km²)	Stressed (km²)	Stable (km²)	Increasing (km²)

Land Conversion		Net land productivity dynamics (km²) for the reporting period					
From	To	Net area change (km²)	Declining (km²)	Moderate Decline (km²)	Stressed (km²)	Stable (km²)	Increasing (km²)
Croplands	Tree-covered areas	292					
Grasslands	Tree-covered areas	57					
Grasslands	Croplands	19					
Croplands	Artificial surfaces	17					

Land Productivity degradation

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

	Area (km²)	Percent of total land area (%)
Land area with degraded land productivity	5 141	18 .1
Land area with non-degraded land productivity	23 303	81 .9
Land area with no land productivity data	17	0 .1

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

	Area (km²)	Percent of total land area (%)
Land area with improved land productivity	8 393	29 .5
Land area with stable land productivity	14 910	52 .4
Land area with degraded land productivity	5 139	18 .1
Land area with no land productivity data	15	0 .1

General comments

The data presented in the same tables SO1-2.T5 and SO1-2.T6 from the sources 1. Armenia – Working draft (BP 18.1%/18.1% RP), 2. Armenia – Revision 2, 05/01/2023 11:13 (BP 18.1%/33.3% RP) and 3. Armenia – Revision 1, 07/04/2022 05:54 (BP 0.3%/4.2% RP) are different, which does not favor the reliability of the data. There is a tendency of increase in degradation of land productivity during the reporting period compared with the productivity of the land in the base period. The decrease in land productivity in the reporting period compared to the base period is also likely due to the intensification and increase in droughts, the increase and expansion of fire areas and the expansion of territories and volumes of sanitary logging in 2016-2019. This is also is confirmed by the data from the SO3-1.T1 table. According to statistics, 6122.7 hectares of forest territories have been affected by fires since 2016-2019. Source: https://www.armstat.am/

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	119	134	108	126	68	84	3
2001	119	134	107	126	68	85	3
2002	119	135	107	130	67	85	3
2003	119	135	107	130	67	85	3
2004	119	135	107	130	67	85	3
2005	119	135	107	129	66	86	3
2006	119	135	107	129	66	86	3
2007	119	135	107	129	65	86	3
2008	120	135	107	129	65	86	3
2009	120	135	107	128	65	86	3
2010	120	135	107	128	65	86	3
2011	120	135	107	128	65	86	3
2012	120	135	108	127	64	86	3
2013	120	135	108	127	64	86	3
2014	120	135	108	126	64	86	3
2015	120	135	108	126	64	86	3
2016	119	135	108	126	63	86	3
2017	119	135	108	126	62	87	3
2018	119	135	108	126	61	88	3
2019	119	135	108	126	60	88	3
2020	0	0	0	0	0	0	0

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 (km²)	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	Grasslands	63	155 .0	180 .6	976 291	1 137 927	161 636

Land Conversion		Soil organic carbon (SOC) stock change in the baseline period					
From	To	Net area change (km²)	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	80	136 .7	151 .4	1 093 251	1 211 248	117 997
Grasslands	Croplands	97	143 .4	131 .2	1 390 637	1 272 352	-118 285
Croplands	Artificial surfaces	161	77 .0	56 .0	1 239 056	901 978	-337 078

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 (km²)	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	292	103 .1	106 .8	3 009 329	3 118 838	109 509
Grasslands	Tree-covered areas	57	122 .6	122 .7	699 045	699 187	142
Grasslands	Croplands	19	178 .0	175 .2	338 289	332 838	-5 451
Croplands	Artificial surfaces	17	55 .1	47 .6	93 689	80 958	-12 731

Soil organic carbon stock degradation

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

	Area (km²)	Percent of total land area (%)
Land area with degraded soil organic carbon (SOC)	223	0 .8
Land area with non-degraded SOC	28 229	99 .2
Land area with no SOC data	9	0 .0

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

	Area (km²)	Percent of total land area (%)
Land area with improved SOC	3	0 .0
Land area with stable SOC	28 256	99 .3
Land area with degraded SOC	191	0 .7
Land area with no SOC data	7	0 .0

General comments

There is a tendency of decrease of the area of land with degraded SOC stock in the reporting period compared to the base period (by about 14%).

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 (km²)	Proportion of degraded land over the total land area (%)
Baseline Period	5 487	19 .3
Reporting Period	5 532	19 .4
Change in degraded extent	45	

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 data concerning the Proportion of degraded land over the total land area presented in the same table SO1-4.T1 from the various sources: 1. Armenia – Working draft (BP 19.3%/19.4% RP), 2. Armenia – Revision 2, 05/01/2023 11:13 (BP 19.3%/34.9% RP) and 3. Armenia – Revision 1, 07/04/2022 05:54 (BP 1.8%/4.9% RP) are different, which does not favor the reliability of the obtained from Trends Earth source data. There is indeed a tendency to increase the Proportion of degraded land over the total land area during the reporting period compared with the base period. It can be assumed that in the reporting period, in addition to reducing the impact of anthropogenic factors that increase the share of degraded lands from the total land area compared to the base period, natural factors increased in parallel with this (claymate change, droughts, fires). This is also is confirmed by the data from the SO3-1.T1 table, and to statistics dates, 6122.7 hectares of forest territories have been affected by fires since 2016-2019. A source: https://www.armstat.am/

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 (km²)	Process driving false +/- outcome	Basis for Judgement	Edit Polygon
Regions: Lori, Tavush, Gegharkunik, Shirak, Aragatsotn, Ararat and Syunik	False Negative	Recode degraded as stable	8 565	The data on the dynamics of land productivity for the base period and for the reporting period are much overestimated respectively, compared with the default data of (see tables: SO1-2 T4 and SO1-2 T5).	Other The data on the dynamics of land productivity for the base period and for the reporting period are much overestimated compared to the default data	

Perform qualitative assessments of areas identified as degraded or improved

SO1-4.T4: Degradation hotspots

Hotspots	Location	Area (km²)	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
Region of Lori	North of the Region of Lori	10	Qualitative information	1. Deforestation and clearance of other native vegetation 2. Climate change 3. Mineral resource extraction 4. Fire regime change	☒ Avoid ☐ Reduce ☐ Reverse	• Restore/improve tree-covered areas ○ Reduce/halt deforestation and conversion of tree cover to other land cover types (e.g. conserving forest land) ○ Restore tree-covered areas ○ Improve tree cover management e.g. fire management • Increase tree-covered area extent ○ Increase tree covered land (net gain) e.g. plantations	
Region of Tavush	South of the Region of Tavush	20	Qualitative information	1. Deforestation and clearance of other native vegetation 2. Climate change 3. Fire regime change	☒ Avoid ☐ Reduce ☐ Reverse	• Increase protected areas • Restore/improve tree-covered areas ○ Restore tree-covered areas ○ Improve tree cover management e.g. fire management • Increase tree-covered area extent ○ Increase tree covered land (net gain) e.g. plantations	
Total no. of hotspots	3						
Total hotspot area	35						

Hotspots	Location	Area (km²)	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
Region of Shirak	South-West of of the Region of Shirak	5	Qualitative information	1. Deforestation and clearance of other native vegetation 2. Cropland and agroforestry management 3. Mineral resource extraction 4. Climate change	☒ Avoid ☐ Reduce ☐ Reverse	• Restore/improve croplands ○ Practise sustainable land management ○ Increase land productivity in agricultural areas • Restore/improve grasslands ○ Restore and improve pastures • Restore/improve protected areas ○ Improve management of protected areas • Restore/improve tree-covered areas ○ Reduce/halt deforestation and conversion of tree cover to other land cover types (e.g. conserving forest land) • Restore productivity and soil organic carbon stock in croplands and grasslands	
Total no. of hotspots	3						
Total hotspot area	35						

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

1. Science, knowledge and technology
2. Economic
3. Institutions and governance

SO1-4.T5: Improvement brightspots

Brightspots	Location	Area (km²)	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 brightpots	4					
Total brightspot area	60					

Brightspots	Location	Area (km²)	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

Region of Armavir	Different land plots	10	Qualitative information	☐ Avoid
				☐ Reduce
				☒ Reverse
					• Restore/improve croplands
					  ○ Practise sustainable land management
					  ○ Improve water use for irrigation
					  ○ Halt/reduce conversion of cropland to other land cover types
					  ○ Rehabilitate bare or degraded land for crop production
					
					• Increase soil fertility and carbon stock
					  ○ Reduce soil erosion
					  ○ Increase carbon stock and reduce soil/land degradation	

Region of Ararat	Different land plots	15	Qualitative information	☐ Avoid
				☐ Reduce
				☒ Reverse
					• Restore/improve croplands
					  ○ Practise sustainable land management
					  ○ Improve water use for irrigation
					  ○ Halt/reduce conversion of cropland to other land cover types
					  ○ Increase land productivity in agricultural areas
					  ○ Rehabilitate bare or degraded land for crop production	

Region of Syunik	Southeast	20	Qualitative information	☐ Avoid
				☐ Reduce
				☒ Reverse
					• Restore/improve grasslands
					  ○ Restore rangeland (e.g. by controlling livestock and wildfires)
					  ○ Restore and improve pastures
					
					• Restore/improve tree-covered areas
					  ○ Reduce/halt deforestation and conversion of tree cover to other land cover types (e.g. conserving forest land)
					  ○ Restore/improve grasslands
					  ○ Restore tree-covered areas
					  ○ Improve tree cover management e.g. fire management
					
					• Increase tree-covered area extent
					  ○ Increase tree covered land (net gain) e.g. plantations	

Total no. of brightpots	4					
Total brightspot area	60					

Brightspots	Location	Area (km²)	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

Region of Tavush	Southeast	15	Qualitative information	☐ Avoid
				☐ Reduce
				☒ Reverse
					• Restore/improve grasslands
					  ○ Restore rangeland (e.g. by controlling livestock and wildfires)
					  ○ Restore and improve pastures
					
					• Restore/improve tree-covered areas
					  ○ Reduce/halt deforestation and conversion of tree cover to other land cover types (e.g. conserving forest land)
					  ○ Restore/improve grasslands
					  ○ Restore tree-covered areas
					  ○ Improve tree cover management e.g. fire management	

Total no. of brightpots	4					
Total brightspot area	60					

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

1. Legal and regulatory instruments
2. Economic and financial instruments
3. Protected areas

General comments

It can be confidently stated that the rate of degradation of land cover during the reporting period decreased by more than 3 times compared to the base period. The data has been obtained from the various sources and are comparable. There is a tendency of increase in degradation of land productivity during the reporting period compared with the productivity of land in the base period. The decrease in land productivity in the reporting period compared to the base period is also likely due to the intensification and increase in climate change, droughts, the increase and expansion of fire areas and the expansion of territories and volumes of sanitary logging. However, the data obtained is much overstated. There are a tendency of decrease the area of land with degraded SOC stock in the reporting period compared to the base period. The data obtained from various sources are comparable. Despite the relatively positive trends observed when studying data on the area of soil degradation and the decrease in the area of land with degraded SOC stock for the reporting period compared to the base period (by about 14%),the reverse process is observed when studying data on the area of degradation of land productivity for the reporting period compared to the base one. The data concerning the Proportion of degraded land over the total land area was presented in the same table - SO1-4. T1 from the various sources: 1. Armenia – Working draft (BP 19.3%/19.4% RP), 2. Armenia – Revision 2, 05/01/2023 11:13 (BP 19.3%/34.9% RP) and 3. Armenia – Revision 1, 07/04/2022 05:54 (BP 1.8%/4.9% RP) are different, which does not favor the reliability of the obtained from Trends Earth source data. There is indeed a tendency of increase in the Proportion of degraded land over the total land area during the reporting period compared with the base period. However, the data obtained is much overstated, which is mainly due to the data obtained by land productivity. It can be assumed that in the reporting period, in addition to reducing the impact of anthropogenic factors that increase the share of degraded lands from the total land area compared to the base period, the process of land degradation has increased as a result of impact of climate change, droughts, fires.

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 (km²)	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
Total			Sum of all targeted areas 28 423						

Target	Year	Location(s)	Total Target Area (km²)	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

Increase in soil organic carbon stocks (underground and above ground) by 1.5% by 2040 compared to the situation in 2015.	2040	Republic of Armenia	10 300	☒ Avoid
				☐ Reduce
				☒ Reverse
					• General instrument (e.g. policies, economic incentives)
					
					• Restore/improve croplands
					  ○ Practise sustainable land management
					  ○ Improve water use for irrigation
					  ○ Halt/reduce conversion of cropland to other land cover types
					  ○ Increase land productivity in agricultural areas
					
					• Restore/improve grasslands
					  ○ Restore rangeland (e.g. by controlling livestock and wildfires)
					  ○ Restore and improve pastures
					  ○ Halt/reduce conversion of grassland to other land cover types
					  ○ Improve land productivity in grasslands
					
					• Restore/improve tree-covered areas
					  ○ Reduce/halt deforestation and conversion of tree cover to other land cover types (e.g. conserving forest land)
					  ○ Restore/improve grasslands
					  ○ Restore tree-covered areas
					  ○ Improve tree cover management e.g. fire management
					
					• Increase tree-covered area extent
					  ○ Increase tree covered land (net gain) e.g. plantations
					
					• Restore productivity and soil organic carbon stock in croplands and grasslands
					
					• Increase soil fertility and carbon stock
					  ○ Reduce soil erosion
					  ○ Improve watershed/landscape management
					  ○ Rehabilitate bare land and/or restore degraded land
					  ○ Increase carbon stock and reduce soil/land degradation
						Ongoing	◉ Yes
							○ No
							
							LDN pilot project
								• Convention on Biological Diversity – National Biodiversity Strategies and Action Plans & National Targets
								• United Nations Framework Convention on Climate Change – Nationally Determined Contributions	

Total			Sum of all targeted areas 28 423						

Target	Year	Location(s)	Total Target Area (km²)	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
By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	2030	Republic of Armenia	18 090	☒ Avoid ☒ Reduce ☒ Reverse	• Restore/improve wetlands • Restore/improve croplands • Restore/improve grasslands • Restore/improve protected areas • Restore/improve multiple land uses • Increase tree-covered area extent • Increase soil fertility and carbon stock • Reduce/halt conversion of multiple land uses	Ongoing	◉ Yes ◯ No Other process Target 15.3 of SDG	• Convention on Biological Diversity – National Biodiversity Strategies and Action Plans & National Targets • United Nations Framework Convention on Climate Change – Nationally Determined Contributions	

10 million trees planting in Armenia	2023	Republic of Armenia	33	☐ Avoid
				☐ Reduce
				☒ Reverse
					• Restore/improve tree-covered areas
					  ○ Reduce/halt deforestation and conversion of tree cover to other land cover types (e.g. conserving forest land)
					  ○ Increase land productivity in tree covered areas
					  ○ Restore tree-covered areas
					  ○ Improve tree cover management e.g. fire management
						Ongoing	◉ Yes
							◯ No
							Other process
							Target 15.3 of SDG
								• Convention on Biological Diversity – National Biodiversity Strategies and Action Plans & National Targets
								• United Nations Framework Convention on Climate Change – Nationally Determined Contributions	

Total			Sum of all targeted areas 28 423						

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 (km²)	Edit Polygon
Increase in soil organic carbon stocks (underground and above ground) by 1.5% by 2040 compared to the situation in 2015.	Same As Targeted Actions	Marzes (Regions) of the Republic of Armenia/Hayantar	2016-01-01	3	4 .00	
					Sum of all areas relevant to actions under the same target Increase in soil organic carbon stocks (underground and above ground) by 1.5% by 2040 compared to the situation in 2015. : — 4 .00 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world : — 16 .00 10 million trees planting in Armenia: 5 .00	

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 (km²)	Edit Polygon
Increase in soil organic carbon stocks (underground and above ground) by 1.5% by 2040 compared to the situation in 2015.	Same As Targeted Actions	Ararat region	2018-04-17	1	4 .00	
10 million trees planting in Armenia	Same As Targeted Actions	Regions of Lori, Tavush, Syunik, Shirak, Aragatsotn, Kotayk, Gegharkunik	2019-11-11	5	5 .00	
By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	Same As Targeted Actions	Regions of Lori, Tavush	2016-12-10	14	16 .00	
By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	Same As Targeted Actions	Regions of Aragatsotn and Shirak	2014-12-10	2	16 .00	

Sum of all areas relevant to actions under the same target

Increase in soil organic carbon stocks (underground and above ground) by 1.5% by 2040 compared to the situation in 2015. :	4 .00
By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world :	16 .00
10 million trees planting in Armenia:	5 .00

General comments

06.05.2021 Decree N 725-L of the Government of the Republic of Armenia is approved "On the Approval of the Program for Achieving a Land Degradation Neutrality in the Republic of Armenia" where as a voluntary target is mentioned: " Increase in soil organic carbon stocks (underground and above ground) by 1.5% by 2040 compared to the situation in 2015". On September 25-27, 2015, at the UN Headquarters in New York, world leaders, including heads of state and government (including the Republic of Armenia), endorsed the post-2015 development agenda, which includes 17 goals. Goal 15 includes target 15.3: "By 2030, combat desertification, restore degraded lands and soils, including lands affected by desertification, drought and floods, and strive for a land degradation free world." Within the framework of the "10 million trees" initiative, the tree planting was launched in 2020 for the purposes of afforestation, reforestation, and landscaping. "10 million trees" campaign was initiated by the RA Government, around 702,280 trees were planted in the territory of Armenia within various projects and initiatives implemented by Government, donor assistance projects, international organizations and civil society (in the regions of Lori, Tavush, Syunik, Shirak, Aragatsotn, Kotayk, Gegharkunik) in 2020-2021.

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)

Proportion of population below the international poverty line

SO2-1.T1: National estimates of the proportion of population below the international poverty line

Year	Proportion of population below international poverty line (%)
2 000	
2 001	14.4
2 002	10.5
2 003	7.9
2 004	5.5
2 005	2.7
2 006	2.1
2 007	1.6
2 008	0.9
2 009	1.3
2 010	1.0
2 011	1.2
2 012	0.9
2 013	1.8
2 014	1.5
2 015	1.3
2 016	1.2
2 017	0.9
2 018	1.4
2 019	1.1
2 020	0.4

Qualitative assessment

SO2-1.T3: Interpretation of the indicator

Indicator metric	Change in the indicator	Comments
Proportion of population below the international poverty line	Decrease	According to this indicator, presented data shows a clear decrease in the values for the base period: from 14.4% to 1.3% (2001-2015).

Indicator metric	Change in the indicator	Comments
Proportion of population below the international poverty line	Decrease	According to this indicator, presented data shows clear decrease in the values for the reporting period: from 1.3% to 1.1% (2016-2019).

General comments

Source of information: Integrated Survey of Living Conditions of Armenian Households (2008-2020) National Statistical Service of the Republic of Armenia https://armstat.am/ https://armstat.am/file/article/poverty_2020_e_2.pdf

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	95.4	64.4	87.6
2001	94.2	64.7	84.7
2002	96.7	64.7	84.1
2003	97.7	71.3	87.3
2004	96.5	74.0	88.9
2005	97.9	72.8	89.4
2006	98.1	78.0	91.3
2007	98.8	84.8	94.1
2008	99.5	92.4	97.1
2009	99.6	93.6	97.6
2010	99.5	93.5	97.0
2011	99.5	93.7	97.5
2012	99.6	90.8	96.6
2013	99.9	96.3	98.7
2014	99.7	95.5	98.3
2015	99.9	92.5	97.3
2016	100	94.0	97.9
2017	99.9	93.3	97.3
2018	99.7	94.4	97.9
2019	99.5	90.6	96.1
2020	99.7	89.6	95.5

Qualitative assessment

SO2-2.T2: Interpretation of the indicator

Change in the indicator	Comments
Increase	For the base period 2000-2015. for this indicator for the general population, the data shows a clear "increase" (with some deviations): the minimum was 84.1%, the maximum was 98.7%, For the rural population the minimum was 64.4%, the maximum was 96.3%. The share of the urban population using water supply services is always higher than the share of the rural population. For the reporting period 2016-2019 for this indicator for the general population, the data shows "no changes" (with some deviations): the minimum was 96.1%, the maximum was 97.9%. For the rural population the minimum was 90.6%, the maximum was 94.4%. The share of the urban population using water supply services is always higher than the share of the rural population. It should also be noted that the quality of services provided has improved. The observed improvements are mainly related to the implementation of a policy to reduce water losses and rational use of water resources, modernization of the water management system.

General comments

Source of information: ARMENIA − NON-MATERIAL POVERTY Social Snapshot and Poverty in Armenia, 2021. Statistical Committee of the

Republic of Armenia https://armstat.am/ https://armstat.am/en/?nid=82&year=2018 https://armstat.am/file/article/poverty_2021_e_4..pdf https://armstat.am/file/article/poverty_2020_e_4.pdf https://armstat.am/file/article/poverty_2018_english_4.pdf

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	828123	29 .6	432145	29 .6	395978	29 .5
Reporting period	766713	27 .8	400984	27 .8	365729	27 .7

Qualitative assessment

SO2-3.T2: Interpretation of the indicator

Change in the indicator	Comments
Decrease	The decrease in share of the total population subject to degradation in the reporting period compared to the share of the total population subject to degradation in the base period can be explained both with the improvement of the condition of agricultural land (from 2006 to 2019, only irrigated land increased by 1,600 hectares from year to year) and with a decrease in the total population of the country (in 2019, compared with 2000, the total population of the country has decreased by 8%). In the period from 2016 to 2021, the "Branch for the Implementation of Water Management Programs" of the Territorial Development Fund of Armenia has restored and built water irrigation pipelines for 2001 hectares within the framework of the "Irrigation Systems Modernization Program". The share of the percentage of total female population exposed, and the share of the percentage of total male population exposed for the baseline period is bigger than for the reporting period. This decrease is also explained by decrease in the total population in the Republic and improvement of condition of agricultural land. When comparing the share of the percentage of total female population exposed with the share of the percentage of total male population exposed, both for the baseline and for the reporting periods, the share of percentage of total female population exposed is always higher, the latter can be explained by the decreasing number of men in the country, the process is faster than the number of women from year to year.

General comments

Calculations were made based on the default data. The source of information: Women and Men in Armenia, https://www.armstat.am /en/?nid=82&id=2215 https://www.armstat.am/file/article/eco_book_2018_2.pdf https://www.armstat.am/ru/?nid=82&id=2215 http://www.atdf.am/hy/Reports https://www.armstat.am/ru/?nid=82&year=2019 https://www.armstat.am/file/article/gender_2016_2.pdf https://www.armstat.am/file/article/gender.pdf https://www.armstat.am/en/?nid=82&id=1094 https://armstat.am/en/?nid=209 Publications by years https://armstat.am/en/?nid=82

SO2 Voluntary Targets

SO2-VT.T1

Target	Year	Level of application	Status of target achievement	Comments
In the event of a planned increase, the minimum wage will be about 240% of the upper poverty level by 2025, instead of 88% in 2012.	2025	National	Ongoing	«The Strategic Program of Long-term Development of the Republic of Armenia for 2014-2025» was approved by the Decree of the Government of the Republic of Armenia No. 442-Ն dated March 27, 2014. The program covered y.y.2014-2025 and became the main strategic document of the socio-economic development of the country and the basis for the development of medium-term, sectoral and other program documents. Being a priority strategic mainstream within the framework for action of the Government of the Republic of Armenia, the Program was based on the following four priorities: 1. Employment expansion, 2. Human capital development, 3. Improvement of the social protection system. 4. Institutional modernization of the management system.
There is no poverty- to eradicate poverty everywhere in all its manifestations and forms	2030	Subnational	Ongoing	SDG 2015 Goal 1: End poverty in all its forms everywhere
Clean water and sanitation-ensuring access and sustainable management of water and sanitation for all	2030	Subnational	Ongoing	SDG 2015 Goal 6: Ensure access to water and sanitation for all
Quality Education-to provide inclusive and adequate quality education for all and to promote lifelong learning opportunities	2030	Subnational	Ongoing	SDG 2015 Goal 4: Quality Education

General comments

On December 7th of 2022, the National Assembly of the Republic of Armenia approved the law "On the proposal of the Government of the Republic of Armenia to amend the law "On Minimum Wages"(ՀՕ-501-Ն), according to which, from January 1, 2023, the minimum wage has been increased by 7000 drams (about 17.5 USD), which fits well into the aforementioned national goal. Source of information: https://www.arlis.am/ (ՀՕ-501-Ն) https://sdgs.un.org/goals

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 (km²)	Moderate drought (km²)	Severe drought (km²)	Extreme drought (km²)	Non-drought (km²)
2000	1 551	10 366	13 894	3 968	0
2001	12 592	5 069	1 657	5 356	5 104
2002	6 156	1 396	0	0	22 227
2003	4 596	1 585	0	0	23 597
2004	8 855	0	37	14	20 873
2005	2 597	451	0	0	26 731
2006	5 403	0	0	0	24 376
2007	3 771	0	0	0	26 008
2008	22 015	4 872	2 856	0	36
2009	4 613	2 783	589	1 177	20 616
2010	298	0	0	0	29 481
2011	8 661	0	0	0	21 118
2012	15 103	3 362	3 960	589	6 765
2013	9 955	3 205	2 732	3 414	10 472
2014	6 591	1 609	1 764	1 177	18 639
2015	5 843	0	0	0	23 936
2016	4 794	1 766	0	0	23 219
2017	8 602	7 332	6 155	6 214	1 476
2018	4 723	0	0	0	25 056
2019	9 396	3 577	5 902	8 667	2 237
2020					
2021					

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

	Total area under drought (km²)	Proportion of land under drought (%)
2000	28 463	100 .0
2001	24 674	86 .7
2002	7 552	26 .5
2003	6 182	21 .7
2004	8 906	31 .3
2005	3 048	10 .7

	Total area under drought (km²)	Proportion of land under drought (%)
2006	5 403	19 .0
2007	3 771	13 .3
2008	28 458	100 .0
2009	9 162	32 .2
2010	298	1 .0
2011	8 661	30 .4
2012	23 014	80 .9
2013	19 306	67 .8
2014	11 140	39 .1
2015	5 843	20 .5
2016	6 560	23 .1
2017	28 303	99 .5
2018	4 723	16 .6
2019	27 542	96 .8
2020		-
2021		-

Qualitative assessment:

Calculations (by default data) show that the average share of proportion of land under drought for the baseline period per year is 16.99% of the total land area, and the average share of proportion of land under drought for the reporting period per year is 59.0% of the total land area, which indicates that within the period lasting from years 2000-2019 the frequency of droughts increases, and the territories, affected by drought, are expanding.

General comments

Studies show that in general, droughts are observed in the valley regions of Armenia almost every year, and in the foothills - once every two years. In recent years, the upper limit of drought has expanded, which is expanding to cover more and more land, pastures, mountain territories. The duration of the drought has also increased. Analysis of the dynamics of droughts 2000-2019 shows that cases of severe and very severe droughts are increasing. The registered maximum for this period was recorded in 2017 and the number of dry days increased by 33 days. Source of information: unccd_Armenia_2018 https://prais.unccd.int/node/214 https://prais.unccd.int/sites/default /files/2018-12/0SO3%20additional%20information.pdf Armenia faces significant disaster risk levels and is ranked 101 out of 191 countries by the 2019 Inform Risk Index (European Commission (2019). INFORM Index for Risk Management. Armenia. URL: https://drmkc.jrc.ec.europa.eu/inform-index). This ranking is driven strongly by the exposure component of risk. Armenia has high exposure to natural hazards, including, riverine, flash, and coastal, and very high exposure to tropical cyclones and their associated risks. Drought exposure is also significant. Disaster risk in Armenia is elevated due to its moderate levels of social vulnerability and the country's decent coping capacity. Vulnerability to draughts is exacerbated by the impact of climate change. Increased drought risk is a particular threat to poorer rural communities dependent on subsistence agriculture. As the Caucasus Glaciers will largely disappear over the 21st century, the pressure and dependence on water management infrastructure is expected to also grow significantly. A warmer and more drought prone environment is likely to drive significant changes in ecosystems composition, notably driving dryland expansion, forest loss, and species range shifts. According to Armenia's 4th National Communication under UNFCCC, quoting the drought indices, the number of days with strong and very strong droughts during the period of 2000-2017 increased by 33 days, as compared to the 1961-1990 average (87). In recent years, the upper boundary of the drought zone has expanded and includes mountainous areas, with an earlier timed start of drought. (Fourth National Communication of the Republic of Armenia under UNFCCC, page xxvii.) Two primary types of drought may affect Armenia, meteorological (usually associated with a precipitation deficit) and hydrological (usually associated with a deficit in surface and subsurface water flow, potentially originating in the region's wider river basins). When low hydrological flows also coincide with imperfect crop choices and land management practices agricultural drought can also result. At present, Armenia faces a significant annual probability of severe meteorological drought, as defined by a standardized precipitation evaporation index (SPEI) of less than −2. A key route through which climate change may lead to soil and land degradation is through its impact on soil moisture. Due to the large increases in the frequency and intensity of drought projected over Armenia, the potential for declines in soil quality are significant. The Caucasus region is among many regions where an expansion of the arid and semi-arid area is projected, with the affected area growing rapidly over the 21st century under higher emissions pathways. Such changes will reduce ecosystem productivity resulting in species range shifts, and potential loss of biodiversity. Source 1: "Accelerated dryland expansion under climate change", Jianping Huang, Haipeng Yu, Xiaodan Guan, Guoyin Wang & Ruixia Guo, Nature Climate Change volume 6, pages166−171 (2016). Source 2: CLIMATE RISK COUNTRY PROFILE: ARMENIA, by 2021 by the World Bank Group and ADB

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	39469	1.3	848196	28.2	1847855	61.5	268040	8.9	3 003 560	100.0
2001	361096	12.1	2276857	76.3	138725	4.6	78898	2.6	128405	4.3	2 622 885	87.9
2002	2767522	93.3	152283	5.1	47045	1.6	0	0.0	0	0.0	199 328	6.7
2003	2818254	95.4	112812	3.8	23629	0.8	0	0.0	0	0.0	136 441	4.6
2004	845160	28.7	2093483	71.2	0	0.0	1825	0.1	199	0.0	2 095 507	71.3
2005	2828265	96.6	94233	3.2	5384	0.2	0	0.0	0	0.0	99 617	3.4
2006	2600229	89.5	306124	10.5	0	0.0	0	0.0	0	0.0	306 124	10.5
2007	2801201	96.7	95859	3.3	0	0.0	0	0.0	0	0.0	95 859	3.3
2008	2101	0.1	2277503	79.0	418812	14.5	185727	6.4	0	0.0	2 882 042	99.9
2009	2195212	76.5	319446	11.1	296370	10.3	21317	0.7	36236	1.3	673 369	23.5
2010	2850433	100.0	396	0.0	0	0.0	0	0.0	0	0.0	396	0.0
2011	2202616	77.4	641408	22.6	0	0.0	0	0.0	0	0.0	641 408	22.6
2012	150194	5.3	1454488	51.3	874499	30.8	342805	12.1	13753	0.5	2 685 545	94.7
2013	397445	14.1	1845447	65.3	230409	8.2	134480	4.8	216593	7.7	2 426 929	85.9
2014	1327863	47.2	1128112	40.1	223140	7.9	98005	3.5	36749	1.3	1 486 006	52.8
2015	2434634	86.9	367286	13.1	0	0.0	0	0.0	0	0.0	367 286	13.1
2016	2276040	81.5	459296	16.4	57867	2.1	0	0.0	0	0.0	517 163	18.5
2017	24477	0.9	255739	9.2	1659528	59.7	405538	14.6	436059	15.7	2 756 864	99.1
2018	2421011	87.3	350890	12.7	0	0.0	0	0.0	0	0.0	350 890	12.7
2019	20957	0.8	1041300	37.7	825114	29.9	387510	14.0	486245	17.6	2 740 169	99.2
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	20615	1.3	437318	27.9	972146	62.1	136439	8.7	1 566 518	100.0

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	185506	11.9	1195701	76.7	71755	4.6	39818	2.6	65294	4.2	1 372 568	88.1
2002	1449308	93.5	77477	5.0	23874	1.5	0	0.0	0	0.0	101 351	6 .5
2003	1475786	95.5	57803	3.7	12037	0.8	0	0.0	0	0.0	69 840	4 .5
2004	434543	28.2	1103707	71.7	0	0.0	956	0.1	108	0.0	1 104 771	71.8
2005	1483345	96.7	47993	3.1	2727	0.2	0	0.0	0	0.0	50 720	3 .3
2006	1364406	89.5	160044	10.5	0	0.0	0	0.0	0	0.0	160 044	10.5
2007	1472060	96.8	48856	3.2	0	0.0	0	0.0	0	0.0	48 856	3 .2
2008	1066	0 .1	1198317	79.0	218328	14.4	98437	6.5	0	0.0	1 515 082	99.9
2009	1157775	76.7	168440	11.2	153538	10.2	10974	0.7	18907	1.3	351 859	23.3
2010	1501405	100.0	229	0.0	0	0.0	0	0.0	0	0.0	229	0 .0
2011	1155718	77.6	333225	22.4	0	0.0	0	0.0	0	0.0	333 225	22.4
2012	76263	5 .2	759728	51.5	458748	31.1	174325	11.8	6892	0.5	1 399 693	94.8
2013	199767	13.6	968651	65.9	119971	8.2	68923	4.7	112880	7.7	1 270 425	86.4
2014	693290	47.3	589751	40.3	113184	7.7	50108	3.4	18686	1.3	771 729	52.7
2015	1271500	87.1	187497	12.9	0	0.0	0	0.0	0	0.0	187 497	12.9
2016	1190345	81.8	235593	16.2	29329	2.0	0	0.0	0	0.0	264 922	18.2
2017	12360	0 .9	129754	8.9	876541	60.4	209048	14.4	222601	15.3	1 437 944	99.1
2018	1267490	87.6	178912	12.4	0	0.0	0	0.0	0	0.0	178 912	12.4
2019	10553	0 .7	546974	37.9	431448	29.9	198558	13.8	254095	17.6	1 431 075	99.3
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	18854	1.3	410878	28.6	875709	60.9	131601	9.2	1 437 042	100.0
2001	175590	12.3	1081156	75.8	66970	4.7	39080	2.7	63111	4.4	1 250 317	87.7
2002	1318214	93.1	74806	5.3	23171	1.6	0	0.0	0	0.0	97 977	6 .9
2003	1342468	95.3	55009	3.9	11592	0.8	0	0.0	0	0.0	66 601	4 .7
2004	410617	29.3	989776	70.6	0	0.0	869	0.1	91	0.0	990 736	70.7
2005	1344920	96.5	46240	3.3	2657	0.2	0	0.0	0	0.0	48 897	3 .5

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	1235823	89.4	146080	10.6	0	0.0	0	0.0	0	0.0	146 080	10.6
2007	1329141	96.6	47003	3.4	0	0.0	0	0.0	0	0.0	47 003	3 .4
2008	1035	0.1	1079186	78.9	200484	14.7	87290	6.4	0	0.0	1 366 960	99.9
2009	1037437	76.3	151006	11.1	142832	10.5	10343	0.8	17329	1.3	321 510	23.7
2010	1349028	100.0	167	0.0	0	0.0	0	0.0	0	0.0	167	0 .0
2011	1046898	77.3	308183	22.7	0	0.0	0	0.0	0	0.0	308 183	22.7
2012	73931	5 .4	694760	51.1	415751	30.6	168480	12.4	6861	0.5	1 285 852	94.6
2013	197678	14.6	876796	64.7	110438	8.2	65557	4.8	103713	7.7	1 156 504	85.4
2014	634573	47.0	538361	39.9	109956	8.2	47897	3.6	18063	1.3	714 277	53.0
2015	1163134	86.6	179789	13.4	0	0.0	0	0.0	0	0.0	179 789	13.4
2016	1085695	81.1	223703	16.7	28538	2.1	0	0.0	0	0.0	252 241	18.9
2017	12117	0 .9	125985	9.5	782987	58.8	196490	14.8	213458	16.0	1 318 920	99.1
2018	1153521	87.0	171978	13.0	0	0.0	0	0.0	0	0.0	171 978	13.0
2019	10404	0 .8	494326	37.5	393666	29.8	188952	14.3	232150	17.6	1 309 094	99.2
2020		-		-		-		-		-	-	-
2021		-		-		-		-		-	-	-

Qualitative assessment

Interpretation of the indicator

1. Calculations by default data show that average proportion of the national population exposed to drought (regardless of intensity) for the base line period per year is 36.26% in relation to the total population, and for the reporting period the same indicator is 57.38% in relation to the total population per year, which confirms that in 2000-2019 the frequency of droughts is increasing, and the territories affected by drought have been expanding. 2.Calculations by default data show that the average percentage of the female population of the country exposed to drought (regardless of intensity) for the base period per year is 42.52% relative to the total female population, and the same indicator in the reporting period per year is 57.25% of the total female population, which confirms that in 2000-2019 the frequency of droughts were increasing, and the areas affected by drought were expanding. 3. Calculations by default data show that the average percentage of the male population of the country exposed to drought (regardless of intensity) for the base period per year is 36.26% relative to the total male population, and the same indicator in the reporting period per year is 57.55% of the total male population, which confirms that in 2000-2019 the frequency of droughts was increasing, and the areas affected by drought were expanding.

General comments

According to the default data analysis, the frequency of droughts in the country have been increasing, and the territories affected by drought were expanding within the period from 2000 to 2019. Along with expansion of areas affected by drought, increase in the percentage of the male population of the country exposed to drought is growing faster, in average 36.26% in baseline period, and 57.55% in reporting period, in comparison with the tendency of growth among women (42.52% - average percentage in baseline period and 57.25%- average percentage in reporting period).

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	0 .52		
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

Due to the lack of appropriate legislative and institutional framework requiring DVI calculation and data collection/analysis at the national level, methodologies for calculating the Drought Vulnerability Index calculations are not carried out in Armenia. DVI calculations should be prescribed by appropriate decision-making body appointing relevant responsible body/institution, tasked for implementation of regular data collection, analysis and reporting. To improve the situation, it is recommended to follow suggested steps: 1. Professional development of relevant specialists (trainings) to introduce relevant methodologies for DVI data collection, analysis and reporting, including introduction of existing methodologies and technological software, platforms and relevant databases, 2. Creation of a database for identification of indicators and calculations for the DVI. 3. Considering that the DVI has an important synergistic value for the 3 Rio Conventions, it is desirable to organize capacity building trainings, analytical reviews, research and studies for the large number of stakeholders and decision-

makers within the framework of UNCCD assistance. 4. Technical and financial support is also needed to overcome the above mentioned gaps, which could be done through initiation of pilot DVI capacity building project, including a. Identification of existing methodologies and their potential adaptation b. Analysis of data collection methodologies, existing data resources and their potential use for DVI analytical framework, c. Initiation of decision-making process to support requirement of DVI as a part of UNCCD strategic target implementation, d. Capacity building and experience exchange organized with support of UNCCD, best practices, special methodology trainings, exchange of experience.

SO3 Voluntary Targets

SO3-VT.T1

Target	Year	Level of application	Status of target achievement	Comments
In the event of a planned increase, the minimum wage will be about 240% of the upper poverty level by 2025, instead of 88% in 2012.	2025	National	Ongoing	«The Strategic Program of Long-term Development of the Republic of Armenia for 2014-2025» was approved by the Decree of the Government of the Republic of Armenia No. 442-Ն dated March 27, 2014.
There is no poverty- to eradicate poverty everywhere in all its manifestations and forms	2030	Subnational	Ongoing	SDG 2015 Goal 1: End poverty in all its forms everywhere
Clean water and sanitation-ensuring access and sustainable management of water and sanitation for all	2030	Subnational	Ongoing	SDG 2015 Goal 6: Ensure access to water and sanitation for all
Quality Education-to provide inclusive and adequate quality education for all and to promote lifelong learning opportunities	2030	Subnational	Ongoing	SDG 2015 Goal 4: Quality Education

General comments

It is appropriate to note that on December 7 of 2022, the National Assembly of the Republic of Armenia approved the law "On the proposal of the Government of the Republic of Armenia to amend the law "On Minimum Wages" (ՀՕ-501-Ն), according to which, from January 1, 2023, the minimum wage increased by 7000 drams (about 17.5 US dollars), which fits well into the aforementioned national the goal.
Source of information: https://www.arlis.am/ (ՀՕ-501-Ն) https://sdgs.un.org/goals

SO4-1 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 SO1-3.

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 .83878	0 .82664	0 .83949	
2001	0 .83861	0 .8263	0 .83944	
2002	0 .83846	0 .82602	0 .83934	
2003	0 .83803	0 .82515	0 .83922	
2004	0 .8362	0 .82384	0 .83892	
2005	0 .83423	0 .82056	0 .83879	
2006	0 .8315	0 .81767	0 .83857	
2007	0 .82937	0 .81623	0 .83622	
2008	0 .82913	0 .81479	0 .83387	
2009	0 .82911	0 .81339	0 .83206	
2010	0 .82909	0 .81272	0 .83131	
2011	0 .82908	0 .81274	0 .83146	
2012	0 .82908	0 .81198	0 .83211	
2013	0 .82908	0 .81129	0 .83309	
2014	0 .82908	0 .81055	0 .83376	
2015	0 .82908	0 .80961	0 .83393	
2016	0 .82908	0 .80969	0 .83489	
2017	0 .82908	0 .809	0 .83519	
2018	0 .82908	0 .80862	0 .83588	
2019	0 .82909	0 .80794	0 .8362	
2020	0 .82909	0 .80701	0 .83672	

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

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
Negative	1. Land-use change 2. Climate change 3. Overexploitation	1. Production and Consumption Patterns 2. Human Population Dynamics and Trends	1. Incentives and Capacity-Building 2. Cross-Sectoral Cooperation 3. Pre-Emptive Action		Open pit mining and problems with the further use of these territories, climate change, lack of crop rotation in some areas, frequent droughts result in negative impact on country's biodiversity. Prevention of biodiversity loss The measures undertaken in Armenia during 2014-2018 for the purpose of preventing the threats to biodiversity and ecosystems and eliminating/mitigating the existing negative impacts derive from the priority strategic directions set out in BSAP. The efforts of government to address the biodiversity issues aimed at improvement of legislation and governance system, rehabilitation of degraded ecosystems, development of specially protected nature areas, mitigation of climate change and its impact on humans and natural environment, as well as introduction of green economy ideas and principles into the country's economy. Number of legal acts were elaborated and adopted concerning flora and fauna, forests, specially protected nature areas, education and other sectors aiming at ensuring Sixth National Report to the Convention on Biological Diversity conservation and sustainable use of biological diversity in Armenia in the period of y.y. 2014-2018. Namely, the Government has approved the following strategic documents and legislation. - "Strategy and National Program for Conservation and Use of Specially Protected Nature Areas" (SPNA-SAP) in 2014, which defined the main strategic goals and targets for the development of Armenia's SPNAs. The introduction of these strategic goals and targets will ensure effective protection of landscapes and their components in SPNAs, restoration of the self-regulatory potential of ecosystems, reasonable long-term use of SPNAs with appropriate status and adjacent areas and the mutually beneficial coexistence of the society and nature. Strategic priorities of SPNAs include the improvement of SPNA legislation, enhancement of SPNA management and strengthening institutional links, ensuring representation of biological and landscape diversity in the SPNA system. The document set the following strategic objectives of development of SPNAs of Armenia, including: 1. Ensuring environmental sustainability and healthy and favorable environment for the population of the country through the development and enhancement of the SPNAs system; 2. Protection of ecological, socio-economic, scientific, educational, recreational and spiritual values of SPNAs that must be undertaken through the conservation, restoration and long-term use of ecosystems, genetic resources, biological and landscape diversity. Government of the Republic of Armenia has approved "The National Strategy and Action Plan of the Republic of Armenia on Conservation, Protection, Reproduction and Use of Biological Diversity" (NBSAP) 1 in 2015 based on the CBD goals and targets supporting the following directions of the strategy of the Republic of Armenia on biodiversity conservation and use: 1. Improvement of legislative and institutional frameworks related to biodiversity; 2. Enhancement of biodiversity and ecosystem conservation and restoration of degraded habitats; 3. Reduction of the direct pressures on biodiversity and promotion of sustainable use; 4.

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
					Elimination of the main causes of biodiversity loss through regulation of intersectoral relations and public awareness raising; 5. Empowerment of scientific research, knowledge management and capacity building in the field of biodiversity conservation and sustainable use of natural resources.
Positive				1. Land / Water Management 2. Conservation Designation & Planning 3. Awareness Raising 4. Law Enforcement & Prosecution 5. Legal & Policy Frameworks	Developed and approved management plans for some SPNA s and national park areas that have a positive impact on state of the country's biodiversity.

General comments

For the Red List Index, default data was used, which can be categorized as a "stable" state from 2008-2019. It is appropriate to note that a number of projects have been implemented and are being implemented in the Republic aimed at preserving biodiversity both in protected areas and beyond. It should also be noted: -Resolution of the Government of the Republic of Armenia dated September 25, 2014 N1059-Ա "On approval of the Strategy of Specially Protected Natural Territories, the State program and measures for their protection and use of the Republic of Armenia" -Resolution of the Government of the Republic of Armenia dated January 29, 2010 N71-Ն "On approval of the Red Book of Animals of the Republic of Armenia" -Resolution of the Government of the Republic of Armenia dated January 29, 2010 N72-Ն "On approval of the Red Book of Plants of the Republic of Armenia". Data sources (https://www.arlis.am)

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	12.54	12 .54	12 .54	
2001	12.54	12 .54	12 .54	
2002	15.02	15 .02	15 .02	
2003	15.02	15 .02	15 .02	
2004	15.02	15 .02	15 .02	
2005	15.02	15 .02	15 .02	
2006	15.02	15 .02	15 .02	
2007	15.05	15 .05	15 .05	The changes are related to the clarification of the boundaries of specially protected natural areas
2008	15.05	15 .05	15 .05	
2009	21.55	21 .55	21 .55	The changes are due to the creation of new Specially Protected Natural Areas
2010	21.55	21 .55	21 .55	
2011	22.57	22 .57	22 .57	The changes are due to the creation of new Specially Protected Natural Areas
2012	22.57	22 .57	22 .57	
2013	22.57	22 .57	22 .57	
2014	22.57	22 .57	22 .57	
2015	22.57	22 .57	22 .57	
2016	22.57	22 .57	22 .57	
2017	22.57	22 .57	22 .57	
2018	22.57	22 .57	22 .57	
2019	22.57	22 .57	22 .57	
2020	22.57	22 .57	22 .57	

Qualitative assessment

SO4-3.T2: Interpretation of the indicator

Qualitative Assessment	Comment
Increasing	For the baseline period, data on the indicator is increasing: from 12.54% in 2000 to 22.57% in 2015. The changes are due to the creation of new Specially Protected Natural Areas. Only in 2009 were created: two National Parks ("Lake Arpi" and "Arevik") and one State Reserve ("Zangezur") with a total area of 780 square kilometers. Besides, the changes in the indicator are related to the clarification of the boundaries of Specially Protected Natural Areas.
No Change	During the reporting period, the data on the indicator remained unchanged: 22.57%.

General comments

Default data was used. Changes of the average proportion in the key areas of terrestrial biodiversity under protection are well aligned with national data of the changes of the SPNAs. SPNAs of Armenia have been established since 1958. Currently there are 3 State Reserves, 4 National Parks, 27 State Sanctuary and 232 Natural Monuments in the Republic of Armenia. Of the State Sanctuary, only 26 are included in the Ministry of Environment of the Republic of Armenia, 1 State Sanctuary - "Alpine Aragats" as part of the Ministry of Education and Science of the Republic of Armenia. The lands of SAPNAs included the National Parks and the State Reserves and the State Sanctuaries are under the state property. The lands of the Specially Protected Natural Area in Armenia is about 13.0% of the total area of the Republic of Armenia, which is very close to world standards. About 70% of Armenia's biodiversity species are protected in SPNAs. Sources: - Resolution of the Government of the Republic of Armenia dated September 25, 2014 N1059-Ա "On approval of the Strategy of Specially Protected Natural Areas of the Republic of Armenia, the State program and measures for their protection and use" -Annual Resolutions of the Government of the Republic of Armenia from 2006 to 2019 "On the availability and distribution of the Land Fund of the Republic of Armenia (Land Report)" (https://www.arlis.am)

SO4 Voluntary Targets

SO4-VT.T1

Target	Year	Level of application	Status of target achievement	Comments
Increase in soil organic carbon stocks (underground and above ground) by 1.5% by 2040 compared to the situation in 2015.	2040	National	Ongoing	Decree of the Government of the Republic of Armenia N2015-Ն "On Approval of the Program for Achieving Land Degradation Neutrality in the Republic of Armenia" https://www.arlis.am
By 2020 areas under agriculture, aquaculture and forestry are managed and forestry are managed sustainably, ensuring conservation of biodiversity.	2020	Subnational	Partially achieved	IUCN Aichi Target 7 https://www.cbd.int/doc/nr/nr-06/am-nr-06-en.pdf
By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration, including restoration of restoration, including restoration of at least 15 % of degraded ecosystems, thereby contributing to climate change mitigation, increase of adaptation efforts and combating desertification.	2020	Subnational	Partially achieved	IUCN Aichi Target 15 https://www.cbd.int/doc/nr/nr-06/am-nr-06-en.pdf
By 2020, at least 17 per cent of terrestrial and inland water, and 10 % of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	2020	Subnational	Partially achieved	IUCN Aichi Target 11 https://www.cbd.int/doc/nr/nr-06/am-nr-06-en.pdf

Complementary information

Source of information: 1.Sixth National Report to the Convention on Biological Diversity of the Republic of Armenia https://www.cbd.int/doc/nr/nr-06/am-nr-06-en.pdf 2.Decree of the Government of the Republic of Armenia N2015-Ն "On Approval of the Program for Achieving Land Degradation Neutrality in the Republic of Armenia" https://www.arlis.am https://sdgs.un.org/goals

SO5-1 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 ∞

"Review of agroforestry measures in selected areas and selection of new lands", GEF/QCBS-2019/00 IFAD project International Fund for Agricultural Development, "Rural Areas Economic Development Programme Implementation Unit" SA under the Ministry of Economy of Armenia and Regional environmental center for Caucasus Armenia NO, within the frameworks of "Infrastructure and Rural Finance Support Programme" implemented under the GEF grant funding, has produced a detailed Land Restoration comprehensive study on existing restoration and investments plans prepared for the preselected sites in Syunik and Ararat marzes of the Republic of Armenia. REC Caucasus has produced a study Report on Remapping and Review of 218 hectares of communal areas in Syunik Region based on maps of the polygons provided by Ministry of Environment, which include areas under reforestation plan of COP22 Paris Agreement Commitment to "10 Million Tree" initiative. Technical approach for implementation of current project was based on objective targeting integration of soil and water conservation measures in the development of the targeted high value agroforestry and vegetable crops, improved conditions for restoration and strengthened resilience to land degradation and climate-risks of the agro-ecosystems and the rural population in the project communal lands. Project has largely used the Land Degradation Neutrality (LDN) conceptual framework by UNCCD Science Policy Interface. REC C has developed LRSP report and Environmental and social Impact Assessment report covering selection of degraded lands and territories, which were subject to afforestation action, as a result of this initiative around 222 ha of degraded land in Syunik region has been identified for afforestation and restoration actions in 10 communities of Syunik region in Armenia in 2022/2023, and afforestation action has been launched. UN Environment Programme, World Resources Institute and Regional Environmental Center for Caucasus has implemented Upscaling Global Forest Watch in Caucasus Region Regional Project to empower decision-makers in government and civil society with technology and information to help reduce deforestation, facilitate commitments to restoration and conserve forest biodiversity by developing innovative user-friendly tools that easily share information, provide on-the-fly analysis. Project has created an online platform for identification of degraded lands and forest (Atlas) for Armenia, which allows to use national data and combine existing maps and information for further identification of territories with restoration potential. Restoration opportunity map has been created to support decision-makers in their further efforts to plan and implement landscape restoration, afforestation and reforestation activities based on data and maps generated by Atlas system.

The Ministry of Environment of the Republic of Armenia continues to cooperate with international and regional organizations, including UNCCD Secretariat, UNEP, UNDP, WB, GEF, KFW, TJS, WWF, USAID, NABU, OSCE, GIZ, GCF, AF, IBRD, ADB, FAO, IFAD, CNF and other international organizations and states in particular with France, Germany, Czech Republic, Greece, Russian Federation, Norway, Poland, Republic of Korea, EU Institutions, as well as within the framework of international conventions and initiatives in the field of environmental protection. The Ministry of Environment is preparing national and regional international grants and lending programs to ensure the implementation of national strategies and action plans, maintenance, negotiation, implementation, reporting, comparison, monitoring, monitoring and control of data on international programs (more than 30 national and about 10 regional grants). The Caucasus Nature Fund has allocated 5 million EURO (about 5.9 million USD) to State Non-Profit Organizations of specially protected natural territories of Armenia. On July 19, 2016, a Memorandum of Understanding was signed between the US Agency for International Development, Coca-Cola Hellenic Bottling Company Armenia and the Ministry of Nature Protection of the Republic of Armenia. In accordance with the RA Law "On the Targeted Use of Environmental Taxes Paid by Societies", the communities were provided with subsidies from the state budget for the implementation of environmental programs for 2016 – 69.1 million AMD, (143 812.USD), which, in turn, became a source of co-financing for international organizations. On 04.11.2016, the State institution "Bureau for the Implementation of Environmental Programs" of the Ministry of Nature Protection of the Republic of Armenia was accredited as a national body for the implementation of the United Nations Framework Convention on Climate Change. On September 20, 2016, the Minister of Foreign Affairs of the Republic of Armenia signed the Paris Agreement on behalf of the Republic of Armenia at the United Nations Headquarters in New York. In addition to the Ministry of Environment of the Republic of Armenia, the Ministry of Territorial Administration and Infrastructures of the Republic of Armenia, the Ministry of Education, Science, Culture and Sports of the Republic of Armenia, the Ministry of Emergency Situations of the Republic of Armenia, etc. also participate in the implementation of the Convention. As of the end of 2018, the Ministry of Nature Protection of the Republic of Armenia is implementing, within the framework of national and regional international grant programs in the amount of: 1. 40,553,776. US$ 2. 16,990,000. EUR (20 047 198.US$) 3. 204,800,000. AMD (424 025. US$) The total amount of received resources is 61024 999. US$. In addition, in 2018 were approved grant programs in the amount of: 1. 23 208 483 EUR, (27 384 641US$) 2. 6 042 293 US$ 3. 250 896 400 AMD (519 465US$). The total amount of approved grant resources is 33 946 399. US$. According to the WB 2018, the average exchange rate of 1 US dollar was 482.99 AMD. Average exchange rate 1 USD in 2018 was 0.8475 EUR. In Armenia, for the implementation of the Convention, about forty projects totaling 121,849,644 US dollars were financed from international state resources in the reporting period (2016-2019), including for: 2016 - 35,065,878 US dollars 2017 - 30,007,883 US dollars. 2018 – 42,052,015 US dollars. 2019 - 14,723,868 US dollars. Since the submitted projects are not implemented within one year, it is difficult to talk about an increase or decrease in the funds received for individual years, since the entire amount is indicated for the start of the project in a certain year.

However, if we look more broadly, there is an increase in funding for the implementation of the Convention from international public resources during the reporting period. Approximately 20% of the presented projects are direct to combating DLDD, and the remaining 80% are indirect. The data source: https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.exchangerates.org.uk/USD-EUR-spot-exchange-rates-history-2018.html#:~:tex http://www.mnp.am/naxararutyun/reports-of-the-ministry https://www.exchangerates.org.uk/USD-EUR-spot-exchange-rates-history-2016.html#:~:tex https://reporting.unccd.int/country/ARM/report/draft/upload/

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	Received 13 609 545
Received	2017	Committed	Received 34 274 883
Received	2018	Committed	Received 41 752 015
Received	2019	Committed	Received 15 167 979
Total resources provided:		0	0
Total resources received:		0	104 804 422

Documentation box

	Explanation
Year	The year (calendar year) of receipt of financing for the implementation of the project, which are directly or indirectly related to the DLDD processes, from 2016 to 2019, is indicated. The entire amount of the project is indicated in the year of receipt of financial resources (2016-2019).
Recipient / Provider	Recipient - a country that receives financial support for the implementation of projects through bilateral, multilateral, bilateral or multilateral channels from countries, organizations, public and private foundations. The provider may be the name of the country or region; "globally" (bilateral flows) or the name of the institution and/or organization (multilateral flows).
Title of project, programme, activity or other	Title of project, program, activity or other that directly or indirectly solve the problems of DLDD.
Total Amount USD	The amounts are indicated in US dollars. If necessary, the corresponding average exchange rate of the currency for a certain year to the US dollar is indicated. The entire amount of the project is indicated in the year of receipt of financial resources (2016-2019).
Sector	Indicated: Agriculture, Forestry, Water supply and sewerage Cross-cutting issues, Other.
Capacity Building	A specific project establishes activities or other activities that, among other things, are aimed at building the capacity of the recipient country.
Technology Transfer	A specific project has activities or other activities that among other things, it is aimed at technology transfer to the recipient country.
Gender Equality	A specific project establishes activities or other activities aimed at achieving gender equality.

	Explanation
Channel	The specific project contains information on financial resources provided and/or received through bilateral, multilateral-bilateral or multilateral channels, aimed directly or indirectly at solving DLDD problems.
Type of flow	The transfer of funds in the format of ODA or OOF is indicated.
Financial Instrument	A financial instrument is an instrument by which these state resources are channeled.
Type of support	This is an activity that is directly or indirectly related to the objectives of the Convention, based on the use of the main and significant Rio markers.
Amount mobilised through public interventions	Amount mobilized as a result of government activities: amounts mobilized from the private sector as a result of official development financing activities.
Additional Information	Any other information at the activity level.

General comments

In Armenia, for the implementation of the Convention, about forty projects totaling 104 804 422 USD were financed from international state resources in the reporting period (2016-2019), including for: 2016 - 13 609 545 USD 2017 - 34 274 883 USD 2018 – 41 752 015 USD. 2019 - 15 167 979 USD. Since submitted projects are not implemented within one year, it is difficult to talk about an increase or decrease in the funds received for individual years, since the entire amount is indicated for the start of the project in a certain year. However, if we look more broadly, there is an increase in funding for the implementation of the Convention from international public resources during the reporting period. As of the end of 2018, the Ministry of Nature Protection of the Republic of Armenia is implementing, within the framework of national and regional international grant programs in the amount of: 1. 40,553,776. US$ 2. 16,990,000. EUR (20 047 198.US$) 3. 204,800,000. AMD (424 025. US$) The total amount of received resources was 61024 999. US$. In addition, in 2018 were approved grant programs in the amount of 1. 23 208 483 EUR, (27 384 641US$), 2. 6 042 293 US$, 3. 250 896 400 AMD (519 465US$) were approved. The total amount of approved grant resources was 33 946 399. US$. According to the WB 2018, the average exchange rate of 1 US dollar was 482.99 AMD. Average exchange rate 1 USD in 2018 was 0.8475 EUR. The data source: https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.exchangerates.org.uk/USD-EUR-spot-exchange-rates-history-2018.html#:~:tex http://www.mnp.am/naxararutyun/reports-of-the-ministry https://reporting.unccd.int/country/ARM/report/draft/upload/ https://www.thegef.org/projects-operations/projects/10050 https://www.adaptation-fund.org/project/strengthening-land-based-adaptation-capacity-communities-adjacent-protected-areas-armenia-3/ https://www.greenclimate.fund/sites/default/files/document/readiness-proposals-armenia-undp-adaptation-planning.pdf https://www.adaptation-fund.org/wp-content/uploads/2017/08/ArtikFinal_04.09.2017_Clean_version.pdf https://www.primeminister.am/en/press-release/item/2018/11/30/Nikol-Pashinyan-Signing-of-the-Agreement/ https://info.undp.org/docs/pdc/Documents/ARM/Wildfire%20Management%20project%20document.pdf https://www.adaptation-undp.org/projects/de-risking-and-scaling-investment-energy-efficient-building-retrofits-armenia https://www.nature-ic.am/Content/Projects/18/GCF%20PROJECT%20BRIEF%20ENG.pdf https://www.greenclimate.fund/project/fp010 https://www.thegef.org/projects-operations/projects/8005 https://www.thegef.org/projects-operations/projects/10003

SO5-2 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 ∞

After Revision and Alignment of the NAP with the UNCCD Strategic Plan by the Resolution of the Government of the Republic of Armenia No. 23 of May 27, 2015 "On approval of the Strategy to Combat Desertification in the Republic of Armenia and the National Action Program" approved the second NAP to combat desertification. In the framework of the national action program to combat desertification in Armenia provided: improvement of legislation related to desertification problems, improving the efficiency of land management, raising public awareness about the problems of desertification and their solution, and so on. Some steps taken within the framework of the National Action Program to combat desertification in Armenia: - In 2018, the National Assembly adopted the Law on Amendments to the Land Code of the Republic of Armenia (Article 6), as well as the Laws on Local self-government of the City of Yerevan and On Local self-government. Amendments to the Land Code of the Republic of Armenia Article 6 defined the concept of land cover. The land coverage of the whole territory was divided into 6 classes: Cropland, Grassland, Tree-covered areas, Shrubby areas, Water bodies, Areas devoid of vegetation. The Law established that the procedure for classifying the coverage of land territory is approved by the Government of the Republic of Armenia. - The Government of the Republic of Armenia, by Resolution No. 431-N of April 11, 2019, approved the procedure for classifying of the land cover of the Republic of Armenia, according to which the Government of the Republic of Armenia, based on annually generalized and analyzed data, adopts the Resolution of the Government of the Republic of Armenia "on the classification of the land cover of the Republic of Armenia". The Administration of the Communities transmit the data about the land cover of their community to the relevant Regional Administration. They summarize the data by regions and transmit the data of the Regions to the Ministry of Environment of the Republic of Armenia, which summarizes and analyzed the data of the Republic and submits them for approval to the Government of the Republic of Armenia, and so every year, starting in 2020. In 2020, 2021 and 2022, the Resolutions of the Government of the Republic of Armenia "On the classification of the land cover of the Republic of Armenia" have already been adopted. Analysis of trends in the classes of land cover will reveal the real state of changes that have occurred as a result of natural and/or anthropogenic impacts on land of the community, region and Republic, which will be support to ensure the sustainable use of land resources, awareness razing, etc. - On May 6, 2021, the Government of the Republic of Armenia, by Resolution No. 725-L, approved the "Program for the Land Degradation Neutrality in the Republic of Armenia". The project provides for the termination of land degradation by achieving the state of neutrality of land degradation (balancing degradation and restoration). The Resolution provides for coordination and implementation: land protection, land restoration, sustainable land management, land use. Annual data on land cover will also be used for monitoring (Resolution of the Government of the Republic of Armenia No. 431-n of April 11, 2019). The decision fixed the national goal - to increase the carbon stocks above and below ground (underground and on-ground sectors) by 2040 and increase them by 1.5% compared to the state of 2015. The information on the economic instruments implemented to disincentives land degradation and to incentivize land degradation neutrality is presented in the 06.05.2021 Decree N 725-L of the Government of the Republic of Armenia is approved "On the Approval of the Program for Achieving a Land Degradation Neutrality in the Republic of Armenia". The main actions to achieve the goal are: 1) to stop the degradation of agricultural land by switching to agro ecological principles (including the best available "organic" technologies); 2) to promote the implementation of the national program approved by the Decree of the Government of the Republic of Armenia N1232-Ն dated July 21, 2005, through reforestation, afforestation of degraded lands, improvement of forest territories; 3) to contribute to the improvement of forestry management through the development of new management plans and sustainable use of forest resources; 4) improve the management of pastures of the republic. To achieve LDN in Armenia in the Resolution determined also: planned events, expected results of the implementation of measures, controlled criteria for the implementation of measures, LDN monitoring, evaluation, project implementation activities, etc. The Ministry of Environment of the Republic of Armenia jointly with the Secretariat of the United Nations Convention to Combat Desertification with the financial support of the Republic of Korea through the Changwon Initiative 2018-2020 has implemented "Implementation of Land Degradation Neutrality concept in Ararat valley of Armenia" Project. Within the framework of the project: 1) planting of trees at the roadsides (about 5 hectares was carried out), 2) introduction of drip irrigation on an area of 30 hectares, 3) purchase of biohumus and fertilization of degraded arable land (about 40 ha). The community in which this program was implemented also has contributed. Although this is a relatively small project, his experience has helped us create larger transformative projects in the same area.

The results of the study of statistical data show that environmental taxes and payments for use of natural resources by organizations included in the statistical observation in 2019 increased by 33.0% compared to 2016. For the period from 2016 to 2019, environmental taxes (emissions of hazardous substances (into the air and water basin), industrial waste disposal and waste consumption into the environment, for products of production and consumption that damage the environment) are increased by 12.0%, and payments for use of natural resources (water use, depleted reserves of non-metallic mineral resources, underground fresh and mineral water and extracted salt reserves, bio resources)have increased by 48.5% . According to the summary data of statistical reports on current expenditure for environmental protection, received from the organizations that are involved in the record system of Statistical Committee, organizations in 2019 spent 12.2% more for these purposes than in 2015. In particular, the costs of land reclamation have increased in 2019 by about 4

times compared to 2016. Source of information: https://armstat.am/file/article/eco_book_2019_13.pdf https://armstat.am/file/article/eco_book_2019_14.pdf https://armstat.am/am/?nid=82&year=2020

Tier 2: Table 2 Domestic public resources

	Year	Amounts	Additional Information
Government expenditures			
Directly related to combat DLDD	2016	17 019 709	According to the WB 2016, the average exchange rate of 1 US dollar was 480.49 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.armstat.am/file/article/eco_book_2019_14.pdf
Indirectly related to combat DLDD	2016	1 243 939	According to the WB 2016, the average exchange rate of 1 US dollar was 480.49 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.armstat.am/file/article/eco_book_2019_14.pdf
Subsidies			
Subsidies related to combat DLDD	2016	196 510	According to the WB 2016, the average exchange rate of 1 US dollar was 480.49 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.minfin.am/hy/page/petakan_byuje_2016_t (Annex 5, Table 19)
Government expenditures directly related to combat DLDD	2017	18 352 668	According to the WB 2017, the average exchange rate of 1 US dollar was 482.72 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.armstat.am/file/article/eco_book_2019_14.pdf
Government expenditures indirectly related to combat DLDD	2017	1 987 695	According to the WB 2017, the average exchange rate of 1 US dollar was 482.72 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.armstat.am/file/article/eco_book_2019_14.pdf
Subsidies related to combat DLDD	2017	285 142	According to the WB 2017, the average exchange rate of 1 US dollar was 482.72 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.minfin.am/hy/page/petakan_byuje_2017t (Annex 5, Table 18)
Government expenditures directly related to combat DLDD	2018	23 182 054	According to the WB 2018, the average exchange rate of 1 US dollar was 482.99 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.armstat.am/file/article/eco_book_2019_14.pdf
Government expenditures indirectly related to combat DLDD	2018	1 915 154	According to the WB 2018, the average exchange rate of 1 US dollar was 482.99 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.armstat.am/file/article/eco_book_2019_14.pdf
Subsidies related to combat DLDD	2018	441 606	According to the WB 2018, the average exchange rate of 1 US dollar was 482.99 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.minfin.am/hy/page/byuje_2018 (Annex 5, Table 18)
Government expenditures directly related to combat DLDD	2019	15 655 948	According to the WB 2019, the average exchange rate of 1 US dollar was 480.45 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.armstat.am/file/article/eco_book_2019_14.pdf
Government expenditures indirectly related to combat DLDD	2019	4 132 792	According to the WB 2019, the average exchange rate of 1 US dollar was 480.45 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.armstat.am/file/article/eco_book_2019_14.pdf
Subsidies related to combat DLDD	2019	371 881	According to the WB 2019, the average exchange rate of 1 US dollar was 480.45 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://www.minfin.am/hy/page/petakan_byuje_2019_t (Annex 5, Table 7)
Total expenditures / total per year			

	Year	Amounts	Additional Information
Government revenues			
Total revenues / total per year			

	Year	Amounts	Additional Information
Environmental taxes for the conservation of land resources and taxes related to combat DLDD	2016	5 162 233	According to the WB 2016, the average exchange rate of 1 US dollar was 480.49 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM https://armstat.am/file/article/eco_book_2019_13.pdf The increase in taxes in the mining sector is indirectly related to the DLDD. https://armstat.am/file/article/eco_book_2019_13.pdf
Environmental taxes for the conservation of land resources and taxes related to combat DLDD	2017	4 584 118	According to the WB 2017, the average exchange rate of 1 US dollar was 482.72 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM The increase in taxes in the mining sector is indirectly related to the DLDD. https://armstat.am/file/article/eco_book_2019_13.pdf
Environmental taxes for the conservation of land resources and taxes related to combat DLDD	2018	6 064 649	According to the WB 2018, the average exchange rate of 1 US dollar was 482.99 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM The increase in taxes in the mining sector is indirectly related to the DLDD. https://armstat.am/file/article/eco_book_2019_13.pdf
Environmental taxes for the conservation of land resources and taxes related to combat DLDD	2019	6 849 587	According to the WB 2019, the average exchange rate of 1 US dollar was 480.45 AMD https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM The increase in taxes in the mining sector is indirectly related to the DLDD. https://armstat.am/file/article/eco_book_2019_13.pdf
Total revenues / total per year			

Documentation box

	Explanation
Government expenditures	Government expenditures - Current expenditures on nature protection and fixed assets. Government expenditures include: - Protection and efficient use of water resources. - Protection of atmospheric air. - Protection of land from waste and other hazardous substances. - Restoration of lands. Source of information: https://armstat.am/file/article/eco_book_2019_14.pdf
Subsidies	A subsidy means an annual subvention provided to the communities of the Republic of Armenia for the implementation of environmental programs (according to the Law of the Republic of Armenia of June 11, 2001 (No. ZR-188) "On the targeted use of environmental taxes paid by Societies"), which is presented in the annexes to Annual Resolutions of the Government of the Republic of Armenia on measures ensuring the execution of the state budget of the Republic of Armenia for a certain year. https://www.minfin.am/hy/page/petakan_byuj/
Government revenues	Government revenues: Environmental taxes and payments for nature use. The information is based on the summary information provided by the Ministry of Territorial Administration and Infrastructures, State Revenue Committee, Inspectorate Body for Nature Protection and Mining. Payments for nature protection (Environmental taxes) of which: • For hazardous substances discharged into water basin. • For hazardous substances emitted into atmosphere from stationary sources of emission. • For waste disposed in landfills. • For goods that cause damage to the environment. Payments for use of natural resources of which: • For water use. • For exhausted reserves of non-metallic minerals, underground fresh and mineral waters and reserves of extracted salt. • For use of bio resources. Source of information: https://armstat.am/file/article/eco_book_2019_13.pdf
Domestic resources directly or indirectly related to combat DLDD	Domestic resources are directly or indirectly allocated to the fight related to combat DLDD using the Rio de Janeiro markers of the OECD.

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

◯ Yes

◉ No

Armenia has not yet set a target for increasing and mobilizing domestic resources for the implementation of the Convention.

General comments

It can be stated that government expenditures directly and indirectly related to the fight against DLDD, state revenues, environmental taxes and payments for environmental management, subsidies related to the fight against DLDD are almost constantly increasing during the reporting period. Source of information: http://env.am/storage/files/2015-gac_1.pdf https://www.irtek.am/views/act.aspx?aid=16855 https://armstat.am/file/article/eco_book_2019_13.pdf https://armstat.am/file/article/eco_book_2019_14.pdf https://armstat.am/am/?nid=82&year=2020 https://www.minfin.am/hy/page/petakan_byuje_2016_t (Annex 5, Table 19) https://www.minfin.am/hy/page/petakan_byuje_2017t (Annex 5, Table 18) https://www.minfin.am/hy/page/byuje_2018 (Annex 5, Table 18) https://www.minfin.am/hy/page/petakan_byuje_2019_t (Annex 5, Table 7) https://armstat.am/file/article/eco_book_2019_13.pdf https://www.minfin.am/hy/page

/petakan_byuj/ https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=AM

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 ∽

"Review of agroforestry measures in selected areas and selection of new lands" GEF/QCBS-2019/00 IFAD project, Sustainable Land Management For Increased Productivity In Armenia (SLMIP) (IFAD Parent project: Infrastructure and Rural Finance Support Programme (IRFSP)). Total cost: $27,010,560 International Fund for Agricultural Development, "Rural Areas Economic Development Programme Implementation Unit" SA under the Ministry of Economy of Armenia and Regional environmental center for Caucasus Armenia NO, within the frameworks of "Infrastructure and Rural Finance Support Programme" implemented under the GEF grant funding, has produced a detailed Land Restoration comprehensive study on existing restoration and investments plans prepared for the preselected sites in Syunik and Ararat marzes of the Republic of Armenia. REC Caucasus has produced a study Report on Remapping and Review of 218 hectares of communal areas in Syunik Region based on maps of the polygons which include areas under reforestation plan of COP22 Paris Agreement Commitment to "10 Million Tree" initiative. Technical approach for implementation of current project was based on objective targeting integration of soil and water conservation measures in the development of the targeted high value agroforestry and vegetable crops, improved conditions for restoration and strengthened resilience to land degradation and climate-risks of the agro-ecosystems and the rural population in the project communal lands. Project has largely used the Land Degradation Neutrality (LDN) conceptual framework by UNCCD Science Policy Interface. Project has developed LRSP report and Environmental and Social Impact Assessment report covering selection of degraded lands and territories, which were subject to afforestation action. As a result of this initiative around 222,65 ha of degraded land in Syunik region has been identified for afforestation and restoration actions in 10 communities of Syunik region in Armenia in 2022/2023, and afforestation action has been launched. UN Environment Programme, World Resources Institute and Regional Environmental Center for Caucasus has implemented Upscaling Global Forest Watch in Caucasus Region Regional Project to empower decision-makers in government and civil society with technology and information to help reduce deforestation, facilitate commitments to restoration and conserve forest biodiversity by developing innovative user-friendly tools that easily share information, provide on-the-fly analysis. Project has invested around 4,460,000 USD into landscape restoration and created an online platform for identification of degraded lands and forest (Atlas) for Armenia, which allows to use national data and combine existing maps and information for further identification of territories with restoration potential. Restoration opportunity map has been created to support decision-makers in their further efforts to plan and implement landscape restoration, afforestation and reforestation activities based on data and maps generated by Atlas system. Agriculture Project Implementation Unit and The World Bank Agencies by grant of the GEF 900 000 USD implemented "Community Agricultural Resource Management and Competitiveness" (CARMAC) Project in 2012-2017. The Government of Armenia received a credit from the International Development Association (IDA) to implement the CARMAC Project. The total project cost is US$21.33 million, of which US$16.0 million is financed by an IDA credit. CARMAC II Project was planned to be implemented during 2015-2019. The total cost of the Project is 42.67mln US$, https://www.thegef.org/projects-operations/projects/4954 https://documents1.worldbank.org/curated/ru/516221467998228105/pdf/99545-AD-P144283-PUBLIC-Box393205B.pdf https://mineconomy.am/en/page/1350 http://arot.am/en/projects/second-community-agricultural-resource-management-and-competitiveness-project-carmac-2 The Caucasus Nature Fund (CNF) reports that it has finalized the transfer of €344,000 to Armenia's Ministry of the Environment as part of a co-financing project to maintain the country's specially protected areas. Some €101,000 has been earmarked for Khosrov Forest State Reserve, €100,000 for Zangezur Biosphere Complex, €98,000 for Dilijan National Park, and €45,000 for Lake Arpi National Park. The CNF continues to co-finance the ongoing costs of maintaining Armenia's specially protected nature areas (SPNAs), to assist in the effective implementation of conservation, and to introduce innovative approaches to improve SPNA management effectiveness. The first such support transfers from the CNF to the ministry were made at the beginning of the 2019. https://hetq.am/en/article/108601

According to the legislation of the Republic of Armenia, the sources of financing for LDN achieving can be considered: 1) state budget funds, 2) funds from international donor organizations, 3) investments of entrepreneurs, institutions, non-governmental organizations at the national level and other sources not prohibited by the legislation of the Republic of Armenia. May 6, 2021, the Government of the Republic of Armenia, by Resolution No. 725-L, approved the "Program for the Land Degradation Neutrality in the Republic of Armenia". https://arlis.am/

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
Total		8 098 978				
Total per year 2016:		8 098 978				

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
2016	Caucasus Nature Fund Allocates €344,000 to Armenia's Ministry of the Environment	373 978	☒ Charitable grant ☐ Commercial loans ☐ Non-concessional loan ☐ Private Export ☐ Credit ☐ Private Equities ☐ Private Insurance ☐ Other(specify)	Non-profit institution	Armenia ☐ Domestic mobilization	Caucasus Nature Fund Allocates €344,000 to Armenia's Ministry of the Environment Biodiversity Land Degradation CNF Grant amount: €344,000 Indirect to DLDD. The Caucasus Nature Fund (CNF) reports that it has finalized the transfer of €344,000 to Armenia's Ministry of the Environment as part of a co-financing project to maintain the country's specially protected areas. The first such support transfers from the CNF to the ministry were made at the beginning of the 2019. https://hetq.am/en/article/108601 https://www.exchangerates.org.uk/USD-EUR-spot-exchange-rates-history-2019.html
2016	Community Agricultural Resource Management and Competitiveness" The second project (CARMAC II),	7 725 000	☒ Charitable grant ☐ Commercial loans ☐ Non-concessional loan ☐ Private Export ☐ Credit ☐ Private Equities ☐ Private Insurance ☐ Other(specify)	Other (specify) Project beneficiaries	Armenia ☒ Domestic mobilization Project beneficiaries	The Project "Community Agricultural Resource Management and Competitiveness" The second project (CARMAC II). The total cost of the Project is 42.67mln US$: -9.67mln US$ of which comes from WB 'International Development Association'(IDA), -23mln US$ from International Bank for Reconstruction and Development (IBRD), -2.275mln US$ from RA Government and -7.725mln US$ is the co-financing of the Project beneficiaries. The Project has been started from January 23, 2015 to November 2020. https://mineconomy.am/en/page/1350 Direct to DLDD.
Total		8 098 978				
Total per year 2016:		8 098 978				

Please provide methodological information relevant to data presented in table 3

As example, in Table 3 presents Projects, one as an domestic private resource and the other as an international private resource. Founded in 2007, the Caucasus Nature Fund (CNF), is a German non-profit organization that supports the protected areas in the South Caucasus countries. The fund's mission is to provide long-term funding for operating costs, improved management and sustainable development of the region's protected areas. The trust works through public-private partnerships with the three governments by matching, but not exceeding the State budgets. This ensures each side is committing long-term support for the protected areas. As an international private resource in 2019 the Caucasus Nature Fund (CNF) has the transfer of €344,000 to Armenia's Ministry of the Environment as part of a co-financing project to maintain the country's specially protected areas. The domestic private resource was presented in the "Community Agricultural Resource Management and Competitiveness" Second Project. The main aims of CARMAC II Project are the improvement of pastures, the productivity and sustainability of livestock system in target communities. The Project aims at ensuring the growth of the volume of products produced and marketed in selected high-value agri-food value chains. The activities developed within the framework of CARMAC II Project are planned to be implemented during 2015-2019. The total cost of the Project is 42.67mln US$, of which 7.725 US$ is the co-financing of the Project beneficiaries. The specific beneficiaries of the project are mainly farmers and communities some of whom have made contributions to the project. The Project has been implemented from January 23, 2015. https://en.wikipedia.org/wiki/Caucasus_Nature_Fund https://www.exchangerates.org.uk/USD-EUR-spot-exchange-rates-history-2019.html https://mineconomy.am/en/page/1350

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?

According to The Decision of the Government of the Republic of Armenia of June 27, 2013 No. 684-N on approving the norms of state expenditures for protection, restoration, afforestation, individual works for afforestation and reforestation works, Government has

encouraged private organizations working on restoration, afforestation actions in communities to involve local community population into the aforementioned actions. This Decision is a step forward to encourage collaboration and partnership in between the private sector and communities supporting restoration and environmental actions (landscape and land restoration, afforestation, reforestation), which meanwhile creates improved socio-economic conditions for local community inhabitants through temporary job creation and meanwhile, strengthens ownership and environmental awareness. Source: https://www.arlis.am/documentview.aspx?docID=84306

General comments

Source: https://www.arlis.am/documentview.aspx?docID=84306

SO5-4 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 ∞

The Ministry of the Environment Republic of Armenia, with the financial support of the GCF, are implementing Project "De-Risking and Scaling-Up Investment in Energy Efficient Building Retrofits - Armenia" through assistance UNDP. The GCF total grant amount is US$ 20 million. Under implementation 30 Jun 2017. The De-risking and Scaling-up Investment in Energy Efficiency Building Retrofits' Project seeks to systematically de-carbonize the existing building stock in Armenia to reduce greenhouse gas (GHG) emissions while achieving sustainable development benefits. To do so, the Project focuses on reducing the overall investment risk profile of energy efficiency retrofits in the building sector – one of the major energy consumers in Armenia. Creating a favorable market environment and scalable business model for investment in energy efficiency retrofits will lead to sizeable energy savings, GHG emissions reductions, green job creation and poverty reduction. The Project addresses market barriers to energy efficient building renovation via a combination of policy and financial de-risking instruments and targeted financial incentives to key market players. By targeting policy, financial, market, technical and capacity barriers, the Project will significantly reduce the overall investment risk profile of energy efficiency building retrofits to encourage private sector investment and thereby scale-up investment in energy efficiency building retrofits in the country. The Project's four components each addressing a specific risk area: (i) building sector monitoring, report and verification (MRV) and knowledge management; (ii) policy de-risking; (iii) financial de-risking; and (iv) financial incentives. First, the Project will support the development of a building sector MRV framework, including guidelines and methodologies building on UNDP's experience with establishing Energy Management Information Systems (EMIS). The Project will also support the knowledge and collective learning processes in Armenia through promoting better information dissemination to stakeholders and sharing lessons learned. Policy de-risking, under the second component, will support national, sub-national and local authorities to adopt and implement an enabling policy framework for energy efficiency retrofits. Investment risks for commercial lenders of energy efficiency retrofit finance will be addressed through policy de-risking tools. The financial de-risking component – in partnership with the European Investment Bank (EIB), the R2E2 fund, local banks and other relevant national and international financial institutions – will provide access to affordable capital for energy efficiency retrofits. De-risking instruments will take several forms, including credit lines from financial institutions and/or loan guarantees to stimulate local commercial banks to lend to private ESCOs and/or building owners. Technical assistance will be offered to local commercial banks to develop their products, appraise investments and develop a pipeline of projects. Information on the availability of energy efficiency building retrofit finance packages will be disseminated. Targeted financial incentives, through component 4, will be provided and offered to building/apartment owners, or the ESCOs serving these clients, to ensure that the most vulnerable households can afford the costs of energy efficiency retrofits. Overall, the Project is aligned with the GCF investment framework that emphasizes upgrading existing infrastructure and supporting efforts to strengthen urban systems. The Project builds on and leverages UNDP's extensive experience supporting the Government of Armenia and successfully engaging the private sector in reducing the barriers for energy efficiency in heating, building and lighting sectors. The Project will create a favorable market environment and a scalable business model for investment in energy efficiency retrofits in Armenia, leading to GHG emissions reductions of between 5.1 and 5.4 million tCO2 over the 20-year lifetime of the investments. In addition to funding from the GCF, the Project will catalyze private and public sector financing of approximately US$ 110 million.

Creation of an interactive forest and land portal including development of ready-to-use analysis to improve and more easily share forest and landscape information in Armenia by the GEF "Upscaling Forest Watch in South Caucasus" regional project, UN Environment programme, WRI and REC Caucasus (2020 - 2023) UN Environment Programme, World Resources Institute and Regional Environmental Center for Caucasus has implemented Upscaling Global Forest Watch in Caucasus Region Regional Project to empower decision-makers in government and civil society with technology and information to help reduce deforestation, facilitate commitments to restoration and conserve forest biodiversity by developing innovative user-friendly tools that easily share information, provide on-the-fly analysis. Project has created an online platform for identification of degraded lands and forest (Atlas) for Armenia, which allows to use national data and combine existing maps and information for further identification of territories with restoration potential. Restoration opportunity map has been created to support decision-makers in their further efforts to plan and implement landscape restoration, afforestation and reforestation activities based on data and maps generated by Atlas system. About 61 spatial layers gathered from the open data portals and relevant organizations/ ministries were organized into the ArcGis geodatabase (see Supplementary materials – Layers ARM.gdb). The metadata for each layer was created based on the ISO 19115 and OGC international standards. About 60 documents (reports, books, legislation) related to the forest, land use and biodiversity sector also were identified and collected. 1. Interactive Forest Atlas of Armenia contains the following information sections. 1.1. Interactive Forest Atlas of Armenia 1.2. Interactive maps 1.2.1. Display and available tools 1.2.2. Metadata of the data available 1.2.3. GFW products available at Atlas for forest/ land use analysis 1.2.4. Work with data, perform analysis 1.3. Dashboard 1.4. Open data portal 1.4.1. Search data by categories 1.4.2. Search and download documents related to forest/ land use/ biodiversity sector (legislation, management plans, books, reports etc.) 1.4.3. Explore data before download: data description, the content of attribute table/ documents etc. 2. Introduction to ArcGis Online GIS cloud service 2.1. ArcGis online 2.1.1. Map viewer 2.1.2. Upload and configure content 2.1.3. Web Mapping Application/ GFW MapBuilder 2.1.4. ArcGis Hub 2.1.5. ArcGis Dashboard 2.1.6. Data sharing Capacity building trainings on use of Atlas interactive system have been organized for stakeholders interested in GIS mapping tools and forest/landscape online software knowledge, as well as relevant decision makers. Capacity development trainings for the staff of the Ministry of Environment and related stakeholders and agencies encouraging capacity development efforts in terms of introduction of FLR ATLAS platform and its practical use, in collaboration with Ministry of Environment, HMC, Hayantar and Forest Committee, which are currently responsible agencies for landscape and forest restoration efforts, and in light of 10 million tree planting campaign initiated by the RA Prime Ministers' Office compliant with UNFCCC Paris Agreement commitments. Capacity-building workshops are ongoing and will be continued throughout the length of the project. Trainings were organized on for a multi stakeholder training group including the relevant forest and landscape management agencies, representatives of the Ministry of Environment, Forest Committee and other relevant stakeholders and experts. Training on Atlas Online Platform for the Ministry of Environment specialists, Forest Committee, National Park specialists and experts, Upscaling forest watch in South Caucasus project. Training explained the targets of the project, and expected outcomes, such as Forest and Landscape Restoration methodologies, actions, mapping and GIS tools available for upgrading existing data and identifying restoration opportunities. Group is discussing opportunities for practical GIS tool application to improve the data on forests, degraded territories, risk zones (forest fires), opportunities to update the online Atlas platform, increasing its visibility and practical application opportunities.

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.

Assistance in terms of methodological information relevant to data could be outlines as follows: Assistance with creation of a comprehensive state information base on lands, Methodologies for Land cover monitoring Adoption and enforcement of land information collection standards, Assessing the cumulative effects of land improvement projects, Further assistance with methodology assistance and technology transfer could be related to DVI methodology, skill and capacity building, Establishing accessible and transparent database for collection and data analysis of lands and land restoration potential (Atlas could be used for further implementation assistance)

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.

Technologies supporting innovation and Improvement of irrigation systems by introduction of modern water saving technologies (drip irrigations. sprinkling, energy-efficient systems) and reduction of flow losses, Technologies targeted at secondary use of water within producing facilities, factories, fish farms and other industries/companies, farmer organizations, Climate adaptive technologies and innovation based on resource efficiency and cleaner production, including technical assistance and technology in support to climate resilient and green agricultural solutions, irrigation, water saving technologies.

General comments

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.

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.

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.

1. One of the latest actual challenges in the field of prevention of land degradation, landscape and forest restoration is still lack of data, analysis and maps which allow decision-makers and stakeholder supporting preventive actions, drought, and working on CC adaptation measures across the country to plan and calculate the costs for restoration, financial and material resources, as well as relevant capacities to undertake necessary data collection and research. For this purpose, assistance would be needed for larger scale awareness and capacity building on issues of desertification, drought, soil and land / forest restoration schemes. 2. Its highly desirable to get assistance with GIS mapping skill building to assist agricultural and environmental stakeholders, and decision-makers in practical exercises, methodologies (like ROAM methodology application) and periodic reviews on the state of environment and TNAs under UNCCD. Pilot projects could be a good tool for demonstration of existing methodologies and technical solutions that entail LDN, NBS and innovation currently used for countries affected by desertification. 3. Due to the lack of appropriate legislative and institutional framework requiring DVI calculation and data collection/analysis at the national level, methodologies for calculating the Drought Vulnerability Index calculations are not carried out in Armenia. DVI calculations should be prescribed by appropriate decision-making body appointing relevant responsible body/institution, tasked for implementation of regular data collection, analysis and reporting. To improve the situation, it is recommended to follow suggested steps: 1. Professional development of relevant specialists (trainings) to introduce relevant methodologies for DVI data collection, analysis and reporting, including introduction of existing methodologies and technological software, platforms and relevant databases, 2. Creation of a database for identification of indicators and calculations for the DVI. 3. Considering that the DVI has an important synergistic value for the 3 Rio Conventions, it is desirable to organize capacity building trainings, analytical reviews, research and studies for the large number of stakeholders and decision-makers within the framework of UNCCD assistance. 4. Technical and financial support is also needed to overcome the above mentioned gaps, which could be done through initiation of pilot DVI capacity building project, including a. Identification of existing methodologies and their potential adaptation b. Analysis of data collection methodologies, existing data resources and their potential use for DVI analytical framework, c. Initiation of decision-making process to support requirement of DVI as a part of UNCCD strategic target implementation, d. Capacity building and experience exchange organized with support of UNCCD, best practices, special methodology trainings, exchange of experience.

General comments

Required assistance is needed to overcome the following gaps: - Lack of data, research (based on new technological software, mapping tools, general databases for using SLM in different aspects, including environmental management, urban planning, agriculture, economic development, territorial planning, etc.) - Lack of capacities and knowledge on current methodologies preventing land degradation, desertification, ecosystem service valuation, biodiversity conservation, climate change adaptation and mitigation (among decision-makers, local communities, research, academia, civil society) - Institutional support and capacities to support forest and land management data and online platforms (such as Atlas online interactive platform created within GEF UNEP WRI REC Caucasus collaboration project "Upscaling forest watch in South Caucasus" project). - Creation of a comprehensive state information base on land cover by communities and marzes - Professional development of relevant specialists (trainings) to introduce relevant methodologies for DVI data collection, analysis and reporting, including introduction of existing methodologies and technological software, platforms and relevant databases, - Creation of a database for identification of indicators and calculations for the DVI. -Considering that the DVI has an important synergistic value for the 3 Rio Conventions, it is desirable to organize capacity building trainings, analytical reviews, research and studies for the large number of stakeholders and decision-makers within the framework of UNCCD assistance. -Technical and financial support is also needed to overcome the above mentioned gaps, which could be done through initiation of pilot DVI capacity building project, including a. Identification of existing methodologies and their potential adaptation b. Analysis of data collection methodologies, existing data resources and their potential use for DVI analytical framework, c. Initiation of decision-making process to support requirement of DVI as a part of UNCCD strategic target implementation, d. Capacity building and experience exchange organized with support of UNCCD, best practices, special methodology trainings, exchange of experience.

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

What type of resources were mobilized (check all that apply)?

☒ Financial Resources
☒ Non-Financial

Which sources were mobilized?

☒ International
☒ Domestic
☒ Public
☒ Private
☒ Local communities
☐ Non-traditional funding sources
☒ Climate Finance
☐ Other (please specify)

Use this space to describe the experience:

The Ministry of Environment of the Republic of Armenia continues to cooperate with international and regional organizations, including UNCCD Secretariat, UNEP, UNDP, WB, GEF, KFW, TJS, WWF, USAID, NABU, OSCE, GIZ, GCF, AF, IBRD, ADB, FAO, IFAD and other international organizations and states, as well as within the framework of international conventions and initiatives in the field of environmental protection. The Republic of Armenia is a party to 22 international environmental conventions and protocols, and the Ministry of Environment of the Republic of Armenia carries out significant work to fulfill its obligations. Continuous improvement of the legislative framework ensuring compliance with the provisions of international treaties continues. The Ministry of Environment is preparing national and regional international grants and lending programs to ensure the implementation of national strategies and action plans, maintenance, negotiation, implementation, reporting, comparison, monitoring, monitoring and control of data on international programs (more than 30 national and about 10 regional grants). The Ministry of Environment of the Republic of Armenia jointly with the Secretariat of the United Nations Convention to Combat Desertification with the financial support of the Republic of Korea through the Changwon Initiative 2018-2020 has implemented "Implementation of Land Degradation Neutrality concept in Ararat valley of Armenia" Project. Within the framework of the project: 1) planting of trees at the roadsides (about 5 hectares was carried out), 2) introduction of drip irrigation on an area of 30 hectares, 3) purchase of biohumus and fertilization of degraded arable land (about 40 ha). The community in which this program was implemented also has contributed. Although this is a relatively small-scale project, its experience helps us to build larger transformative projects in the same area. "Review of agroforestry measures in selected areas and selection of new lands", GEF/QCBS-2019/00 IFAD project financed under GEF, invested $27,010,560 into landscape restoration action to support restoration of degraded lands and afforestation. International Fund for Agricultural Development, "Rural Areas Economic Development Programme Implementation Unit" SA under the Ministry of Economy of Armenia and Regional environmental center for Caucasus Armenia NO, within the frameworks of "Infrastructure and Rural Finance Support Programme" implemented under the GEF grant funding, has produced a detailed Land Restoration comprehensive study on existing restoration and investments plans prepared for the preselected sites in Syunik and Ararat marzes of the Republic of Armenia. REC Caucasus has produced a study Report on Remapping and Review of 218 hectares of communal areas in Syunik Region based on maps of the polygons provided by Ministry of Environment, which include areas under reforestation plan of COP22 Paris Agreement Commitment to "10 Million Tree" initiative. Technical approach for implementation of current project was based on objective targeting integration of soil and water conservation measures in the development of the targeted high value agroforestry and vegetable crops, improved conditions for restoration and strengthened resilience to land degradation and climate-risks of the agro-ecosystems and the rural population in the project communal lands. Project has largely used the Land Degradation Neutrality (LDN) conceptual framework by UNCCD Science Policy Interface. Project has developed LRSP report using LDN and ROAM methodologies, UAV and GIS tools, producing analytical report on selection of territories for landscape restoration. Project has developed Environmental and Social Impact Assessment report covering selection of degraded lands and territories, which were subject to afforestation action, as a result of this initiative around 222,65 ha of degraded land in Syunik region has been identified for afforestation and restoration actions in 10 communities of Syunik region in Armenia in 2022/2023, and afforestation action has been launched. UN Environment Programme, World Resources Institute and Regional Environmental Center for Caucasus has implemented Upscaling Global Forest Watch in Caucasus Region Regional Project to empower decision-makers in government and civil society with technology and information to help reduce deforestation, facilitate commitments to restoration and conserve forest biodiversity by developing innovative user-friendly tools that easily share information, provide on-the-fly

analysis. Project has contributed created an online platform for identification of degraded lands and forest (Atlas) for Armenia, which allows to use national data and combine existing maps and information for further identification of territories with restoration potential. Restoration opportunity map has been created to support decision-makers in their further efforts to plan and implement landscape restoration, afforestation and reforestation activities based on data and maps generated by Atlas system. Current interactive platform is serving as a new database and GIS tool for landscape and forest restoration, identification of new opportunities for restoration actions, provides detailed data on land cover, biodiversity, climate conditions, endemic species and other relevant aspects necessary for decision-makers to generate necessary and updated data. Total cost of the project was 4,460,000 USD. "Environmental project implementation unit" State Agency Ministry of Environment RA with assistance of Adaptation Fund has started 2 Grant projects: • "Artik city closed stone pit wastes and flood management" project has provided restoration of degraded landscapes of the closed quarry and prevention of floods both in the city of Artik and adjacent territories. Comprehensive measures have also taken to strengthen the adaptive capacity of natural and agricultural landscapes. Project fund 1,435,000 US dollars during 2018-2023. • "Strengthening land-based adaptation capacity in the Communities adjacent to protected areas in Armenia". Project fund is 2,506,000 US dollars during 2019-2023. According to the project plan in several communities, will be carry out some works: 1) improved the state of degraded arable land according to the LDN national targets and measures, 2) improvement natural pastures and hayfields, 3) repair of field roads, 4) create a stable fodder base, 5) create fruit and berry orchards, 6) created a system of drip irrigation, 7) built solar greenhouses, and dryers for fruits and wild medicinal plants. The project intends to reduce the vulnerability of four communities living adjacent to the "Khosrow Forest" State Reserve and "Dilijan" National Park by strengthen the communities' adaptive capacity in the agriculture sector the agricultural sector and reinforcing their institutional and planning capacity for climate change adaptation. This includes implementing community based, climate smart agricultural practices, strengthening value chains for climate smart agriculture and enhancing awareness, planning, monitoring and decision-making capacity on climate smart agriculture production methods and land degradation neutrality in the target communities. The Ministry of the Environment, with the assistance of the Food and Agriculture Organization of the United Nations (FAO), has started work on the development of the 2 Grant projects: • "Implementation of commitments/responsibilities in the framework of LDN in Armenia through sustainable management and restoration of degraded meadows"., The program will be funded by the GEF for more than 2 million US dollars, and it is also planned to be co-financed by other organizations. The program will be implemented in Syunik and Lori marzes during 2021-2024. The program will have a number of components (improving legislation, introducing new technologies, raising awareness, mapping, etc.), • "Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation". Co-financing to the proposed LDN project has been agreed with the Government of Armenia and the GCF. The program will be funded by the GCF about 10 million US dollars, during 2020-2029. The Ministry of the Environment, with the financial support of the GCF, has started working on 2 development projects: • "Adaptation Planning support for Armenia" through assistance UNDP, start is 2018. The GCF total grant amount 2,999,593.00 USD. • "De-Risking and Scaling-Up Investment in Energy Efficient Building Retrofits - Armenia" through assistance UNDP, the GCF total grant and loan amount is US$ 20 million. The project which is implementing the Ministry of the Environment Republic of Armenia, with the financial support of the GCF, -"De-Risking and Scaling-Up Investment in Energy Efficient Building Retrofits - Armenia" through assistance UNDP. The GCF total grant amount is US$ 20 million. Under implementation 30 Jun 2017. The "De-Risking and Scaling-Up Investment in Energy Efficient Building Retrofits - Armenia" project will build the market for energy efficient building retrofits in Armenia, leading to sizeable energy savings and Green House Gas emission reductions (up to 5.8 million tons of Carbon Dioxide of direct and indirect emission savings over the 20-year equipment lifetimes). It will also lead to green job creation and energy poverty reduction. It will directly benefit over 200,000 people and will catalyze private and public sector investment of approximately US$100 million. The Municipality of Yerevan will add US$8 million in co-financing. UNDP providing US$1.4 million and the Ministry of Nature Protection US$0.4 million co-funding. The cost-effective combination of policy and financial de-risking instruments and targeted financial incentives will address market barriers and achieve a risk-return profile for EE building retrofits that can attract private investments. The project has a potential to leverage a sizeable volume of additional resources. To maximize this potential, UNDP is working closely with the European Investment Bank (EIB) on securing concessional loan for public and residential sector. The loan amount of EIB is US$86 250 000 US$. Overall, US$ 20 million of GCF financing is expected to leverage over US$ 80 million of private investment and US$ 20 million of public investment in energy efficiency retrofits. Grant Total Project Financing is 116 070 000 US$. Agriculture Project Implementation Unit and The World Bank Agencies by grant of the GEF 900 000 USD implemented "Community Agricultural Resource Management and Competitiveness" (CARMAC) Project in 2012-2017. The Government of Armenia received a credit from the International Development Association (IDA) to implement the CARMAC Project. The total project cost is US$21.33 million, of which US$16.0 million is financed by an IDA credit. The Project was a great success in the Republic of Armenia, and there was a need to implement a new additional project "Community Agricultural Resource Management and Competitiveness" The second project (CARMAC II), which implemented during 2015-2019. CARMAC II Project was planned to be implemented during 2015-2019. The total cost of the Project is 42.67mln US$, The Caucasus Nature Fund has allocated 5 million EURO (about 5.9 million USD) to State Non-Profit Organizations of specially protected natural territories of Armenia. On July 19, 2016, a Memorandum of Understanding was signed between the US Agency for International Development, Coca-Cola Hellenic Bottling Company Armenia and the Ministry of Nature Protection of the Republic of Armenia. In accordance with the RA Law "On the Targeted Use of Environmental Taxes Paid by Societies", the communities were provided with subsidies from the state budget for the implementation of environmental programs for 2016 – 69.1 million AMD, (143 812.USD), which, in turn, became a source of co-financing for international organizations. On 04.11.2016, the State institution "Bureau for the Implementation of Environmental Programs" of the Ministry of Nature Protection of the Republic of Armenia was accredited as a national body for the implementation of the United Nations Framework Convention on Climate Change. On September 20, 2016, the Minister of Foreign Affairs of the Republic of Armenia signed the Paris Agreement on behalf of the Republic of Armenia at the United Nations Headquarters in New York. https://www.unccd.int/sites/default/files/ldn_targets/armenia-ldn-country-report_0.pdf https://www.adaptation-fund.org/project/strengthening-land-based-adaptation-capacity-communities-adjacent-protected-areas-armenia-3/ https://www.adaptation-fund.org/wp-content/uploads/2018/10/AFB.PPRC_.23.9-Proposal-for-Armenia-2.pdf https://www.thegef.org /projects-operations/projects/4954 https://documents1.worldbank.org/curated/ru/516221467998228105/pdf/99545-AD-P144283-PUBLIC-Box393205B.pdf https://mineconomy.am/en/page/1350 http://arot.am/en/projects/second-community-agricultural-resource-management-and-competitiveness-project-carmac-2 https://icare.am/ongoing/carmac-ii-project/ https://www.greenclimate.fund/sites /default/files/document/funding-proposal-fp010-undp-armenia.pdf

What were the challenges faced, if any?

The challenges that had to be faced were: • Lack or insufficient data to monitoring land degradation and provide verified data/follow up actions planning. • Strengthen target setting and monitoring systems for land degradation neutrality, such as carbon stocks above and below ground and land cover. • Insufficient institutional and financial capacities.

What do you consider to be the lessons learned?

Even a relatively small project can create larger transformative projects in the same area.

How did you ensure that women benefited from/got access to this funding?

All projects necessarily stipulate the condition for the involvement of women and men on the principle of gender equality. In addition, many projects are focused by their portals and components on gender mainstreaming, for example, the participation of women in the management of natural resources and geoinformation systems, in afforestation projects, etc.

Use this space to provide any further complementary information you deem relevant:

There is no additional information.

Has your country supported other countries in the mobilization of financial and non-financial resources for the implementation of the Convention?

○ 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

Use this space to describe the experience:

The Ministry of Environment of the Republic of Armenia jointly with the Secretariat of the United Nations Convention to Combat Desertification with the financial support of the Republic of Korea through the Changwon Initiative 2018-2020 has implemented "Implementation of Land Degradation Neutrality concept in Ararat valley of Armenia" Project. Within the framework of the project: 1) planting of trees at the roadsides (about 5 hectares was carried out), 2) introduction of drip irrigation on an area of 30 hectares, 3) purchase of biohumus and fertilization of degraded arable land (about 40 ha). Although this is a relatively small-scale project, its experience helps us to build larger transformative projects in the same area. The Ministry of the Environment, with the assistance of the Food and Agriculture Organization of the United Nations (FAO), has started work on the development of the 2 Grant projects: • "Implementation of commitments/responsibilities in the framework of LDN in Armenia through sustainable management and restoration of degraded meadows"., The program will be funded by the GEF for more than 2 million US dollars, and it is also planned to be co-financed by other organizations. The program will be implemented in Syunik and Lori marzis during 2021-2024. The program will have a number of components (improving legislation, introducing new technologies, raising awareness, mapping, etc.), • "Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation". Co-financing to the proposed LDN project has been agreed with the Government of Armenia and the GCF. The program will be funded by the GCF about 10 million US dollars, during 2020-2029. On May 6, 2021, the Government of the Republic of Armenia, by Resolution No. 725-L, approved the "Program for the Land Degradation Neutrality in the Republic of Armenia". The project provides for the termination of land degradation by achieving the state of neutrality of land degradation (balancing degradation and restoration). The Resolution provides for coordination and implementation: land protection, land restoration, sustainable land management, land use. Annual data on land cover will also be used for monitoring (Resolution of the Government of the Republic of Armenia No. 431-n of April 11, 2019). The decision fixed the national goal - to increase the carbon stocks above and below ground (underground and on-ground sectors) by 2040 and increase them by 1.5% compared to the state of 2015. The main objectives of achieving the national goal are: stop the degradation of agricultural land, to promote the implementation of the program for the increase of forest territories, to promote work to improve forestry management, improve the management of pastures of the Republic. For achieve LDN in Armenia in the Resolution determined also: planned events, expected results of the implementation of measures, controlled criteria for the implementation of measures, LDN monitoring, evaluation, project implementation activities, etc.

What were the challenges faced, if any?

The draft of Resolution of the Government of the Republic of Armenia on the "Program for the Land Degradation Neutrality in the Republic of Armenia" it was prepared in 2019 however, due to objective reasons, the draft of Resolution was agreed only in 2021.

What do you consider to be the lessons learned?

Teamwork, awareness and perseverance were of paramount importance during adopting the draft of Resolution.

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

Was this through any of the following (check all that apply)?

☒ Existing financial processes
☒ Innovative financial processes
☒ The GEF
☐ Other funds (please specify)

Use this space to describe the experience:

On 04.11.2016, the State institution "Bureau for the Implementation of Environmental Programs" of the Ministry of Nature Protection of the Republic of Armenia was accredited as a national body for the implementation of the United Nations Framework Convention on Climate Change. "Environmental project implementation unit" State Agency Ministry of Environment RA with assistance of Adaptation Fund has started 2 Grant projects: • "Artik city closed stone pit wastes and flood management" project has provided restoration of degraded landscapes of the closed quarry and prevention of floods both in the city of Artik and adjacent territories. Comprehensive measures have also taken to strengthen the adaptive capacity of natural and agricultural landscapes. Project fund 1,435,000 US dollars during 2018-2023. • "Strengthening land-based adaptation capacity in the Communities adjacent to protected areas in Armenia". Project fund is 2,506,000 US dollars during 2019-2023. According to the project plan in several communities, will be carry out some works: 1) improved the state of degraded arable land according to the LDN national targets and measures, 2) improvement natural pastures and hayfields, 3) repair of field roads, 4) create a stable fodder base, 5) create fruit and berry orchards, 6) created a system of drip irrigation, 7) built solar greenhouses, and dryers for fruits and wild medicinal plants. The project intends to reduce the vulnerability of four communities living adjacent to the "Khosrow Forest" State Reserve and "Dilijan" National Park by strengthen the communities' adaptive capacity in the agriculture sector the agricultural sector and reinforcing their institutional and planning capacity for climate change adaptation. This includes implementing community based, climate smart agricultural practices, strengthening value chains for climate smart agriculture and enhancing awareness, planning, monitoring and decision-making capacity on climate smart agriculture production methods and land degradation neutrality in the target communities. Component 1: Community based, climate smart agricultural practices in degraded areas and buffer zones. (USD 1,410,000) This component focus on The component aims to increase the adaptive capacity through promoting climate smart agriculture and developing activities that promote restoration of natural ecosystems, water and soil conservation, organic agriculture, low cost technologies, and improved livestock forage quality. The component will introduce the following adaptation measures: Increase in water use efficiency by renovating the main irrigation water supply systems; Increase in soil organic carbon by promoting farming practices such as mulching, reduced tillage and compost management; Improving fodder management through the establishment of sowing areas of perennial plants such as Lucerne and sainfoin; Establishment of agroforestry systems on degraded slopes; promoting information sharing; and Strengthening monitoring systems for climate smart agriculture, land degradation neutrality, forest and ecosystem adaptation. Component 2: Strengthening value chains and climate smart technology transfer for vulnerable communities (USD 500,000) This component complement the adaptation measures in the crop, livestock and forestry production systems by supporting the livelihoods and income earning opportunities of the target communities. Under this component, the project intends to install alternative hot water supply systems for the public sector, construct non-heated greenhouses, and construct solar dryers for fruits, vegetables and herbs, and to formulate community management and business plans for climate smart agricultural value chains. Component 3: Awareness raising, capacity building, monitoring and decision making for climate smart agricultural practices and land degradation neutrality (USD 200,000) This component aims to support awareness raising and capacity building (authorities, farmer associations, civil society organizations, and the private sector) in climate smart agriculture as well as land degradation neutrality and support the decision-making and planning process in the target communities. Under this component, the project will provide training and awareness raising on efficient management of water resources, climate smart agriculture and land degradation neutrality and other relevant issues related to climate change adaptation. In addition, the project will develop a dissemination strategy to capture lessons learnt and make them available to other communities.

What were the challenges faced, if any?

In 2018 "Environmental project implementation unit" State Agency Ministry of Environment RA submitted to the Adaptation Fund for approval 2 Grant projects ("Artik city closed stone pit wastes and flood management" project and "Strengthening land-based adaptation capacity in the Communities adjacent to protected areas in Armenia"). This 2 Grant projects have been returned for revision. Later, cooperating with the representatives of the staff of the Secretariat of the United Nations Convention to Combat Desertification and Global Mechanism these 2 projects have been finalized in a short tame. In the future, both projects were coordinated with the Adaptation Fund.

What do you consider to be the lessons learned?

Improved cooperation at various levels is of great importance.

Did your country support other countries in the improvement of existing 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

Use the space below to share more details about your country's experience:

The Resolution of the Government of the Republic of Armenia No. 13 of March 28, 2002 approved the "National Action Program to Combat Desertification in Armenia" (NAP). This was the first NAP to combat desertification. Within the framework of the program, analysis of the ecological and socio-economic state of the Republic was carried out, a clear identification of the roles of executive and local authorities and land users in the process of combating desertification. The program includes: "Strategic directions of action to combat desertification in Armenia", "The role of education and science in combating desertification" and "Public participation in combating desertification" sections. The program has played an invaluable role in raising public awareness on issues of combating desertification. After Revision and Alignment of the NAP with the UNCCD Strategic Plan by the Resolution of the Government of the Republic of Armenia N 23 of May 27, 2015 "On approval of the Strategy to Combat Desertification in the Republic of Armenia and the National Action Program" approved the second NAP to combat desertification. In the framework of the national action program to combat desertification in Armenia provided: improvement of legislation related to desertification problems, improving the efficiency of land management, raising public awareness about the problems of desertification and their solution, Joint actions within the framework of the Rio Conventions and international cooperation. Steps taken within the framework of the national action program to combat desertification in Armenia: - In 2018, the National Assembly adopted the Law on Amendments to the Land Code of the Republic of Armenia (Article 6), as well as the Laws on Local self-government of the City of Yerevan and On Local self-government. Amendments to the Land Code of the Republic of Armenia Article 6 defined the concept of land cover. The land coverage of the whole territory was divided into 6 classes: Cropland, Grassland, Tree-covered areas, Shrubby areas, Water bodies, Areas devoid of vegetation. The Law established that the procedure for classifying the coverage of land territory is approved by the Government of the Republic of Armenia. - The Government of the Republic of Armenia, by Resolution No. 431-Ն of April 11, 2019, approved the procedure for classifying of the land cover of the Republic of Armenia, according to which the Government of the Republic of Armenia, based on annually generalized and analyzed data, adopts the Resolution of the Government of the Republic of Armenia "on the classification of the land cover of the Republic of Armenia". The Administration of the Communities transmit the data about the land cover of their community to the relevant Regional Administration. They summarize the data by regions and transmit the data of the Regions to the Ministry of Environment of the Republic of Armenia, which summarizes and analyzed the data of the Republic and submits them for approval to the Government of the Republic of Armenia, and so every year, starting in 2020. In 2020, 2021 and 2022, the Resolutions of the Government of the Republic of Armenia "On the classification of the land cover of the Republic of Armenia" have already been adopted. Analysis of trends in the classes of land cover will reveal the real state of changes that have occurred as a result of natural and/or anthropogenic impacts on land of the community, region and Republic, which will be support to ensure the sustainable use of land resources, awareness razing, etc. - On May 6, 2021, the Government of the Republic of Armenia, by Resolution No. 725-L, approved the "Program for the Land Degradation Neutrality in the Republic of Armenia". The project provides for the termination of land degradation by achieving the state of neutrality of land degradation (balancing degradation and restoration). The Resolution provides for coordination and implementation: land protection, land restoration, sustainable land management, land use. Annual data on land cover will also be used for monitoring (Resolution of the Government of the Republic of Armenia No. 431-Ն of April 11, 2019). The decision fixed the national goal - to increase the carbon stocks above and below ground (underground and on-ground sectors) by 2040 and increase them by 1.5% compared to the state of 2015. The main objectives of achieving the national goal are: stop the degradation of agricultural land, to promote the implementation of the program for the increase of forest territories, to promote work to improve forestry management, improve the management of pastures of the Republic. For achieve LDN in Armenia in the Resolution determined also: planned events, expected results of the implementation of measures, controlled criteria for the implementation of measures, LDN monitoring, evaluation, project implementation activities, etc. - By Order of the RA Minister of Nature Protection N392-A dated November 6, 2017 the program "Raising public awareness about the problems of desertification, land degradation and droughts in the Republic of Armenia" was approved. If funds are available, the program can be implemented in full scale or by regions.

Would you consider the action programmes and/or plans to be successful and what do you consider the main reasons for success or lack thereof?

The Resolution of the Government of the Republic of Armenia No. 13 of March 28, 2002 approved the first "National Action Program to Combat Desertification in Armenia". This is the first NAP to combat desertification. Within the framework of the program, an analysis of the ecological and socio-economic state of the Republic was carried out, a clear identification of the roles of executive and local authorities and land users in the process of combating desertification. The program includes: "Strategic directions of action to combat desertification in Armenia", "The role of education and science in combating desertification" and "Public participation in combating desertification" sections .The program has played an invaluable role in raising public awareness by the issues of combating desertification. The NAP was supposed to be implemented within the framework of annual and long-term programs of socio-economic development of the Republic of Armenia by spheres, size and sources of financing. If possible, it was reflected in the annual state budgets of the Republic of Armenia, in the budgets of the respective communities, as well as in agreements with donor States and International organizations. It should be taken into account that at that time the GEF was not as financial instrument of the DLDD, and there were certain restrictions in the availability of funding sources. After Revision and Alignment of the NAP with the UNCCD Strategic Plan by the Resolution of the Government of the Republic of Armenia No. 23 of May 27, 2015 "On approval of the Strategy to Combat Desertification in the Republic of Armenia and the National Action

Program" approved the second NAP to combat desertification. In the framework of the national action program to combat desertification in Armenia provided: improvement of legislation related to desertification problems, improving the efficiency of land management, raising public awareness about the problems of desertification and their solution, Joint actions within the framework of the Rio Conventions and international cooperation. It can be noted that legislative reforms have been carried out since 2015, also aimed at improving the effectiveness of the land monitoring system. Monitoring on an ongoing basis is necessary to identify the real state of changes that have occurred as a result of natural and/or anthropogenic impacts on the land at the level of the community, region and Republic. This will help to identify positive and negative trends in terms of land restoration/degradation in communities/regions, identify hot spots in order to take appropriate measures. In the Republic of Armenia there are a number of projects are currently being implemented. But often in these projects, DLDD is presenting in the secondary role.

What were the challenges faced, if any?

The challenges that had to be faced were: • Insufficient institutional and financial capacities. • Insufficient attention and allocation of resources for landscape and forest restoration, prevention and reduction of the negative impact of drought, landslides.

What do you consider to be the lessons learned?

It can be noted that legislative reforms have been carried out since 2015, also aimed at improving the effectiveness of the land monitoring system. However, the attention and necessary financial resources and allocations are insufficient to prevent current trends in desertification, and especially, support efforts of communities to prevent land erosion, contamination, drought, landslides, overgrazing of pastures, fires and effective adaptation actions to the negative impact of climate change.

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

These policies and enabling environments were aimed at (check all that apply):

☒ Promoting solutions to combat desertification, land degradation and drought (DLDD)
☒ Implementing solutions to combat DLDD
☐ Protecting women's land rights
☐ Enhancing women's access to natural, productive and/or financial resources
☒ Other (please specify)
Annual monitoring of land cover

How best to describe these experiences (check all that apply):

☒ Prevention of the effects of DLDD
☒ Relief efforts after DLDD has caused environmental and or socioeconomic stress on ecosystems and or populations
☒ Recovery efforts after DLDD has caused environmental and or socioeconomic stress on ecosystems and or populations
☐ Engagement of women in decision - making
☐ Implementation and promotion of women's land rights and access to land resources
☐ Building women's capacity for effective UNCCD implementation
☒ Other (please specify)
Awareness raising.

Use the space below to share more details about your country/sub-region/region/institution's experience.

Steps taken within the framework of the national action program to combat desertification in Armenia: - In 2018, the National Assembly adopted the Law on Amendments to the Land Code of the Republic of Armenia (Article 6), as well as the Laws On Local self-government of the City of Yerevan and On Local self-government. Amendments to the Land Code of the Republic of Armenia Article 6 defined the concept of land cover. The land coverage of the whole territory was divided into 6 classes: Cropland, Grassland, Tree-covered areas, Shrubby areas, Water bodies, Areas devoid of vegetation. The Law established that the procedure for classifying the coverage of land territory is approved by the Government of the Republic of Armenia. - The Government of the Republic of Armenia, by Resolution No. 431-N of April 11, 2019, approved the procedure for classifying of the land cover of the Republic of Armenia, according to which the Government of the Republic of

Armenia, based on annually generalized and analyzed data, adopts the Resolution of the Government of the Republic of Armenia "on the classification of the land cover of the Republic of Armenia". The Administration of the Communities transmit the data about the land cover of their community to the relevant Regional Administration. They summarize the data by regions and transmit the data of the Regions to the Ministry of Environment of the Republic of Armenia, which summarizes and analyzed the data of the Republic and submits them for approval to the Government of the Republic of Armenia, and so every year, starting in 2020. In 2020, 2021 and 2022, the Resolutions of the Government of the Republic of Armenia "On the classification of the land cover of the Republic of Armenia" have already been adopted. Analysis of trends in the classes of land cover will reveal the real state of changes that have occurred as a result of natural and/or anthropogenic impacts on land of the community, region and Republic, which will be support to ensure the sustainable use of land resources, awareness razing, etc. - By Order of the RA Minister of Nature Protection N392-A dated November 6, 2017 The program "Raising public awareness about the problems of desertification, land degradation and droughts in the Republic of Armenia" was approved. If funds are available, the program can be implemented in full or by regions.

Do you consider these policies to be successful in promoting or implementing solutions to address DLDD, including prevention, relief and recovery, and what do you consider the main factors of success or lack thereof?

In 2020, 2021 and 2022, the Resolutions of the Government of the Republic of Armenia "On the classification of the land cover of the Republic of Armenia" have already been adopted, according on the Resolution of the Government of the Republic of Armenia No. 431-N dated April 11, 2019. Analysis of trends in the classes of land cover will reveal the real state of changes that have occurred as a result of natural and/or anthropogenic impacts on land of the community, region and Republic, which will be support to ensure the sustainable use of land resources, awareness razing, etc. It is necessary noted, that legislative reforms, which have been carried out since 2015, (after statement of the second NAP by the Resolution of the Government of the Republic of Armenia No. 23 of May 27, 2015 "On approval of the Strategy to Combat Desertification in the Republic of Armenia and the National Action Program"), also are aimed at improving the efficiency of the land monitoring system. Legislative improvements are aimed at identifying the real state of changes that have occurred as a result of natural and anthropogenic impacts on the earth at the community, region and republic levels. This will help to identify positive and negative trends in terms of land restoration/degradation in communities/regions, identify hot spots for appropriate measures.

What were the challenges faced, if any?

Diversity of sectors involved in the process of combating DLDD and limited resources.

What would you consider to be the lessons learned?

Holding seminars, workshops, etc. creates the prerequisites for involved in the process of combating DLDD representatives of various specialties.

Has your country supported other countries in establishing policies and enabling environments to promote and implement solutions to combat desertification/land degradation and mitigate the effects of drought, including prevention, relief and recovery?

○ 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

Your country's actions were aimed at (please check all that apply):

☒ Leveraging DLDD with other national plans related to the other Rio Conventions
☒ Integrating DLDD into national plans
☒ Leveraging synergies with other strategies to combat DLDD
☒ Integrating DLDD into other international commitments
☐ Other (please specify)

Use the space below to describe your country's experience.

The Ministry of Environment of the Republic of Armenia jointly with the Secretariat of the United Nations Convention to Combat Desertification with the financial support of the Republic of Korea through the Changwon Initiative 2018-2020 has implemented "Implementation of Land Degradation Neutrality concept in Ararat valley of Armenia" Project. The community in which this program was implemented also has contributed. Although this is a relatively small-scale project, its experience helps us to build larger transformative projects in the same area. On the example of this project, the detailed experience of our country is presented below. Ararat valley of Armenia is one of the most important agricultural regions of the country. Here there are main areas of orchards and vineyards, as well as the large area occupied by grain crops and vegetable and melon crops. However, it is also one of the hot spots of biodiversity of Armenia, where preserved natural ecosystems are inhabited by a large number of rare and endemic species of plants and animals. Most rare species of plants and animals are found usually on land unsuitable for agriculture - in the sandy desert, the salt marshes, solonchaks and solonetzs, on strongly rocky habitats. Unsustainable use of land resources (overgrazing in arid ecosystems, particularly early spring or later autumn and winter, aspic irrigation, wrong use of fertilizers and pesticides, etc.) leads to the transformation and degradation of ecosystems and, consequently, to the deterioration of the populations of rare species of plants and invertebrates included in the Red book of Armenia and Red list of IUCN. It has to be noticed that two State reserves are near the borders of project area – "Khosrov forest" and "Erebuni". First is the best reserve in Armenia, in 2013 it received special certificate of the EU. Its ecosystems consist oak forests, juniper open forest, sandy desert, mountain steppes, semi-deserts and other. Second was established with special purpose – to conserve steppe ecosystem with 3 wild species of wheat (Triticum araraticum, Triticum boeoticum, Triticum urartu). The implementation of the project contributed to the preservation of the ecosystems of these reserves, especially their buffer zones. The intensive and often inefficient use of agricultural land, as well as due to the energy and economic crises, violations of drainage and irrigation systems, as well as the cutting of shelterbelts have led to land degradation and the appearance of intensive desertification processes. This causes an increase of anthropogenic pressure on natural ecosystems due to the expansion of new agricultural areas, livestock development, which is little in the low-cost of the Ararat Valley, and as a result of the lack of soil application of organic fertilizers. The main problems of the Ararat valley are lack of water for irrigation, decrease of land productivity, secondary salinization of soil as result of abundant using artesian waters for irrigation. The main objective of the proposed project in the long term is to minimize land degradation and desertification processes in the Ararat valley by the use of modern agricultural technologies. In particular, on the basis of short-term goals of the project (to show the necessity, importance, profitability and prospects of application of modern technologies for improvement of agricultural production and to achieve the objectives of the LDN) was to carry out three types of actions on the small areas, which help to reduce land degradation. It was carry out the restoration of shelterbelts, mostly along roads for field shelter belts. It is also for orchards and vineyards was create a drip irrigation system on a small area. Finally, by using bio-humus it was the improvement of the quality of arable land. Restoration of shelterbelts are reduce wind erosion of agricultural lands, reduce the intensity of the winds, especially during heat waves, drying up the soil and crops. Using drip irrigation methods are lead to economical use of irrigation water, which, on the one hand, lead to lower production costs and as a result to higher profitability of production, on the other hand prevent or at least reduce the intensity of processes of secondary salinization. The use of bio-humus significantly improved soil fertility and avoid pollution caused by inefficient use of mineral fertilizers (or non-use, leading to depletion of the soil and land abandon). Overall, the project was corresponds to the implementation of one of the national LDN targets: Stop cropland degradation and apply agro ecology (conservation + modern "organic" technology); and particularly to second: Afforestation of the degraded land. The project is also in line with "Strategy and the NAP to Combat Desertification in the Republic of Armenia" (paragraph 34), which shows the application of the principles by LDN. As well the project corresponds with UN Convention on Biological Diversity (NAP of Armenia, 2015) and UN Framework Convention on Climate Change (Third National Communication of Armenia, 2015). All three Conventions promote the ecosystem approach to the problems of nature conservations, which is in the base of project. The project is connecting with Strategy of development of agricultural sector in Armenia and with strategic approach to develop ecotourism in the Republic, and will facilitate to achieving their aims.

Do you consider this experience a success and, if so, what do you consider the reasons behind this success (or lack thereof)?

As the overall outcome it should be mentioned the improvement the soil fertility (use of bio-humus), reduction of soil erosion (recovery of forest belts, the proper use of land resources) and its preserved from secondary salinization (the use of drip irrigation system), as well as increasing the level of carbon stocks (thanks to shelterbelts), as well it is that one of outcomes of the project lead to mitigation of anthropogenic impact on rare natural ecosystems of Ararat valley. The economic effect there are Increasing crop yields and reduced irrigation costs. As measurable changes increasing crop yields and reduced irrigation costs can be assumed, and therefore should bring an economic effect.

What were the challenges faced, if any?

Limited amount of financial resources, lack of data and relevant research, lack of technologies and software support.

What would you consider to be the lessons learned?

Although this is a relatively small-scale project, its experience helps us to build larger transformative projects in the same area.

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

If so, DLDD was mainstreamed into (check all that apply):

☒ Economic policies

☒ Environmental policies

☒ Social policies

☒ Land policies

☐ Gender policies

☒ Agricultural policies

☐ Other (please specify)

Use the space below to describe your country's experience.

"Review of agroforestry measures in selected areas and selection of new lands", GEF/QCBS-2019/00 International Fund for Agricultural Development, "Rural Areas Economic Development Programme Implementation Unit" SA under the Ministry of Economy of Armenia and Regional environmental center for Caucasus Armenia NO, within the frameworks of "Infrastructure and Rural Finance Support Programme" implemented under the GEF grant funding, has produced a detailed Land Restoration comprehensive study on existing restoration and investments plans prepared for the preselected sites in Syunik and Ararat marzes of the Republic of Armenia. Project has produced a study Report on Remapping and Review of 218 hectares of communal areas in Syunik Region based on maps of the polygons provided by Ministry of Environment, which include areas under reforestation plan of COP22 Paris Agreement Commitment to "10 Million Tree" initiative. Technical approach for implementation of current project was based on objective targeting integration of soil and water conservation measures in the development of the targeted high value agroforestry and vegetable crops, improved conditions for restoration and strengthened resilience to land degradation and climate-risks of the agro-ecosystems and the rural population in the project communal lands. Project has largely used the Land Degradation Neutrality (LDN) conceptual framework by UNCCD Science Policy Interface. REC C has developed LRSP report and Environmental and social Impact Assessment report covering selection of degraded lands and territories, which were subject to afforestation action, as a result of this initiative around 222 ha of degraded land has been identified for afforestation and restoration actions in 10 communities of Syunik region in Armenia in 2022/2023, and afforestation action has been launched. Around 20 polygons identified for restoration actions are under afforestation action, and 222, 65 ha of the territory in Syunik region will be restored as a result of project assistance. Success of this initiative is based on collaborative action and maintained cooperation with local municipalities and communities who were introduced to the aims of project and actively supported all activities, including the restoration process. One of the important features of "Review of agroforestry measures in selected areas and selection of new lands" project was a thorough research and field works carried out by the team in 2020- 2022, collecting data on degraded lands, potential for afforestation and landscape restoration, database of Atlas software, existing data exchange and close collaboration with Hydrometeorology and Forest Monitoring Center under the Ministry of Environment. Project has also used UAV for collecting data and monitoring of project actions. The mapping was implemented with a purpose of clarifying the land use modes of the selected polygons (pasture, agriculture, forest, or other uses), their ownership (community, private, state owned), accessibility, proximity to water sources (potential for irrigation) that would be among key determinants for the preparation of reforestation plans and costing estimates. Industry leading ESRI ArcGIS 10.8 software application, along with its toolkits was used for the compilation and of the existing and processing, analysis and visualization of the new datasets. The data sources included forest polygon spatial layers and attribute supplied by HMC as well as major publicly available base maps such as OpenStreetMap, Google Maps, the digital elevation model (product of NASA's Shuttle Radar Topography Mission), which was used also for the generation of key derivative mapping products including aspect, slope and contours. Support for land degradation neutrality: Under SLM results of the project is a best practice to be included under the Armenia's 8th National Report under UNCCD. Namely, the LRSP Pre-identification site report data has been included within the Country UNCCD profile and the plot of the UNCCD National Report. Restoration pilots implemented under LRSP project contribute to the Climate adaptation measures in Syunik region, in line with UNFCCC Paris agreement voluntary contributions and under the National 10 mln. Tree planting campaign. Restoration actions fall under the priority actions of the National Programme of the Republic of Armenia against desertification, National Program of Strategies and Actions to Fight Against Desertification in the Republic of Armenia. Restoration opportunity mapping: The LRSP research and pilots on afforestation works being implemented under the project will be used in the process of quantifying the area of restoration opportunity in Armenia based on the best knowledge and science developed, tested, and applied using GIS-based mapping of pilot sites. The mapping was implemented with a purpose of clarifying the land use modes of the selected polygons (pasture, agriculture, forest, or other uses), their ownership, accessibility, proximity to water sources (potential for irrigation) that would be among key determinants for the preparation of reforestation plans and costing estimates. Industry leading ESRI ArcGIS 10.8 software application, along with its toolkits was used for the compilation and of the existing and processing, analysis and visualization of the new datasets. The data sources included forest polygon spatial layers and attribute supplied by the Ministry of Environment, as well as major publicly available base maps such as OpenStreetMap, Google Maps, the digital elevation model (product of NASA's Shuttle Radar Topography Mission), which was used also for the generation of key derivative mapping products including aspect, slope and contours. The overall workflow for the GIS-based mapping of the degraded landscapes consisted of four major components, such as: 1. Preliminary review of the data and planning for the fieldwork 2. Secondary GIS data collection, processing and draft mapping 3. Fieldwork visits for mapping data validation 4. Reforestation sites' profile mapping. Technological cards for polygons are the main tools for planning for degraded landscapes and afforestation works envisaged for selected polygons in Syunik region. As mentioned, the polygons were studied and researched based on initial data, and further on clarified and re-mapped through the field visits and data checks. 20 polygons of 222.65 ha. were identified by the project for afforestation and landscape restoration action. "Community Agricultural Resource Management and Competitiveness" (CARMAC) Project by grant of the GEF 900 000 USD was implemented in 2012-2017. Total amount of the project 18,300, 000.USD. The objectives of project were: (i) increased livestock productivity as; (ii) increased efficiency of communal pasture management, as measured by increased communal budgetary revenues from lease of pastures; (iii) increased farm sales from livestock; and, (iv) increased Pasture management effectiveness. A new additional project "Community Agricultural Resource Management and Competitiveness" (CARMAC II) the second project , was developed and approved, under the leadership of the Government of the Republic of Armenia, with the involvement of international organizations (WB, IBRD, IDA), and the Project beneficiaries, which was implemented during 2015-2019. The total cost of the project is 42.67 million US dollars. The main aims of CARMAC II Project are the improvement of pastures, the productivity and sustainability of livestock system in target communities. The

Project aims at ensuring the growth of the volume of products produced and marketed in selected high-value agri-food value chains. The activities developed within the framework of CARMAC II Project was planned to be implemented during 2015-2019.

Do you consider this experience a success and, if so, what do you consider the reasons behind this success (or lack thereof)?

One of the important features of "Review of agroforestry measures in selected areas and selection of new lands" project was a thorough research and field works carried out by the team in 2020- 2022, collecting data on degraded lands, potential for afforestation and landscape restoration, database of Atlas software, existing data exchange and close collaboration with Hydrometeorology and Forest Monitoring Center under the Ministry of Environment. Project has also used UAV for collecting data and monitoring of project actions. Another feature which contributed to successful implementation of the project was a thorough research, field work and regular consultations with communities and their support for restoration action. In "Community Agricultural Resource Management and Competitiveness" (CARMAC) Project one can point to the introduction of a communal pasture/livestock management system, as a result of which the well-being of community residents has increased.

What were the challenges faced, if any?

Lack of data on conditions of land degradation in each community, outdated data, lack of detailed information on environmental conditions, land ownership

What would you consider to be the lessons learned?

Due to the systematic use of both remote and nearby pastures, their condition has improved, land degradation has decreased, and the state of ecosystems has improved.

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

What types of SLM practices are being implemented?

☒ Agroforestry
☒ Area closure (stop use, support restoration)
☒ Beekeeping, fishfarming, etc
☐ Cross-slope measure
☐ Ecosystem-based disaster risk reduction
☒ Energy efficiency
☒ Forest plantation management
☒ Home gardens
☒ Improved ground/vegetation cover
☒ Improved plant varieties animal breeds
☒ Integrated crop-livestock management
☐ Integrated pest and disease management (incl. organic agriculture)
☐ Integrated soil fertility management
☒ Irrigation management (incl. water supply, drainage)
☐ Minimal soil disturbance
☐ Natural and semi-natural forest management
☒ Pastoralism and grazing land management
☐ Post-harvest measures
☐ Rotational system (crop rotation, fallows, shifting, cultivation)
☒ Surface water management (spring, river, lakes, sea)
☒ Water diversion and drainage
☐ Water harvesting
☐ Wetland protection/management
☒ Windbreak/Shelterbelt
☒ Waste management / Waste water management
☐ Other (please specify)

Use the space below to share more details about your country's experience:

Agroforestry: Agroforestry measures were implemented alongside afforestation and landscape restoration measures in communities of Sisian, Goris, Harzhis, Spandaryan of Syunik region of Armenia, within the IFAD project of the "Rural Areas Economic Development Programme Implementation Unit" SA under the Ministry of Economy of Armenia and Regional environmental center for Caucasus Armenia NO, implemented under the GEF grant funding. Agroforestry measures targeted improved socio-economic situation for local communities, and provided fruit trees (apple and pear trees, rosehip, blackberry seedlings) to support agroforestry in the region. Project has also conducted the socio-economic assessment of communities, and while studying the situation due to the high poverty level, the local population was included into environmental action to benefit from temporary jobs to reach improvement of poverty level and using alternative income generation from agro-forestry measures. Within the framework of this project, the species of trees and shrubs for afforestation cultures were determined taking into account the soil-climatic features of the region, terrain relief, location of landscapes / polygons planned for restoration, altitude based on the nature of the forest. The most suitable species are considered to be large-leaved oak, Georgian oak, ash, sage, field maple, birch, Caucasian, wild apple, pear. and from the bushes plum tree, hawthorn, rosehip. UNDP-GEF Project: "Mainstreaming Sustainable Land and Forest Management in Mountain Landscapes of North-eastern Armenia": Project has contributed to replenishment and built local experience in implementing SFM and SLM practices, addressed by the project through the support of several demonstrations such as community-based small scale innovative solutions seeking to reduce pressure on forests and through the demonstration of rehabilitation of degraded forests and pastures. Supporting community-based small-scale solutions, the project supported the demonstration of small businesses which can improve the livelihoods of these communities while at the same time

decreasing the need of forest products, particularly the need for firewood. Terminal Evaluation FINAL Report of the UNDP-GEF Project: "Mainstreaming Sustainable Land and Forest Management in Mountain Landscapes of North-eastern Armenia", Jean-Joseph Bellamy, Submitted on November 17, 2020

Would you consider the implemented practices successful and what do you consider the main factors of success?

1. Successful SLM practices, preventive measures and afforestation actions were implemented within "Review of Agroforestry Measures in Selected Areas and Selection of New Lands", GEF/QCBS-2019/003 project. Implemented practices were successful due to the following factors: - Project has used research, qualitative and quantitative data and analysis, relevant research and studies in the field, using SLM, LDN and other relevant methodologies (including ROAM methodology by IUCN and WRI) for identification of existing causes of land degradation, condition of soil, pastures, lands, in degraded communities building the follow-up activities on scientific and practice - oriented experiences. - Second, polygons selected for afforestation in the Goris-Sisian sub-regions of Syunik marz, despite of their different relief, altitudes, agro-climatic conditions, have been analyzed individually, screened and analyzed for afforestation, using design of agro-technical measures as classification of soil fertility and forestry suitability. Depending on the location, condition of the area intended for afforestation, the biological characteristics of the trees grown, the purpose of afforestation, seed sowing or planting methods were envisaged for each area individually, based on technological cards and Bill of Quantities for each restoration plot. - The project provided a review of existing studies, including environmental, social and economic aspects of the proposed measures and analysis. In addition, the review covers the developed criteria for identifying and determining the causes of landscape degradation based on the GEF indicators. - Third factor contributing to success of implemented project was use of endemic species for afforestation works, as well as close collaboration with local communities, their immediate involvement in afforestation planning and practical works. 2. "Upscaling Global Forest Watch in Caucasus Region Regional Project" has been using lots of new research, existing maps, data sources, as well as invented heavily into the creation of new maps and layers of information, collected and designed individually for the aims of the project, and Atlas system targets, including outline of restoration opportunities and their mapping for land and forest landscape restoration purposes. Success of the project was based on excellent partnership and advisory work provided by the technical working group, appointed by the Ministry of Environment, HMC, Hayantar SNCO, also academic and expert institutions, civil society and international projects. Project has been transparent and coordinated its action on a regular basis with all agencies related to the topic, having regular meetings, and training / capacity building sessions for interested stakeholders, CSOs, forest and land agencies, experts working in landscape restoration.

What were the challenges faced, if any?

Insufficient institutional and financial capacities. Lack or insufficient data to monitoring land degradation and provide verified data/ follow up actions planning. Insufficient attention and allocation of resources for landscape, prevention and reduce of impact of drought, landslides.

What do you consider to be the lessons learned?

Due to the systematic use of both remote sensing, thorough landscape research, and field work, as well as close collaboration with communities, there has been a progress and positive support among the local communities with regards to landscape restoration activities undertaken by project, One of the most important pre-conditions for successful interventions preventing land degradation is availability of adjusted methodology and research data on soil, climatic conditions, biodiversity, local cultural heritage and infrastructure which play a key role in identification of restoration areas, planning and investment budgeting targeted for aforementioned activities.

How did you engage women and youth in these activities?

All projects necessarily stipulate the condition for the involvement of women and men on the principle of gender equality. In addition, many projects are focused by their portals and components on gender mainstreaming, for example, the participation of women in the management of natural resources and geoinformation systems, in afforestation projects, etc.

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

What types of rehabilitation and restoration practices are being implemented?

☒ Restore/improve tree-covered areas

☒ Increase tree-covered area extent

☒ Restore/improve croplands

☒ Restore/improve grasslands

☐ Restore/improve wetlands

☒ Increase soil fertility and carbon stock

☐ Manage artificial surfaces

☒ Restore/improve protected areas

☒ Increase protected areas

☐ Improve coastal management

☐ General instrument (e.g. policies, economic incentives)

☐ Restore/improve multiple land uses

☐ Reduce/halt conversion of multiple land uses

☐ Restore/improve multiple functions

☒ Restore productivity and soil organic carbon stock in croplands and grasslands

☐ Other/general/unspecified

Use the space below to share more details about your country's experience:

1. The project "Review of Agroforestry Measures In Selected Areas And Selection Of New Lands", GEF/QCBS-2019/003. Review and re-assessment of pre-selected areas subject to landscape and forest restoration is conducted within the scope of the "Review of Agroforestry Measures In Selected Areas And Selection Of New Lands", GEF/QCBS-2019/003 project. Review is covering the Evaluation of Rehabilitation and Investment Programs for Pre-selected Areas of RA in Syunik marz (region), providing revision of existing research and studies, including environmental, social and economic aspects of suggested measures and analysis. Also, the review covers elaborated criteria for identification and determining the causes of landscape degradation based on GEF indicators, including National priority strategies in FLR, type of interventions and remapping and clarification of exact borders of polygons, including GIS and remote sensing sources. The latter includes justification for partial re-mapping of polygons and relevant argumentation. Suggested review is in line with 10 million tree planting campaign undertaken by the initiative of the RA Government, targeted at combating climate change, air pollution, soil degradation, conserving Armenia's rich biodiversity and restoring ecosystems, within the framework of the 10m initiative, the tree planting was launched in 2020 for the purposes of afforestation, reforestation and landscaping. Armenia in line with country's NDCs, has set an ultimate goal to identify realistic implementation strategy for limitation of greenhouse gas emissions and prioritization of climate adaptation measures for coping with risks to country's sustainable development. Within the framework of the GEF/QCBS-2019/003 project "Review of agroforestry measures in selected areas and selection of new lands", degraded landscape restoration works were carried out on 222.59 hectares of communal lands. For each polygon project team has developed GIS maps, technological calculation maps and planting schemes. The main objective of this investment program is to ensure environmental safety, restore degraded forests and lands, as well as expand and develop green areas. Fences were established in all polygons along the border, and shrubs were planted along these fences on both sides, which will later turn into a natural fence and, on the other hand, will become an alternative source of income for residents of nearby communities. Within the framework of the program, trees were planted, in particular, during the year at the main stage of the work, more than 872,000 trees and shrubs were planted, of which 38106 shrubs planted along the fence, including 19063 rosehip bushes and 19043 blackberries (total number of seeds-9404.5 kg, total number of seedlings-696.692 pcs.). In addition to traditional tree species that correspond to the natural and climatic conditions of this territory, flowering trees - wild pear and wild apple - have also been planted with the necessary soil features. It should be noted that the greatest attention was paid to seedlings that should be sufficiently viable, thick diameter, vertical axis, according to the methodology prepared within the framework of the program. The main tree species are: Large-leaved oak (seed, kg) 7709 Caucasian pine (pcs.) 317900. Related tree species are: Georgian oak (seed, kg) 1695.5 Common pine (pcs.) 87330 Alpine maple (pcs.) 37466 Common ash (pcs.) 22784 Caucasian pear tree (pieces) 74344 Oriental Apple tree (pcs) 45187 Caucasian honeysuckle (pieces) 39468 Eastern currant (pcs.) 42577 Holly maple (pcs.) 22708 Birch tuber (pcs.) 3822 Rosehip ordinary (pcs) 3106. All projects necessarily stipulate the condition for the participation of women and men on the basis of the principle of gender equality. In addition, many projects through their portals and components are focused on gender mainstreaming, for example, women's participation in the management of natural resources and geoinformation systems, in afforestation projects, etc. All technical work in these areas was carried out by the local population, and more than 60% were women. 2. UN Environment Programme, World Resources Institute and Regional Environmental Center for Caucasus has implemented "Upscaling Global Forest Watch in Caucasus Region Regional Project" to empower decision-makers in government and civil society with technology and information to help reduce deforestation, facilitate commitments to restoration and conserve forest biodiversity by developing innovative user-friendly tools that easily share information, provide on-the-fly analysis. Project has created an online platform for identification of degraded lands and forest (Atlas) for Armenia, which allows to use national data and combine existing maps and information for further identification of territories with restoration potential. Restoration opportunity map has been created to support decision-makers in their further efforts to plan and implement landscape restoration, afforestation and reforestation activities based on data and maps generated by Atlas system. Meanwhile, project methodology is using Restoration Opportunity and Assessment Methodology (ROAM) developed by IUCN and WRI for planning of forest and landscape restoration actions, assessment of potential areas for restoration and data collection and analysis. Handbook provides a flexible and affordable framework for countries to rapidly identify and analyze FLR potential and locate special areas of opportunity at a national or sub-national level. The handbook offers practical advice and options to bear in mind when considering or conducting an FLR assessment using ROAM, as well as real-life examples of the kinds of outputs to design a tailor-made process to meet country's specific needs. Emphasizing the environmental (soil protection, water regulation, climate change adaptation) and socio-economic significance of restoration of forests and degraded

landscapes, the project has focused on climate adaptation and SLM measures. Afforestation and forest restoration were selected as an effective method to improve climate and prevent land degradation in the areas where there is land (eroded), in unfavorable forest lands that have been deforested or fragmented, and where their degradation continues. Atlas online platform was used for planning and implementation of pilot afforestation actions by GEF "Review of Agroforestry Measures In Selected Areas And Selection Of New Lands" project implementing afforestation and re-mapping of the degraded lands in Syunik region, implemented by IFAD. The following criteria were the basis for the selection of favorable forest restoration areas: 1. Average temperature in July ≥ 11° 2. 2. Average annual precipitation ≥ 450 mm (according to the data of Goris Meteorological Station, the average annual precipitation is 708 mm and Sisian - 492 mm) 3. Maximum altitude above sea level ≤ 2200 m 4. Slope ≤ 25° 5. Polygon surface ≥ 1ha 6. Legal status of the land – preferred to be communal land. Restoration action is a major and effective step to adapt to climate change negative impact, as well as prevention of loss of biodiversity and land erosion,land degradation, which was implemented through the following actions and strategies. • Measures for forest restoration, improvement of forest ecosystems in degraded or negatively affected forest areas; • Agro-forestry measures in communities with degraded, eroded or unused or low-income lands, which, in addition to environmental benefits and improved climate resilience, ensure the social and economic development of the community; • Afforestation in community-owned lands, where the action contributed to improved awareness and understanding of impact and mechanisms to fight climate change and reduce the risks through adaptation measures through sustainable management of adjacent agricultural lands, increase land use efficiency, prevent further degradation by providing soil protection, and play a regulatory function to maintain water within the soils. • Afforestation work in previously deforested or territories which have lost or have degraded forest areas, contributing to the increase of forest cover. 3. The project "Artik city closed stone pit wastes and flood management pilot project", funded by Adaptation Fund. "Environmental project implementation unit" (EPIU) State Agency has successfully mobilized a total of USD 1435100 from the Adaptation fund for the project "Artik city closed stone pit wastes and flood management pilot project". In August 2018 the full proposal was submitted to AF Secretariat and approved by the Adaptation Fund (AF) Board in October 2018 followed by the official signing of the Agreement between AF Board and EPIU on December 2018. The project has improved resilience of highly exposed Artik city of Armenia to hydro meteorological threats that were increasing in frequency and intensity as a result of climate change, reducing the quantity of debris flowing to reservoir located down the Artik city and the pollution of agricultural lands (300 hectares of arable land 190 hectares of pastures, 15 hectares of hay meadows, 640 ha of artificial forests, 80ha of water reservoir and other natural landscapes) in the project impact area by increasing their resilience and adaptation to climate change. The specific objectives of the project were • To improve and to promote self-recovery of more than 300 hectares of arable land 190 hectares of pastures, 15 hectares of hay meadows, 640 ha of artificial forests, 80ha of water reservoir and other natural landscapes. • To reduce hazards caused by floods and to contribute to adaptation of natural and agricultural landscapes and ecosystems in the impact zone of floods. • To raise awareness and knowledge level among decision makers and local population on the landscape and ecosystem adaptation to climate change and on efficient management of floods. 4. Integrated Biodiversity Management, South Caucasus (IBiS) programme implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) has implemented series of pilot projects aimed at presented soil erosion control, as well as the Handbook on Integrated Erosion Control in Armenia. In the period of 2014 – 2017, project has developed erosion control pilot projects for mountainous regions in close partnership with the Ministry of Territorial Administration and Infrastructure (MTAI). By the end of 2017, the IEC measures were integrated into the IBiS programme. The core measures piloted were afforestation and soil bioengineering measures on community land. Source: Lessons learned, 2015 - 2019, Integrated Biodiversity Management, South Caucasus (IBiS) programme.

Would you consider the implemented practices successful and what do you consider the main factors of success?

1. "Review of Agroforestry Measures In Selected Areas And Selection Of New Lands", GEF/QCBS-2019/003. Implemented practices were successful due to the following factors: first, project has used research, qualitative and quantitative data and analysis, relevant research and studies, using SLM, LDN and other relevant methodologies for identification of existing causes of land degradation, condition of soil, pastures, lands, in degraded communities building the follow-up activities on scientific and practice - oriented experiences. Second, polygons selected for afforestation in the Goris-Sisian sub-regions of Syunik marz, despite of their different relief, altitudes, agro-climatic conditions, have been analyzed individually, screened and analyzed for afforestation, using design of agro-technical measures as classification of soil fertility and forestry suitability. Depending on the location, condition of the area intended for afforestation, the biological characteristics of the trees grown, the purpose of afforestation, seed sowing or planting methods were envisaged for each area individually, based on technological cards and Bill of Quantities for each restoration plot. The project provided a review of existing studies, including environmental, social and economic aspects of the proposed measures and analysis. In addition, the review covers the developed criteria for identifying and determining the causes of landscape degradation based on the GEF indicators. Third factor contributing to success of implemented project was use of endemic species for afforestation works, as well as close collaboration with local communities, their immediate involvement in afforestation planning and practical works. 2. "Upscaling Global Forest Watch in Caucasus Region Regional Project" has been using lots of new research, existing maps, data sources, as well as invested heavily into the creation of new maps and layers of information, collected and designed individually for the aims of the project, and Atlas system targets, including outline of restoration opportunities and their mapping for land and forest landscape restoration purposes. Success of the project was based on excellent partnership and advisory work provided by the technical working group, appointed by the Ministry of Environment, Hydrometeorology and Forest monitoring center of Ministry of Environment of Armenia, Hayantar SNCO, Forest Committee, also academic and expert institutions, civil society and international projects working in sustainable land management, prevention of desertification and agro-forestry areas. Project has been transparent and coordinated its action on a regular basis with all agencies related to the topic, having regular meetings, and training / capacity building sessions for interested stakeholders, CSOs, forest and land agencies, experts working in landscape restoration. 3. Within "Artik city closed stone pit wastes and flood management pilot project", funded by Adaptation Fund. Artik project, the team has improved resilience of highly exposed Artik city of Armenia to hydro meteorological threats that were increasing in frequency and intensity as a result of climate change, reducing the quantity of debris flowing to reservoir located down the Artik city and the pollution of agricultural lands (300 hectares of arable land 190 hectares of pastures, 15 hectares of hay meadows, 640 ha of artificial forests, 80ha of water reservoir and other natural landscapes) in the project impact area by increasing their resilience and adaptation to climate change. 4. Within GIZ implemented Integrated Biodiversity Management, South Caucasus (IBiS) programme The pilot work of GIZ/IBiS in the municipalities regarding afforestation measures for erosion control (new bio-engineering technologies) in connection with income-gen-erating plantations for erosion control (e.g. integrating fruit trees and raspberry plants in the erosion control plantations) is considered to be very successful and is a con-tribution to reducing poverty. The contribution to rural development and poverty re-duction is seen in particular on the basis of the results of the interviews with key local stakeholders in pilot areas. Although it is currently difficult to calculate to what extent these improved pastures, fruits, and berries contribute to poverty reduction for the villagers, these are generally positive contributions to livelihoods and income, i.e. to SDG 1. The measures also contribute to climate change preparedness (SDG 13),

sustainable use of natural resources and biodiversity (SDG 15). The active participation of local administrations and communities in the planning and administration, as more participatory and inclusive decision making contributes to SDG 16. (Source: Monitoring of impact of IBiS in relation to the Overarching Results / Selected SDGs report, by Integrated Biodiversity Management, South Caucasus project, Hammerman and Nuuburs, AHT Group AG, April 2018)

What were the challenges faced, if any?

- Insufficient institutional and financial capacities, - Lack of proper coordination and information exchange on SLM and current projects, policies, methodologies in between stakeholder agencies, civil society, research and beneficiaries, - Lack or insufficient data to monitoring land degradation and provide verified data/ follow up actions planning - Lack of awareness, knowledge and available technologies/software to support research and practice based decisions supporting improved and sustainable land management data collection, analytical reporting, technical and methodological trainings, pilot projects demonstrating best practices of using preventive erosion control with a large-scale coverage in territories affected by desertification. - Insufficient involvement of local communities and farmers, low awareness and capacities on preventive measures, green agricultural practices, available techniques and methods for restoration of landscape and forests, importance of climate change adaptation measures, etc. - Insufficient attention and allocation of resources for landscape and forest restoration, prevention and reduction of the negative impact of drought, landslides, - insufficient financial and human resources working on landscape and forest restoration, prevention of erosion, desertification, droughts.

What do you consider to be the lessons learned?

Lessons learned: - Importance of availability of updated scientific and research data on condition of land/soil, - Availability of information databases, GIS mapping tools, interactive online platforms for forest and landscape restoration, which allow to generate data and maps and identify territories with degradation and their potential for restoration action, - Weak cooperation and coordination within the local organizations working on restoration and erosion control, - Make efforts to coordinate and collect related data and information on SLM, including data in Soil atlas with updated information, - Collaboration with local communities, creation of jobs and improved opportunities for local income generation schemes through supporting environmental and economic measures is one of the most important aspects and prerequisites for future success. Alongside with limited opportunities for local population, actors working on prevention of desertification, landscape restoration and SLM, should consider parallel measures targeting pilot initiatives and support projects demonstrating best practices in drip irrigation, intensive agriculture, green technologies, supporting the methodological mainstream and policy level action. - To conduct field inventories and develop vulnerability profiles for SLM, landscape restoration, agro-biodiversity and climate adaption in priority areas of the most vulnerable arid and semi-arid ecosystems, - Restoration of pastures and near-village pastures and increase of their productivity, protection of slopes from destructive impact of erosion, the introduction of pinfold and hay-and-pasture system of grazing is necessary; under-sow of grasses, tillage, application of fertilizers, temporary termination of cattle should also be implemented grazing in the case of strong erosion of slopes. - In the system of measures, directed towards the preservation of increase of fertility of soils of slopes, implementation of the complex of land treatment anti-erosion measures is very important. They should be intended for ensuring of better absorption of precipitations, reduction of water run-off and soil scavenging, creation of favorable conditions for development of plants. These measures should be implemented on the whole ploughed area, situated on slopes.

How did you engage women and youth in SLM activities?

All projects necessarily stipulate the condition for the involvement of women and men on the principle of gender equality. In addition, many projects are focused by their portals and components on gender mainstreaming, for example, the participation of women in the management of natural resources and geoinformation systems, in afforestation projects, etc.

Has your country supported other countries with 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

Could you list some practices implemented at country level to promote alternative livelihoods?

☒ Crop diversification
☒ Agroforestry practices
☒ Rotational grazing
☐ Rain-fed and irrigated agricultural systems
☐ Small vegetable gardens
☐ Production of artisanal goods
☒ Renewable energy generation
☒ Eco-tourism
☒ Production of medicinal and aromatic plants
☐ Aquaculture using recycled wastewater
☐ Other (please specify)

Use the space below to describe your country's experience.

"Environmental project implementation unit" State Agency Ministry of Environment RA with assistance of Adaptation Fund implements the Grant project "Strengthening land-based adaptation capacity in the Communities adjacent to protected areas in Armenia". Project fund is 2,506,000 US dollars during 2019-2023. According to the project plan in several communities, was carry out some works: 1) was improved the state of degraded arable land according to the LDN national targets and measures, 2) was improved natural pastures and hayfields, 3) repaired of field roads, 4) created a stable fodder base, 5) created fruit and berry orchards, 6) created a system of drip irrigation, 7) built solar greenhouses, and dryers for fruits and wild medicinal plants. The project intends to reduce the vulnerability of four communities living adjacent to the "Khosrow Forest" State Reserve and "Dilijan" National Park by strengthen the communities' adaptive capacity in the agriculture sector the agricultural sector and reinforcing their institutional and planning capacity for climate change adaptation. This includes implementing community based, climate smart agricultural practices, strengthening value chains for climate smart agriculture and enhancing awareness, planning, monitoring and decision-making capacity on climate smart agriculture production methods and land degradation neutrality in the target communities. As a good example of alternative livelihoods is Component 2 of this project: Strengthening value chains and climate smart technology transfer for vulnerable communities (USD 500,000). This component complement the adaptation measures in the crop, livestock and forestry production systems by supporting the livelihoods and income earning opportunities of the target communities. Under this component, the project intends to install alternative hot water supply systems for the public sector, construct non-heated greenhouses, and construct solar dryers for fruits, vegetables and herbs, and to formulate community management and business plans for climate smart agricultural value chains.

Do you consider this experience a success and, if so, what do you consider the reasons behind this success (or lack thereof)?

The implementing community based, climate smart agricultural practices, strengthening value chains for climate smart agriculture and enhancing awareness, planning, monitoring and decision-making capacity on climate smart agriculture production methods and land degradation neutrality in the target communities, which living adjacent to the Special Protected Natural Areas - ensured the gorgonized synergy of 3 Rio Conventions.

What were the challenges faced, if any?

- Insufficient institutional and financial capacities. - Lack or insufficient data to monitoring land degradation and provide verified data/ follow up actions planning - Lack of awareness, knowledge and available technologies/software to support research and practice based decisions supporting improved and sustainable land management data collection, analytical reporting, technical and methodological trainings, pilot projects demonstrating best practices of using preventive erosion control with a large-scale coverage in territories affected by desertification. - Insufficient investment into development of financial mechanisms and soft loans, supporting green agricultural development, especially targeting farmers and local communities.

What would you consider to be the lessons learned?

Strengthening the adaptive capacity in the agricultural sector of four communities (living near the "Khosrow forest" State Reserve and "Dilijan" National Park) is aimed at reducing the vulnerability of these communities to climate change. And as a result, reducing the load on Specially Protected Natural Areas.

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
◉ No

Other files for Reporting

Armenia - SO5-1 recipient	Download	12.8 KB

Other files for Reporting

| Armenia - SO5-1 recipient | Download | 12.8 KB |

Armenia − SO1-1.M1

Land cover in the initial year of the baseline period

Legend
- No data
- Tree-covered
- Grassland
- Cropland
- Wetland
- Artificial
- Other land
- Water body

International Boundary

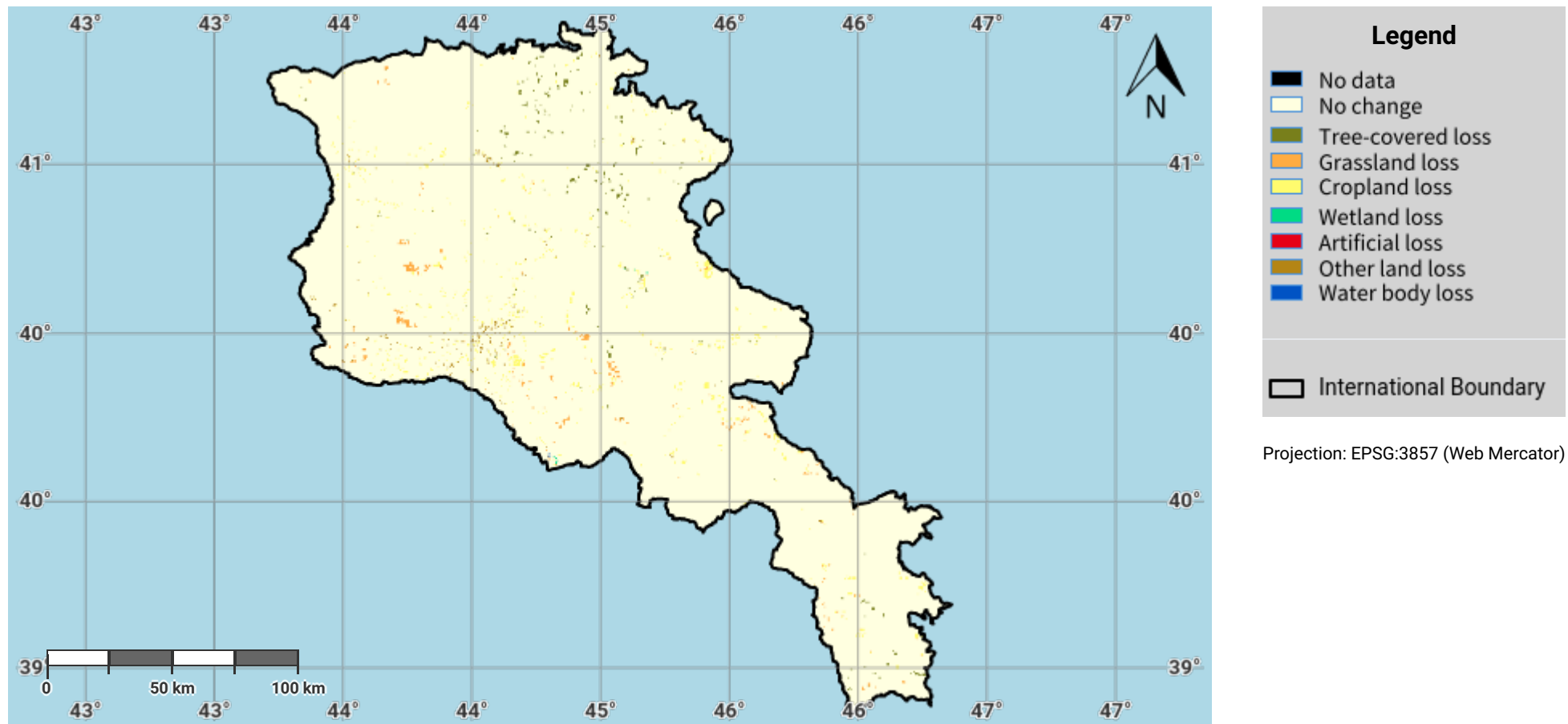Projection: EPSG:3857 (Web Mercator)

Disclaimer

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Source Data Credits

- European Space Agency Climate Change Initiative Land Cover (ESA CCI-LC) product, 1992-2019. URL: https://www.esa-landcover-cci.org/

Armenia – SO1-1.M2
Land cover in the baseline year

Legend

- No data
- Tree-covered
- Grassland
- Cropland
- Wetland
- Artificial
- Other land
- Water body

International Boundary

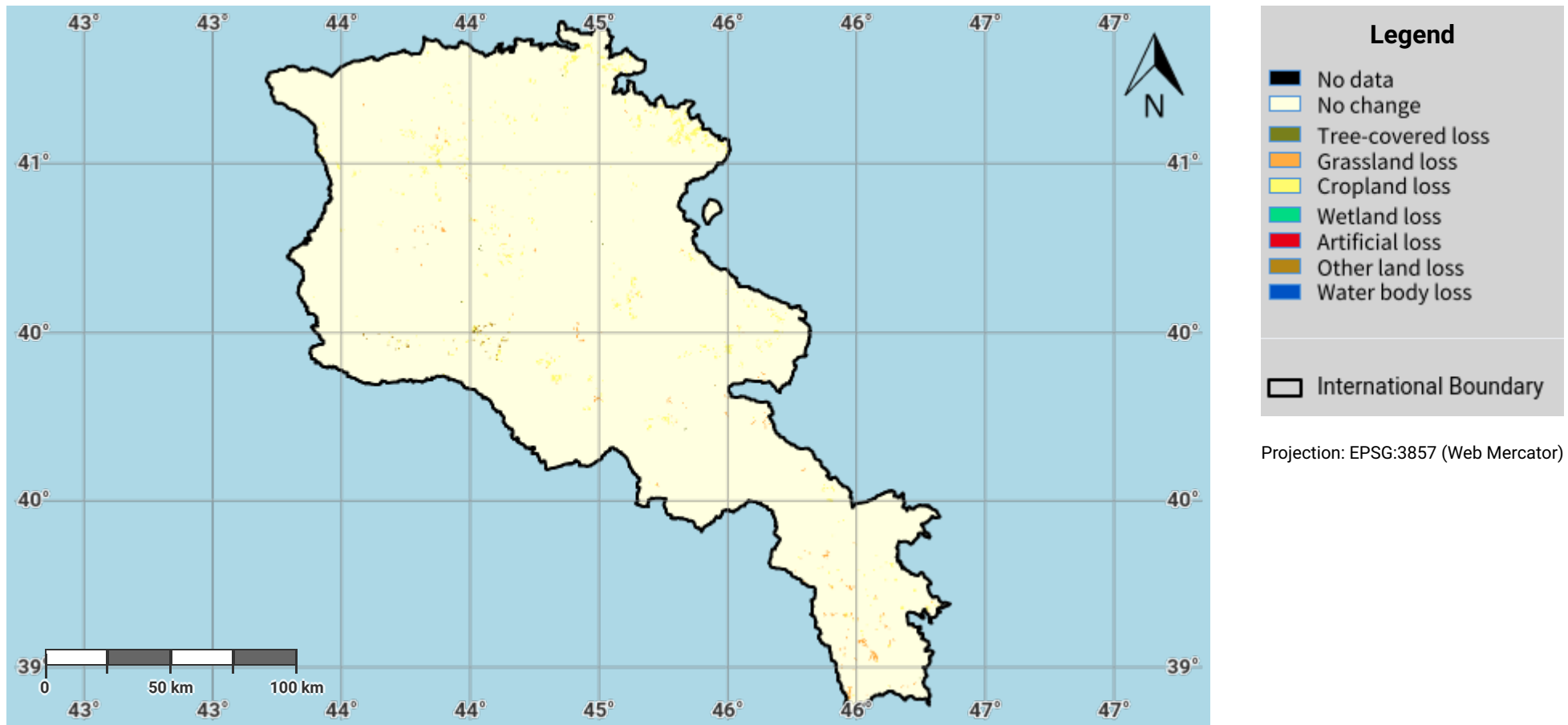Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- European Space Agency Climate Change Initiative Land Cover (ESA CCI-LC) product, 1992-2019. URL: https://www.esa-landcover-cci.org/

Armenia – SO1-1.M3
Land cover in the latest reporting year

Legend

- No data
- Tree-covered
- Grassland
- Cropland
- Wetland
- Artificial
- Other land
- Water body

International Boundary

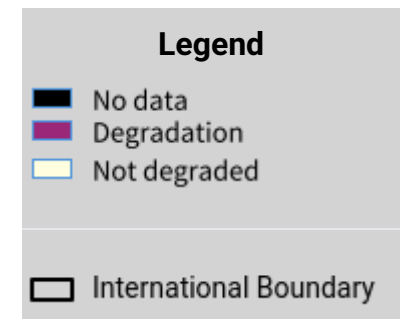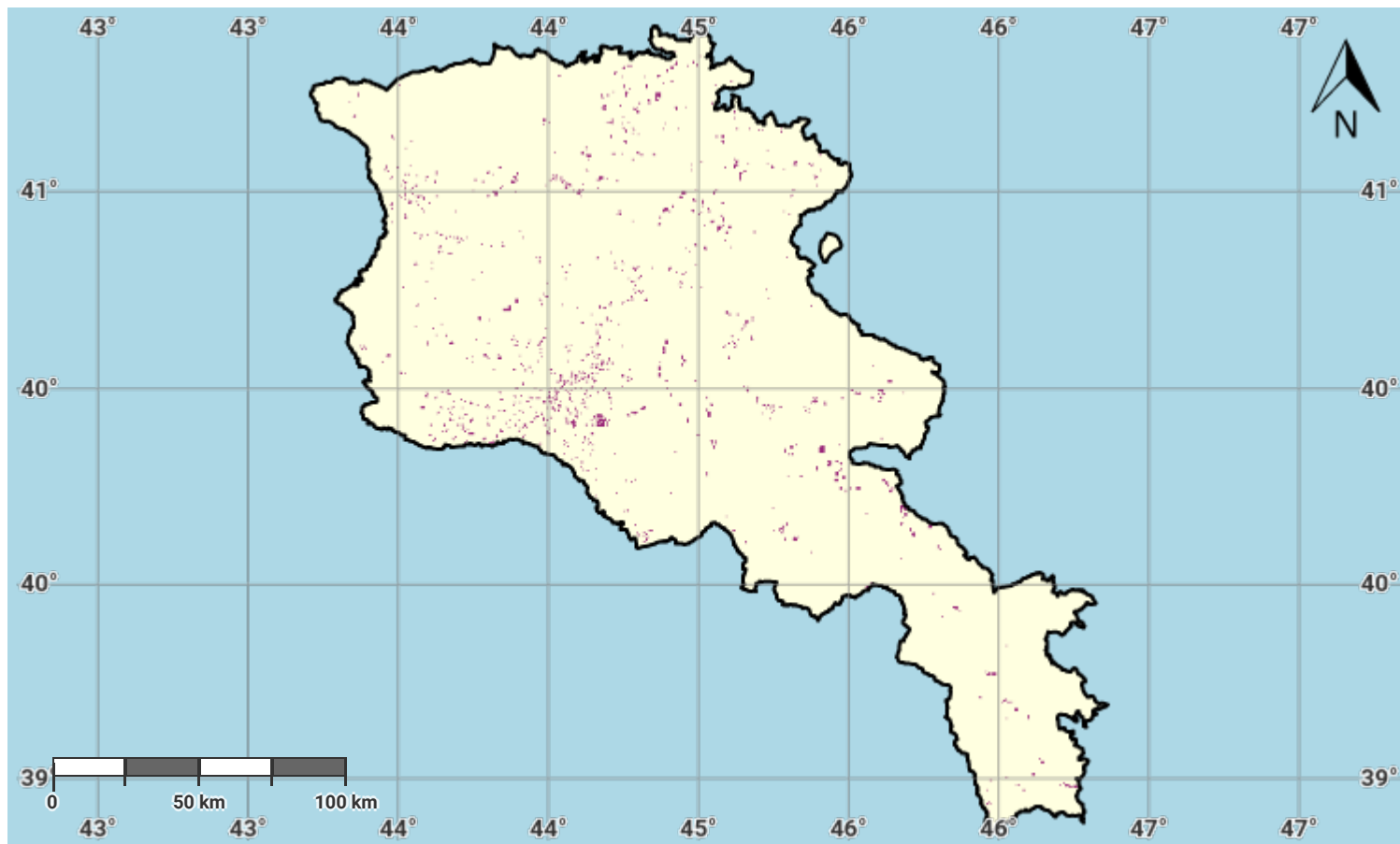Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

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Armenia − SO1-1.M4

Land cover change in the baseline period

Legend

- No data
- No change
- Tree-covered loss
- Grassland loss
- Cropland loss
- Wetland loss
- Artificial loss
- Other land loss
- Water body loss

- International Boundary

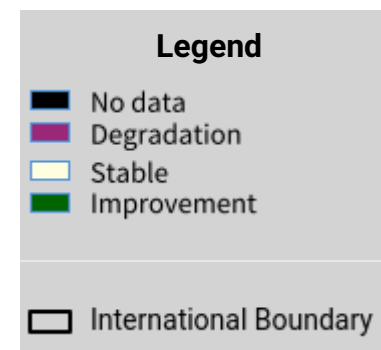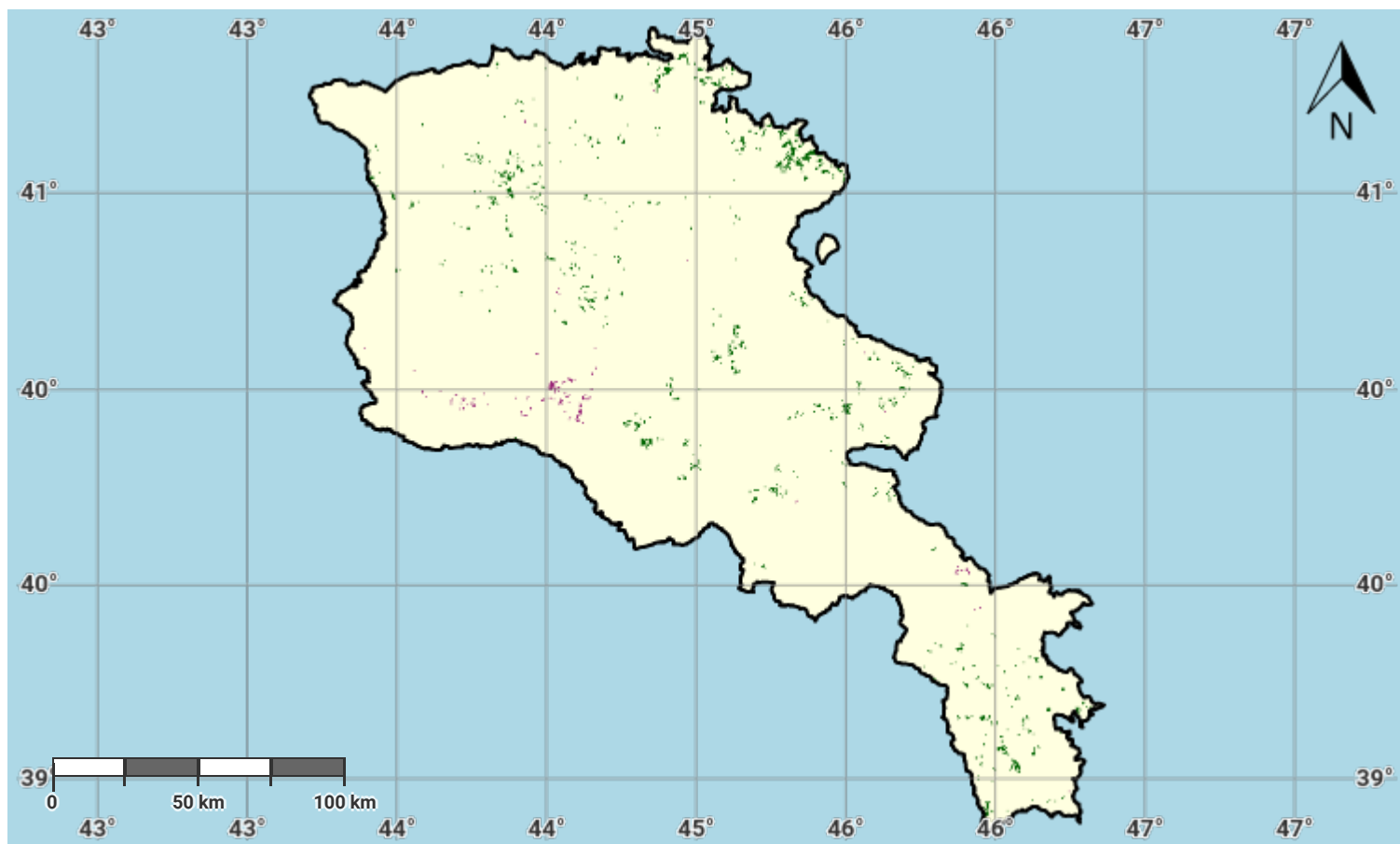Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- European Space Agency Climate Change Initiative Land Cover (ESA CCI-LC) product, 1992-2019. URL: https://www.esa-landcover-cci.org/

Armenia – SO1-1.M5
Land cover change in the reporting period

Legend

- ■ No data
- □ No change
- ■ Tree-covered loss
- ■ Grassland loss
- ■ Cropland loss
- ■ Wetland loss
- ■ Artificial loss
- ■ Other land loss
- ■ Water body loss

- ▭ International Boundary

Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- European Space Agency Climate Change Initiative Land Cover (ESA CCI-LC) product, 1992-2019. URL: https://www.esa-landcover-cci.org/

Armenia – SO1-1.M6
Land cover degradation in the baseline period

Legend

- No data
- Degradation
- Not degraded

- International Boundary

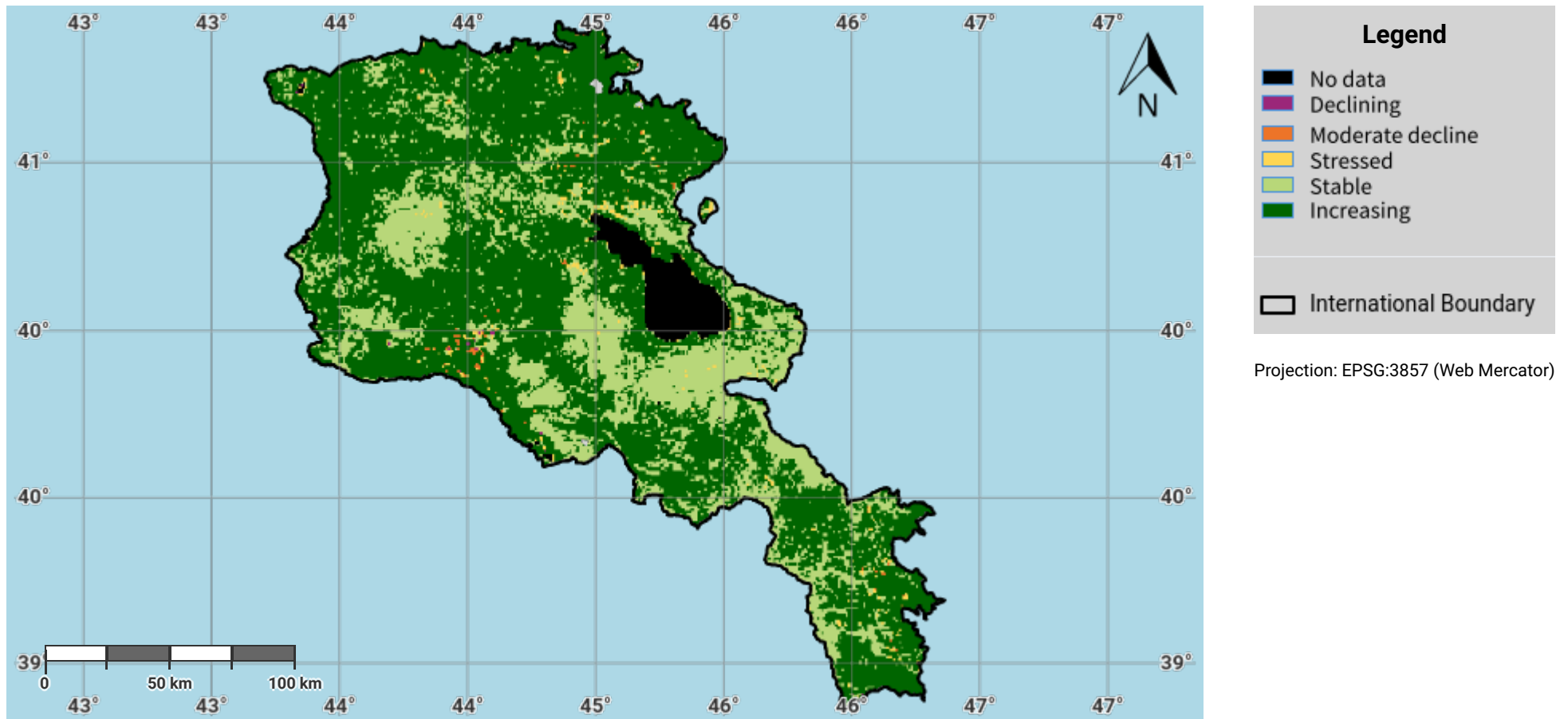Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- European Space Agency Climate Change Initiative Land Cover (ESA CCI-LC) product, 1992-2019. URL: https://www.esa-landcover-cci.org/

Armenia − SO1-1.M7

Land cover degradation in the reporting period

Legend

- No data
- Degradation
- Stable
- Improvement

- International Boundary

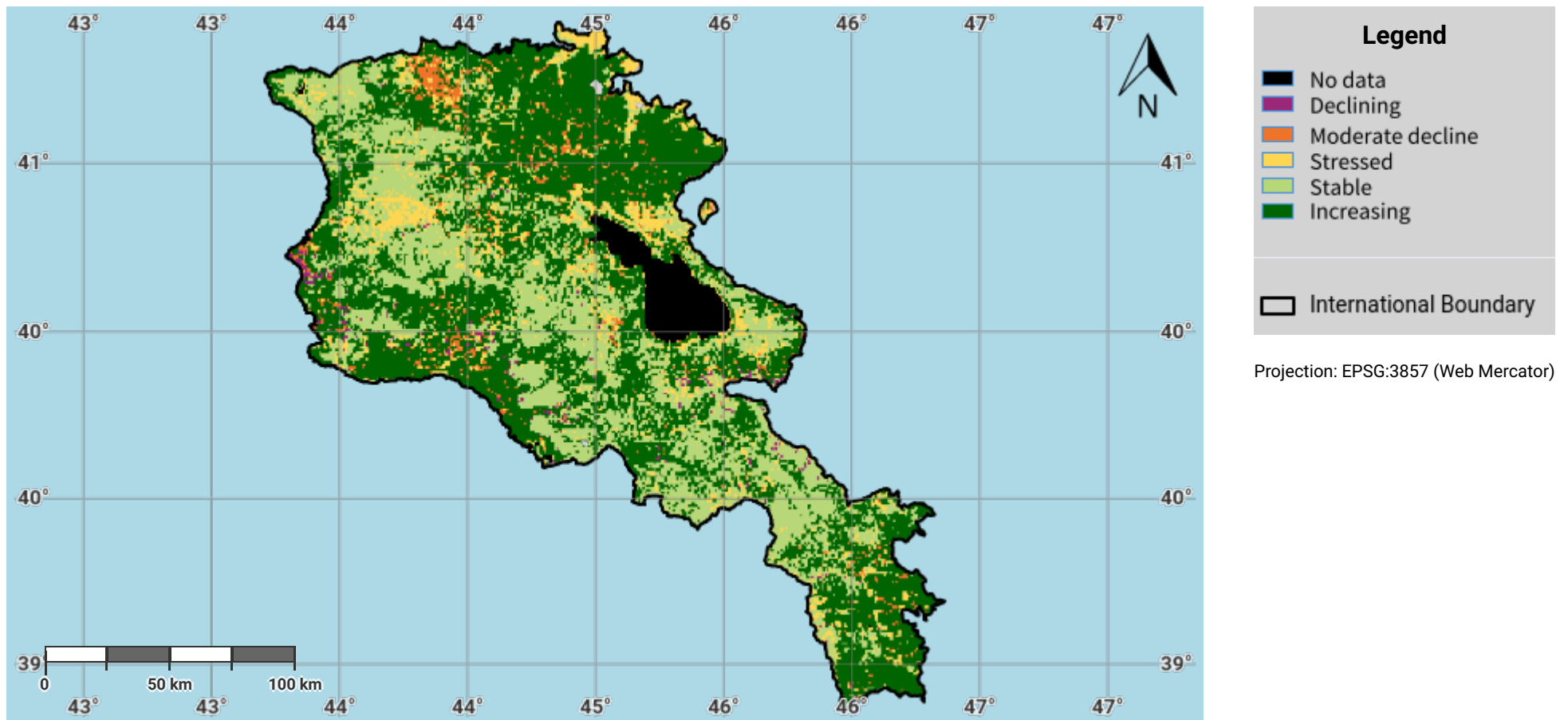Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

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Armenia – SO1-2.M1
Land productivity dynamics in the baseline period

Legend

- No data
- Declining
- Moderate decline
- Stressed
- Stable
- Increasing

International Boundary

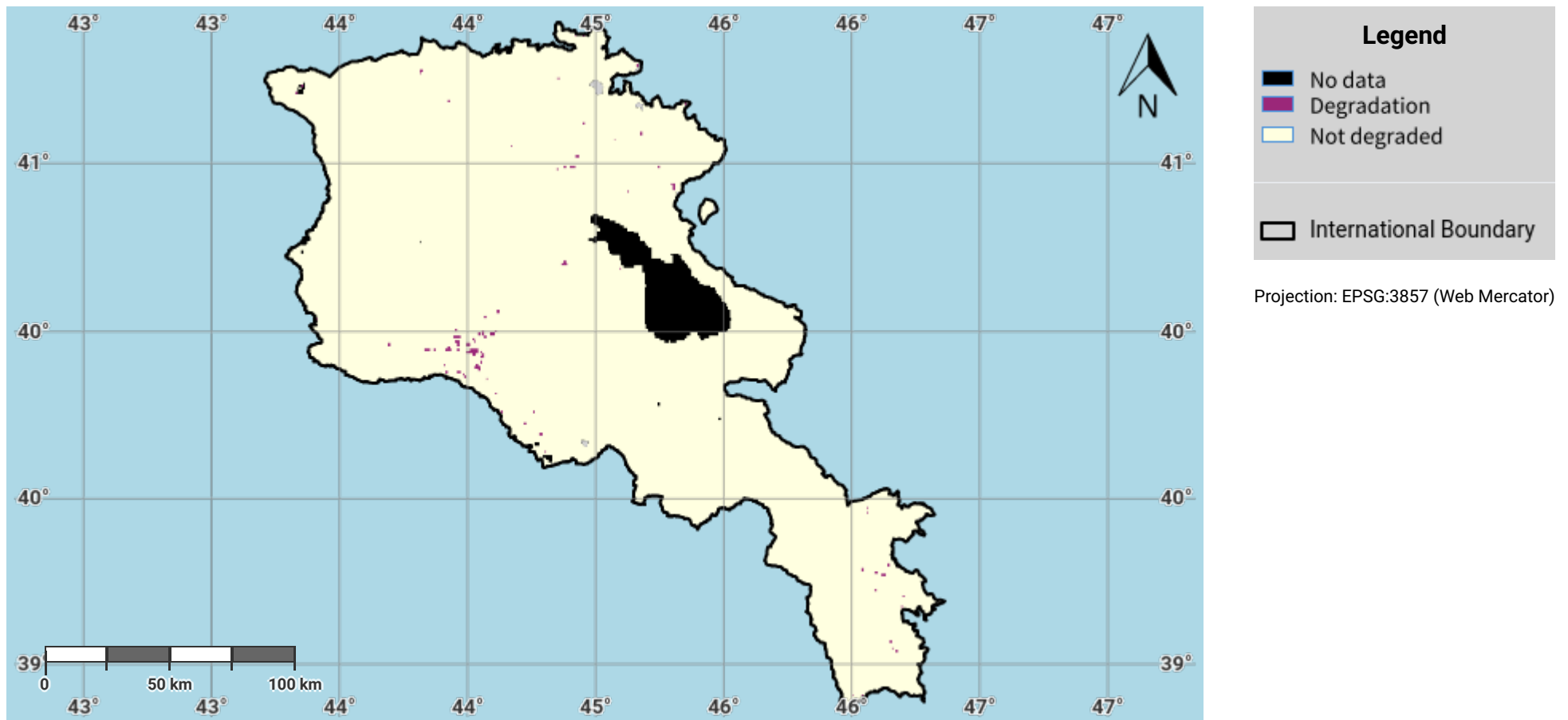Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- EC-JRC, 2021, based on Xavier Rotllan-Puig, Eva Ivits, Michael Cherlet, LPDynR: A new tool to calculate the land productivity dynamics indicator, Ecological Indicators, Volume 133, 2021, 108386, ISSN 1470-160X. URL: https://doi.org/10.1016/j.ecolind.2021.108386

Armenia – SO1-2.M2
Land productivity dynamics in the reporting period

Legend

- ■ No data
- ■ Declining
- ■ Moderate decline
- ■ Stressed
- ■ Stable
- ■ Increasing

- ▭ International Boundary
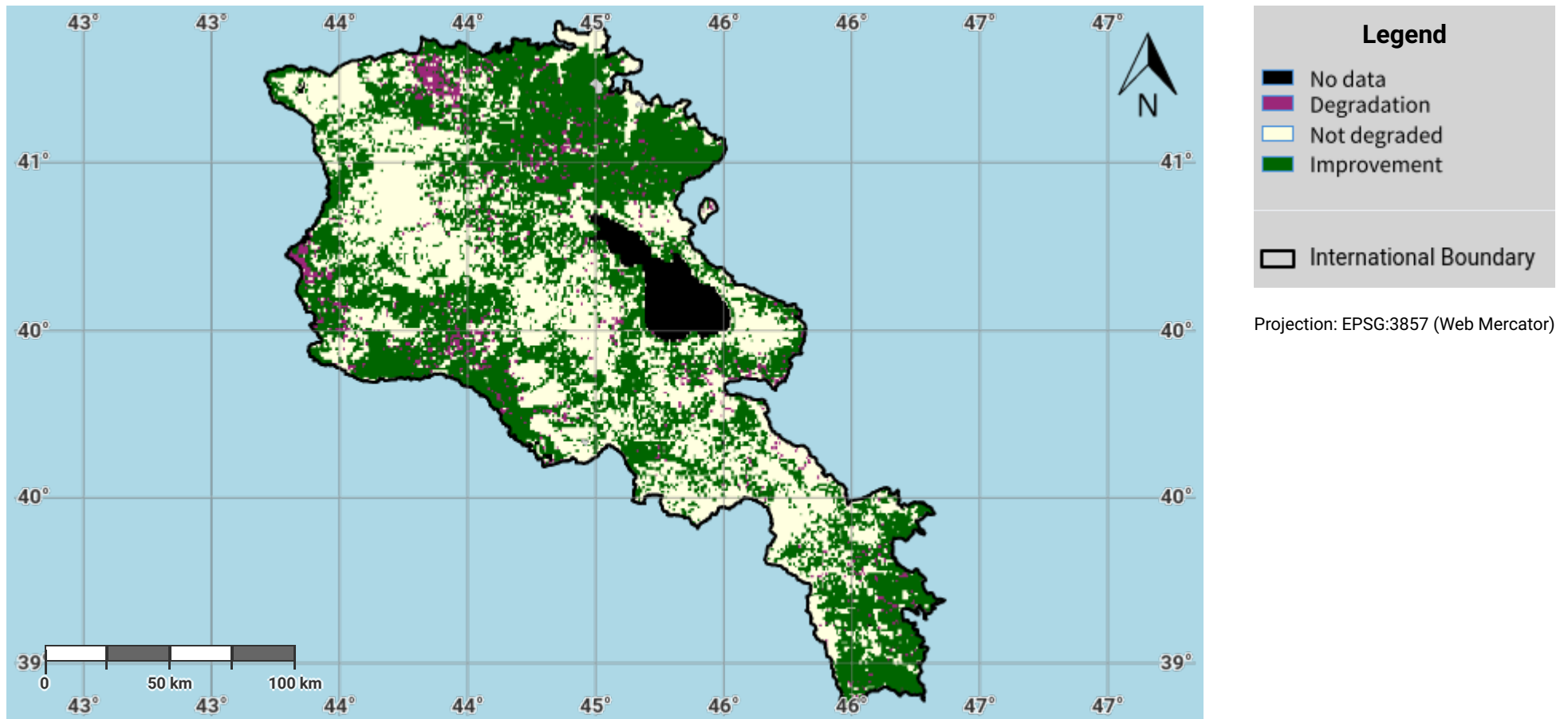
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Armenia – SO1-2.M3

Land productivity degradation in the baseline period

Legend

- ■ No data
- ■ Degradation
- □ Not degraded

- ▭ International Boundary

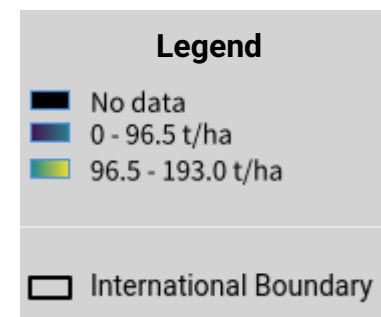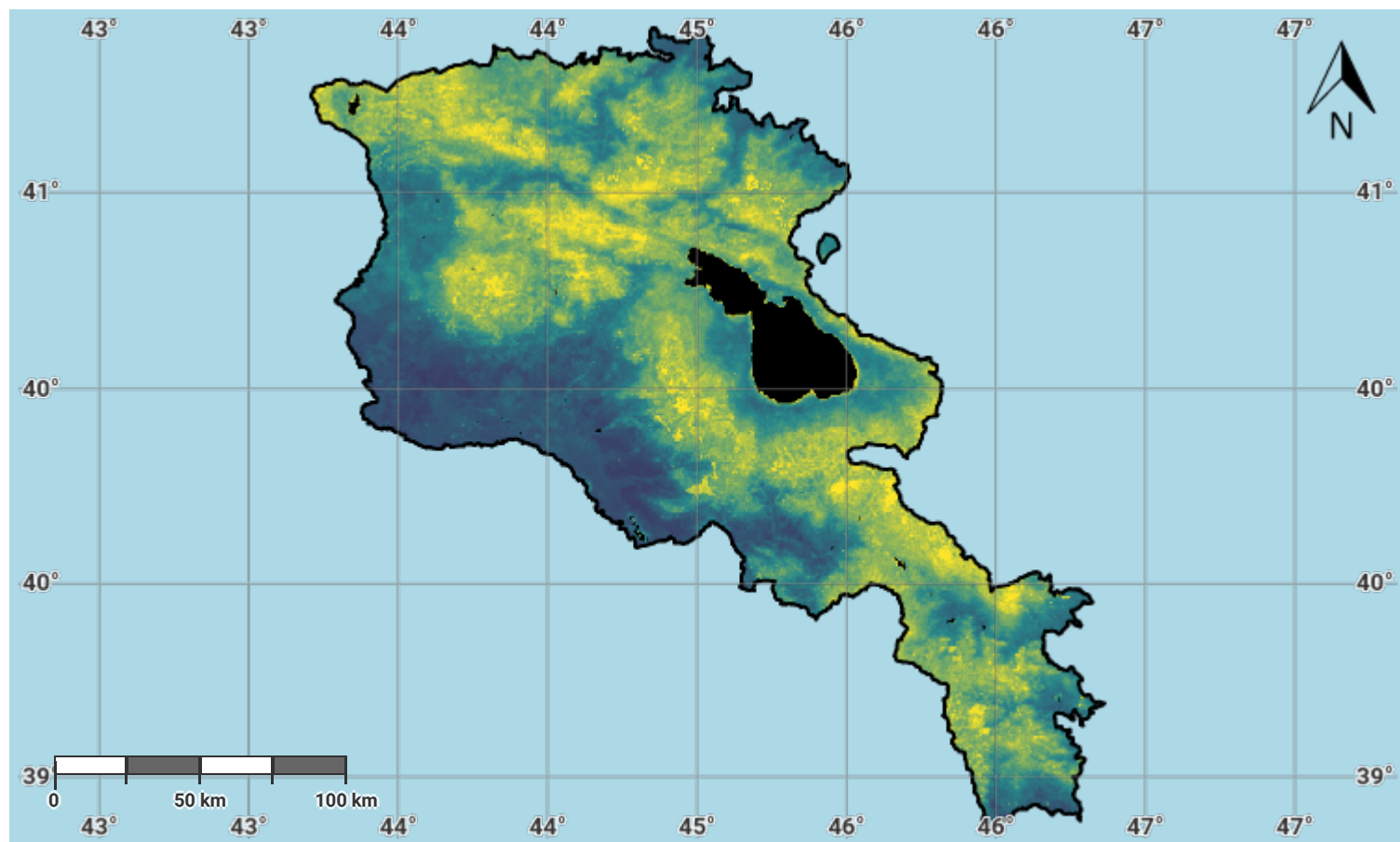Projection: EPSG:3857 (Web Mercator)

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Armenia – SO1-2.M4
Land productivity degradation in the reporting period

Legend
- No data
- Degradation
- Not degraded
- Improvement

- International Boundary
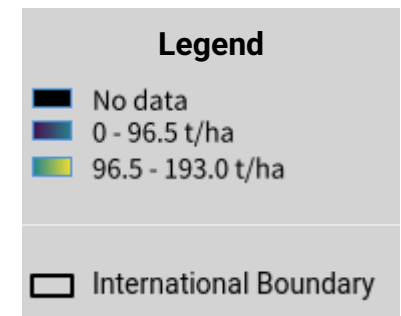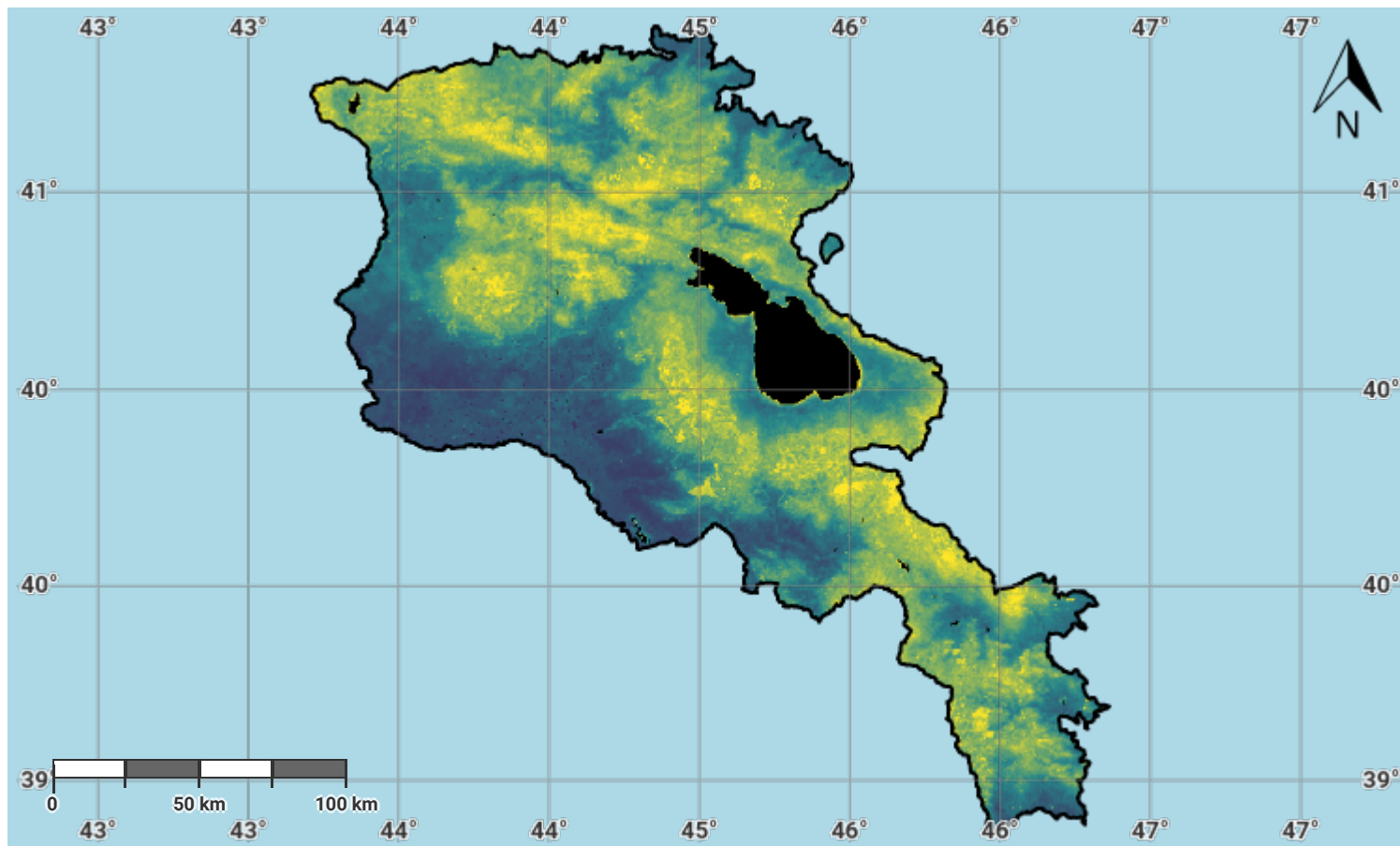
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Armenia – SO1-3.M1

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

Legend

- ■ No data
- ■ 0 - 96.5 t/ha
- ■ 96.5 - 193.0 t/ha

- ☐ International Boundary

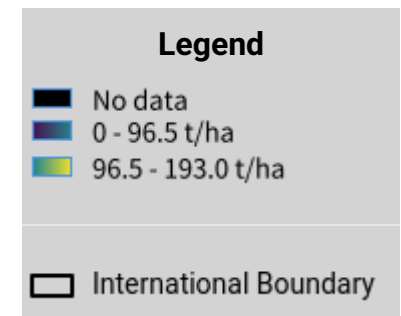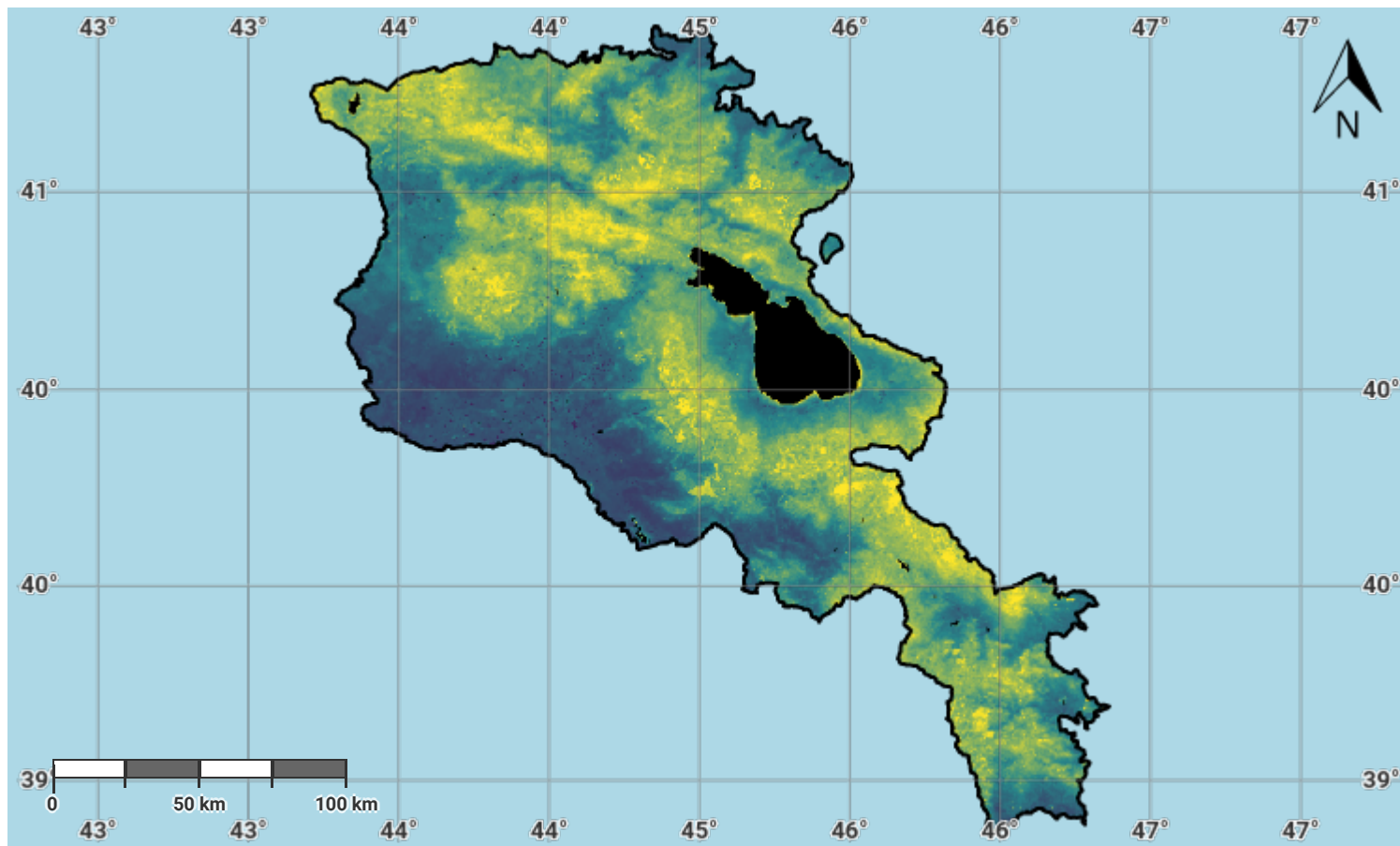Projection: EPSG:3857 (Web Mercator)

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Source Data Credits
- International Soil Reference and Information Centre (ISRIC) SoilGrids250m dataset. URL: https://www.isric.org/explore/soilgrids

Soil organic carbon stock in the baseline year

Disclaimer
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Source Data Credits
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Armenia – SO1-3.M3

Soil organic carbon stock in the latest reporting year

Legend

- ■ No data
- ■ 0 - 96.5 t/ha
- ■ 96.5 - 193.0 t/ha

- ▭ International Boundary

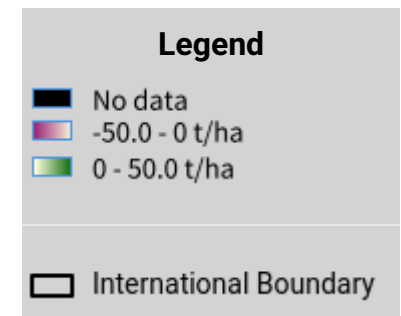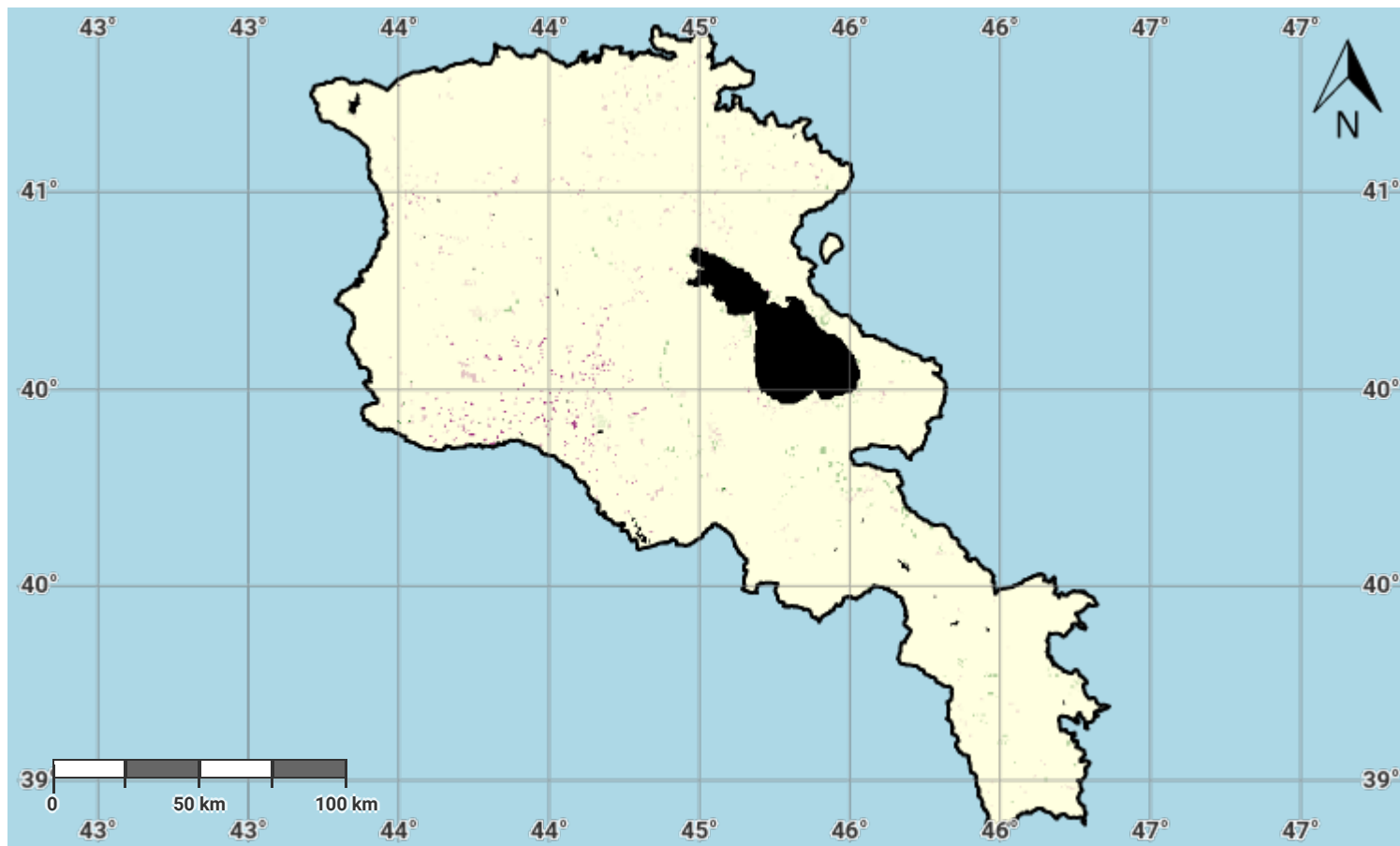Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- International Soil Reference and Information Centre (ISRIC) SoilGrids250m dataset. URL: https://www.isric.org/explore/soilgrids

Change in soil organic carbon stock in the baseline period

Legend
- No data
- -50.0 - 0 t/ha
- 0 - 50.0 t/ha
- International Boundary
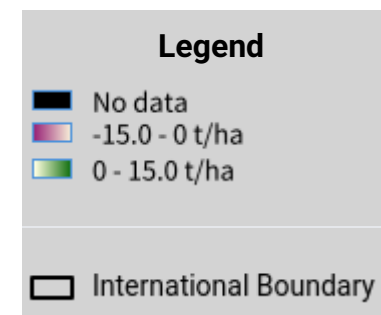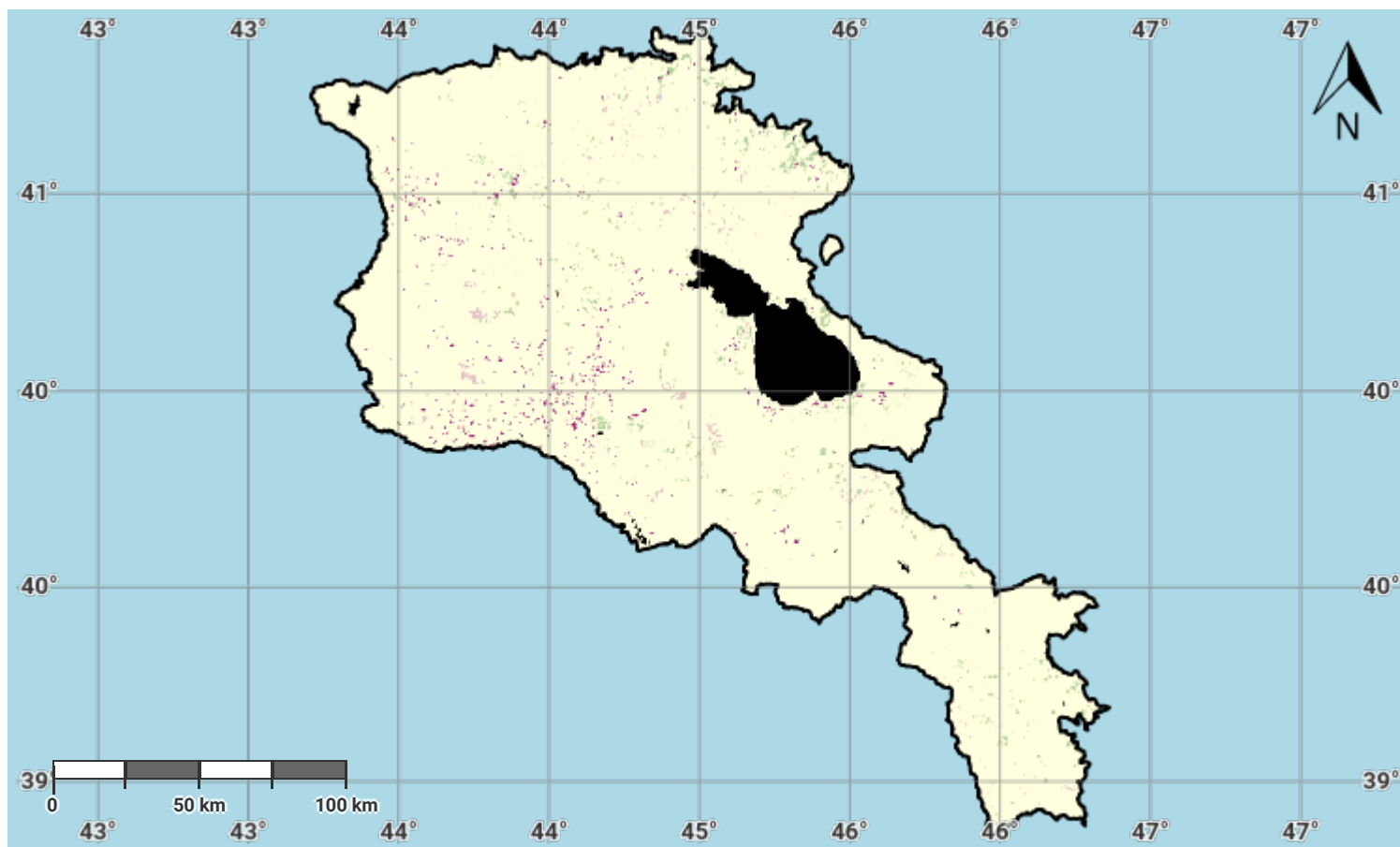
Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- International Soil Reference and Information Centre (ISRIC) SoilGrids250m dataset. URL: https://www.isric.org/explore/soilgrids

Armenia – SO1-3.M5
Change in soil organic carbon stock in the reporting period

Legend

- No data
- -15.0 - 0 t/ha
- 0 - 15.0 t/ha

- International Boundary

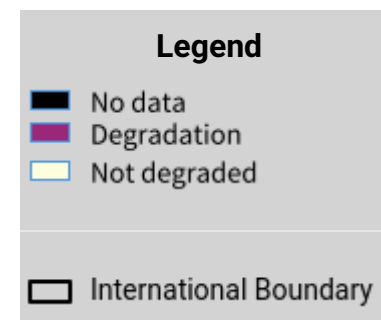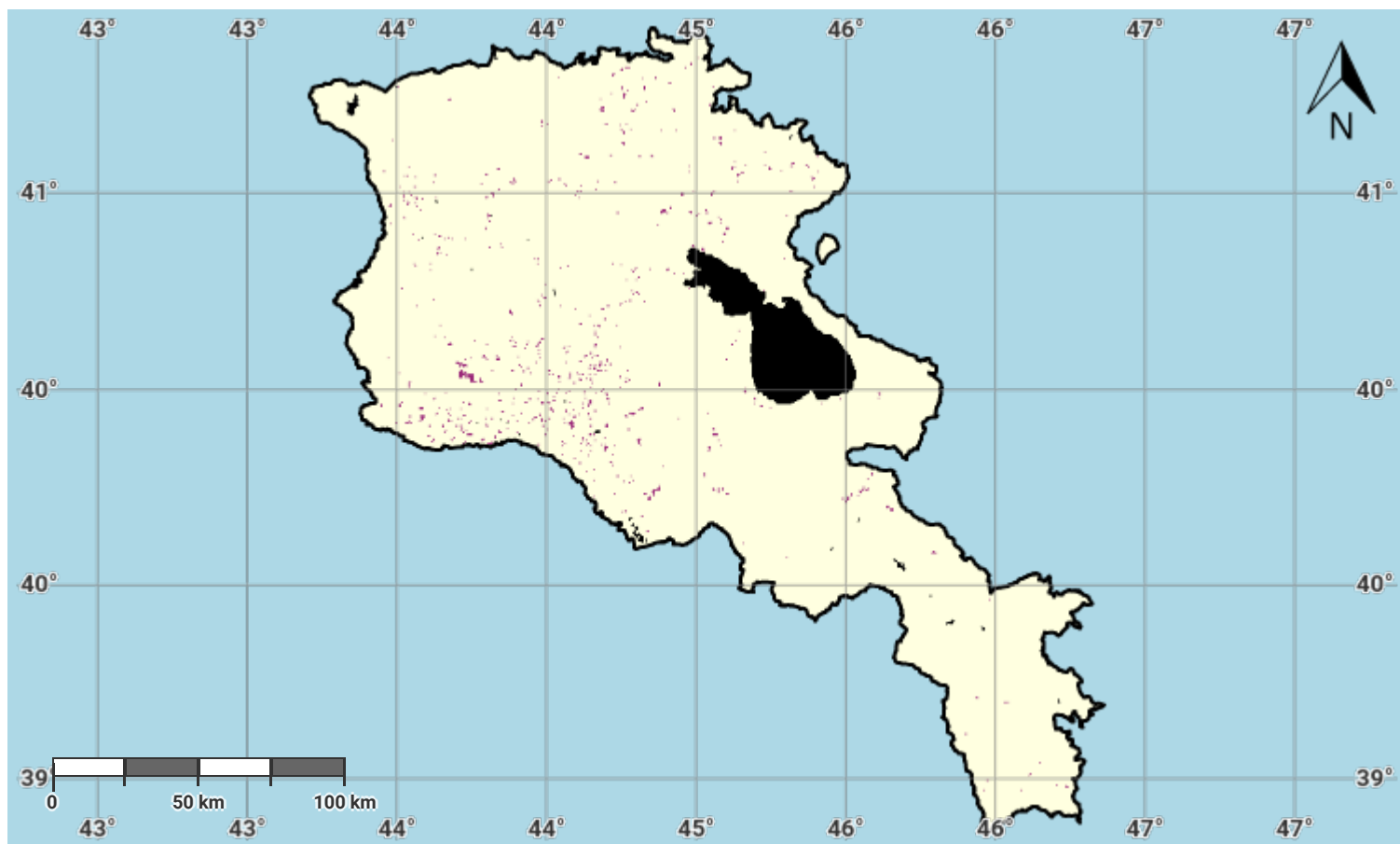Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- International Soil Reference and Information Centre (ISRIC) SoilGrids250m dataset. URL: https://www.isric.org/explore/soilgrids

Armenia – SO1-3.M6
Soil organic carbon degradation in the baseline period

Legend

- No data
- Degradation
- Not degraded

- International Boundary

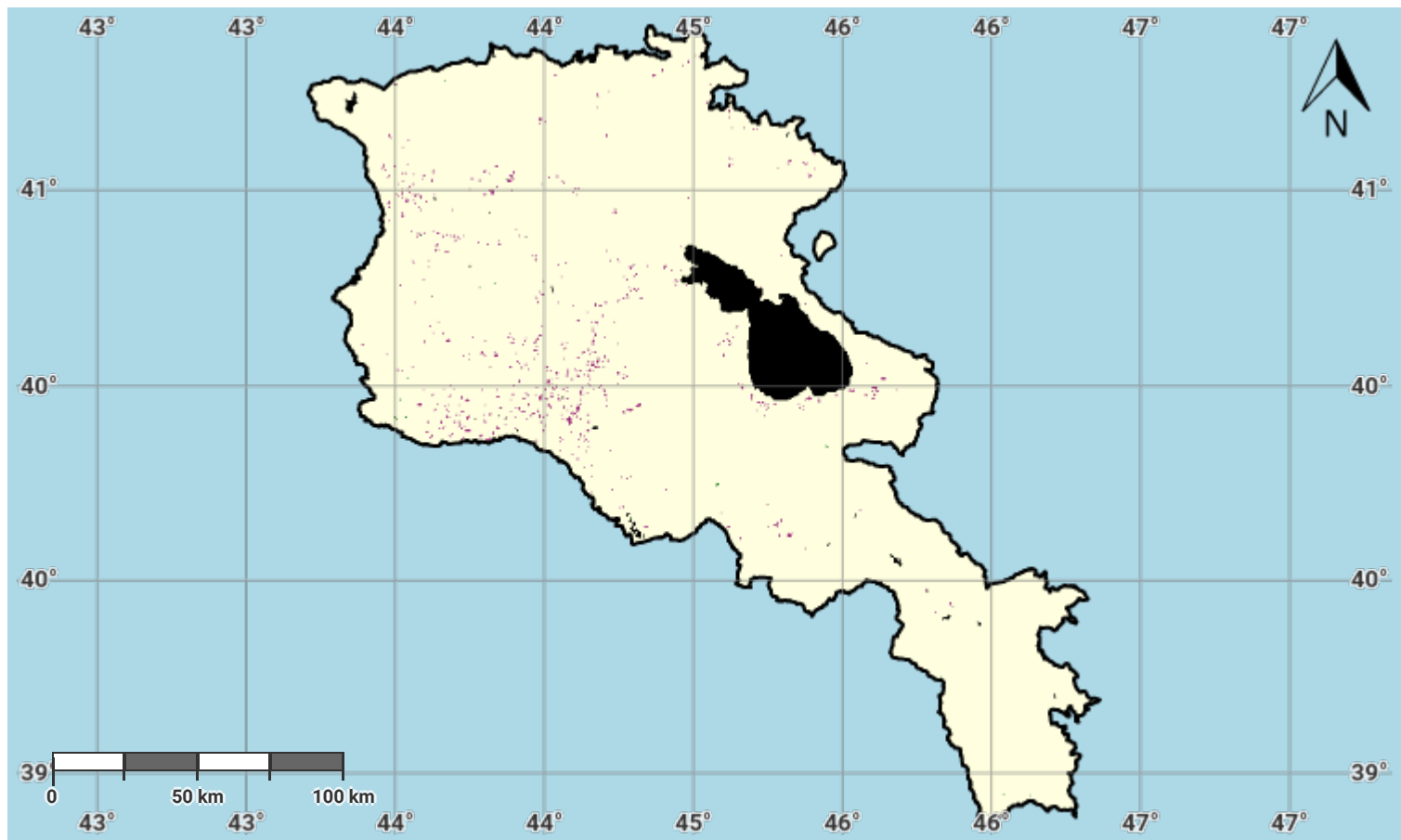Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- International Soil Reference and Information Centre (ISRIC) SoilGrids250m dataset. URL: https://www.isric.org/explore/soilgrids

Armenia − SO1-3.M7
Soil organic carbon degradation in the reporting period

Legend

- No data
- Degradation
- Stable
- Improvement

- International Boundary

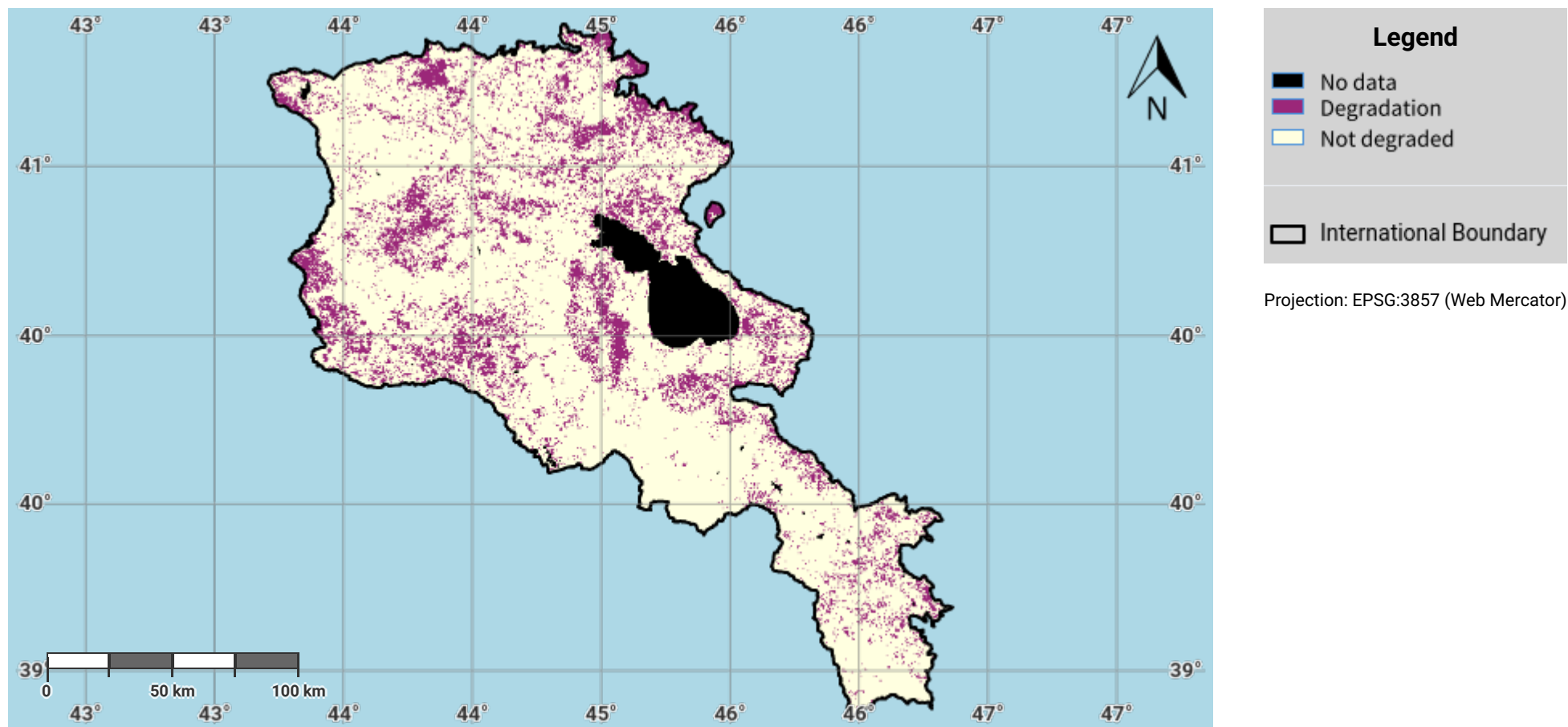Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

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Armenia − SO1-4.M1

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

Legend

- ⬛ No data
- 🟪 Degradation
- ⬜ Not degraded

- ▭ International Boundary

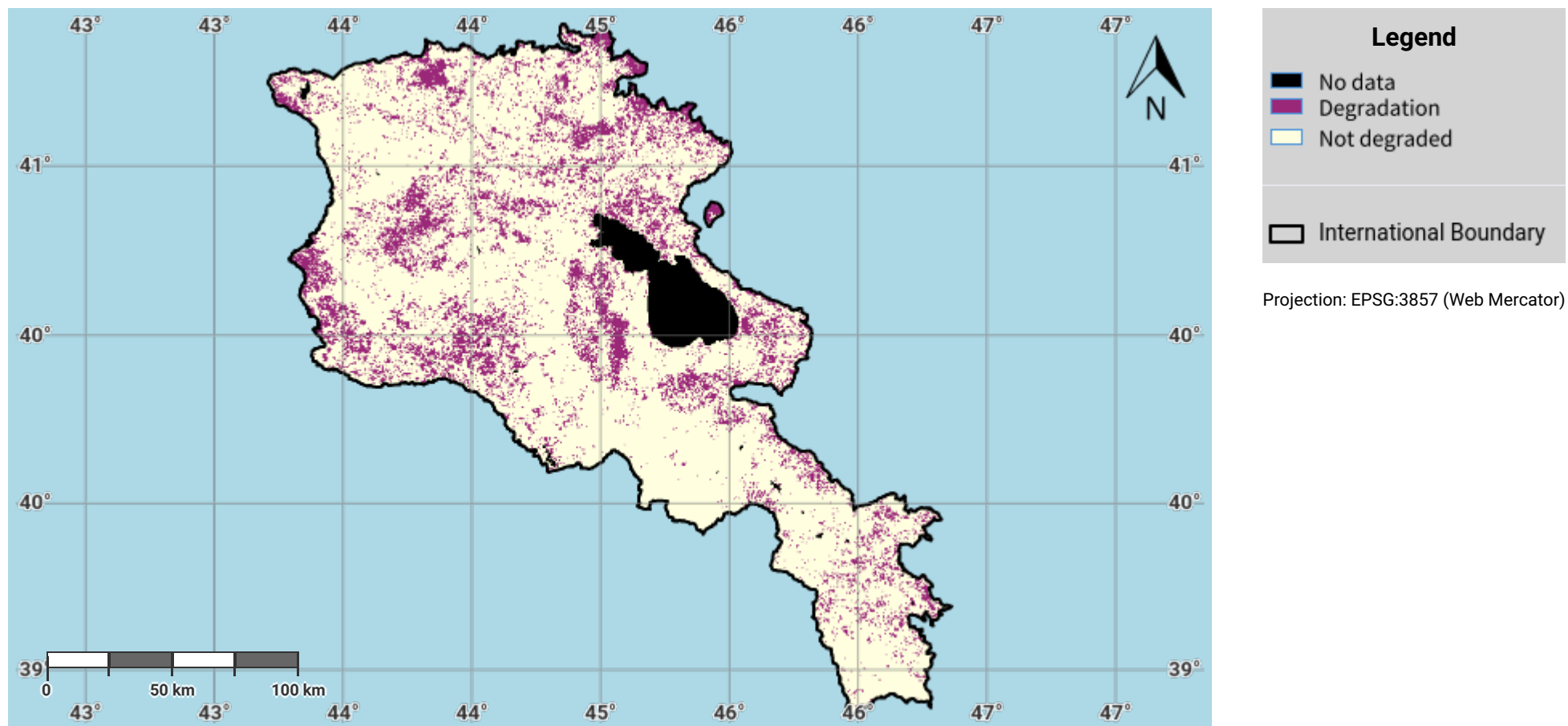Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- 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

Armenia − SO1-4.M2

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

Legend

- No data
- Degradation
- Not degraded

- International Boundary

Projection: EPSG:3857 (Web Mercator)
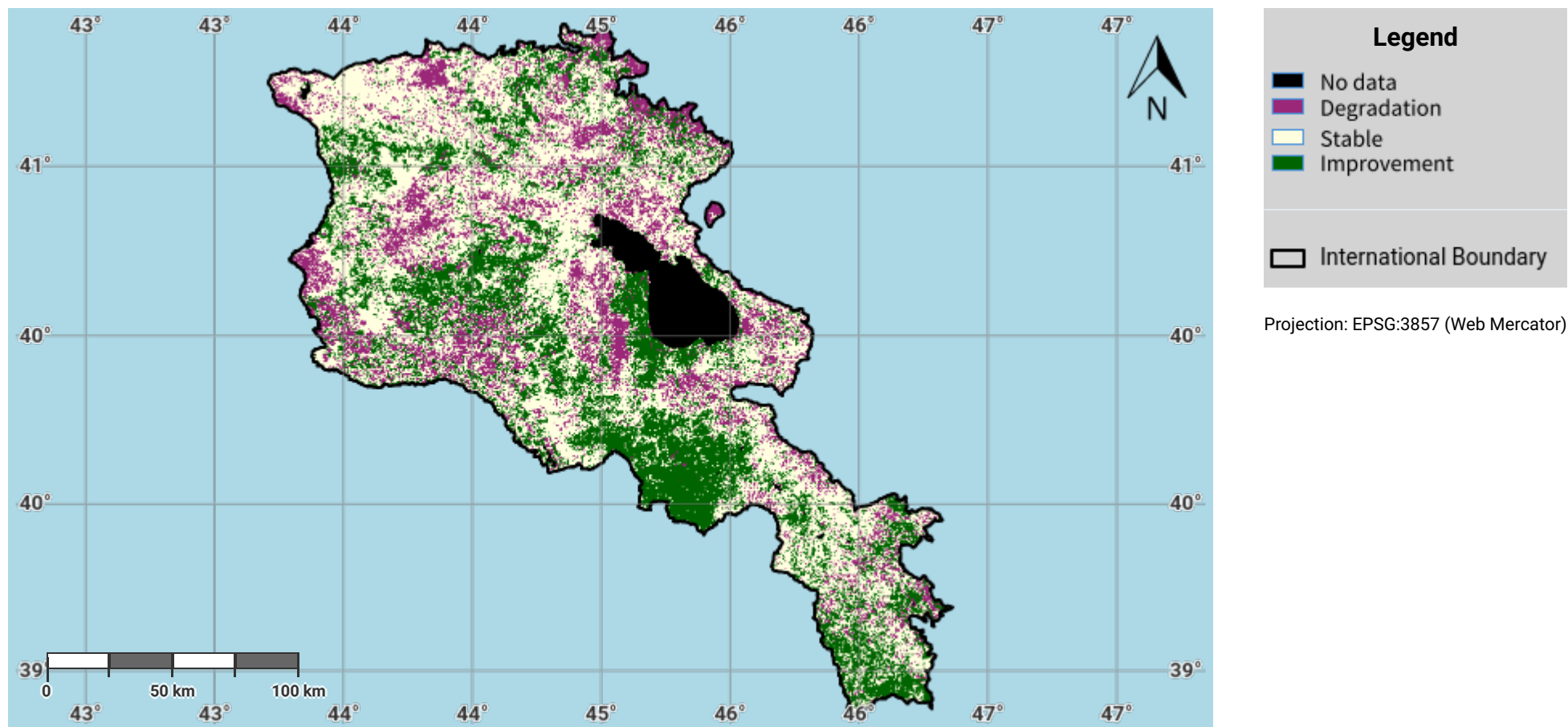
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Armenia – SO1-4.M3

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

Legend

- No data
- Degradation
- Stable
- Improvement

- International Boundary

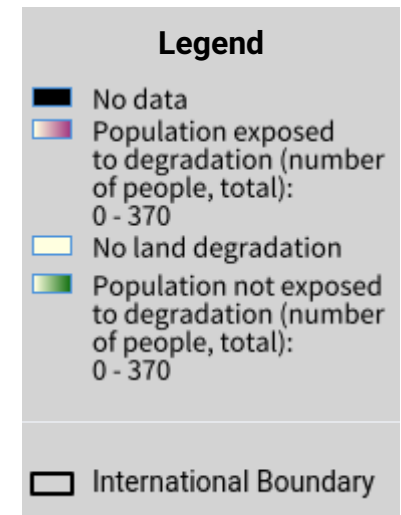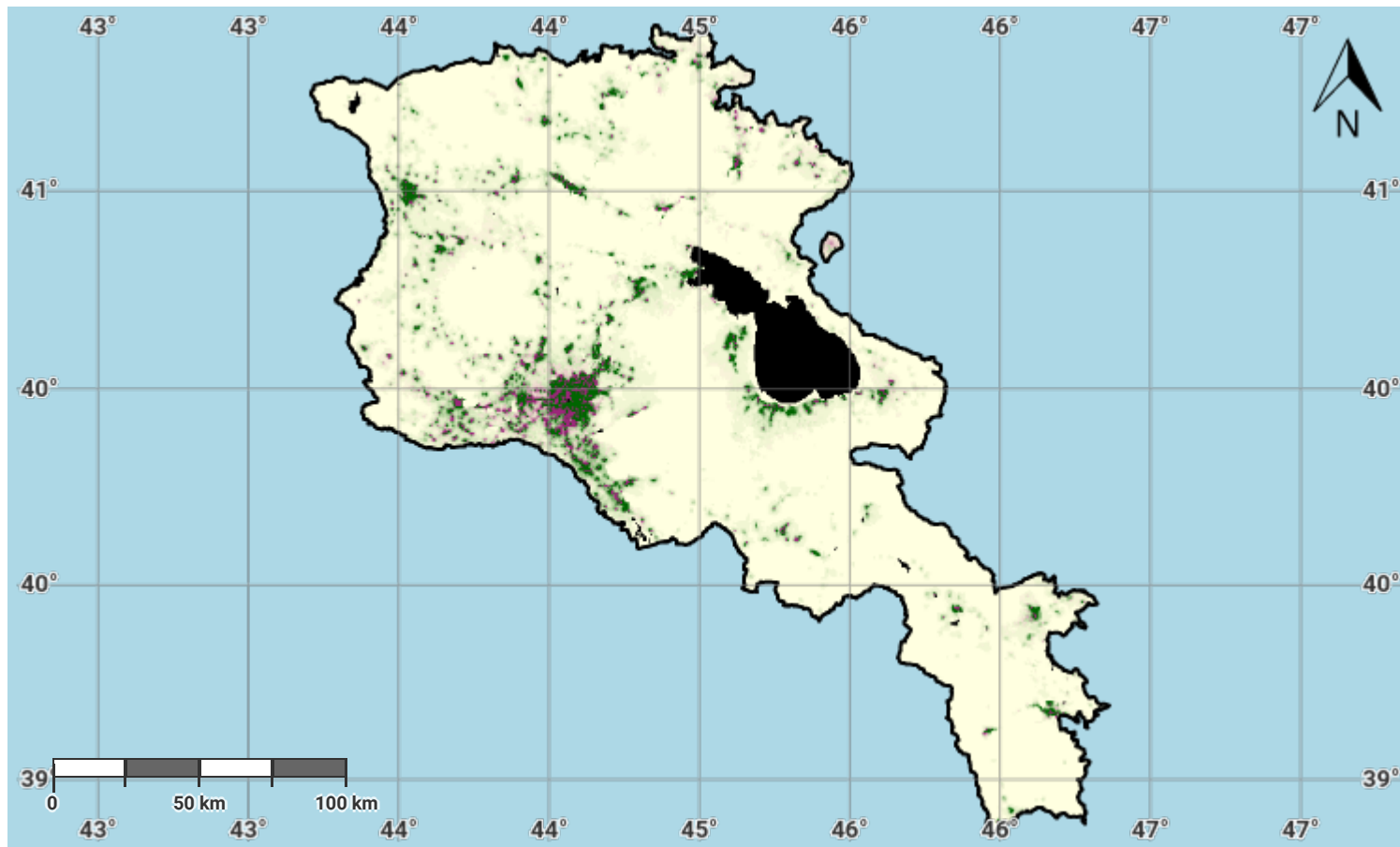Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- 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

Armenia − SO2-3.M1

Total Population exposed to land degradation (baseline)

Legend

- ■ No data
- Population exposed to degradation (number of people, total): 0 - 370
- No land degradation
- Population not exposed to degradation (number of people, total): 0 - 370

- ☐ International Boundary

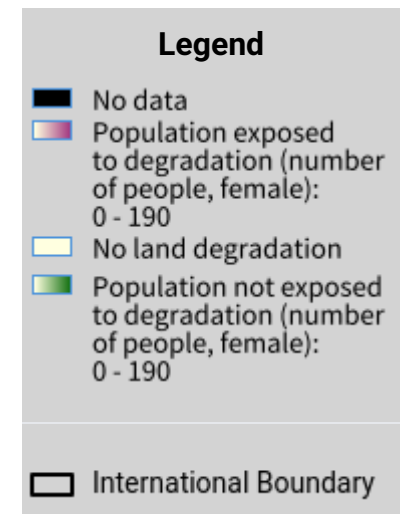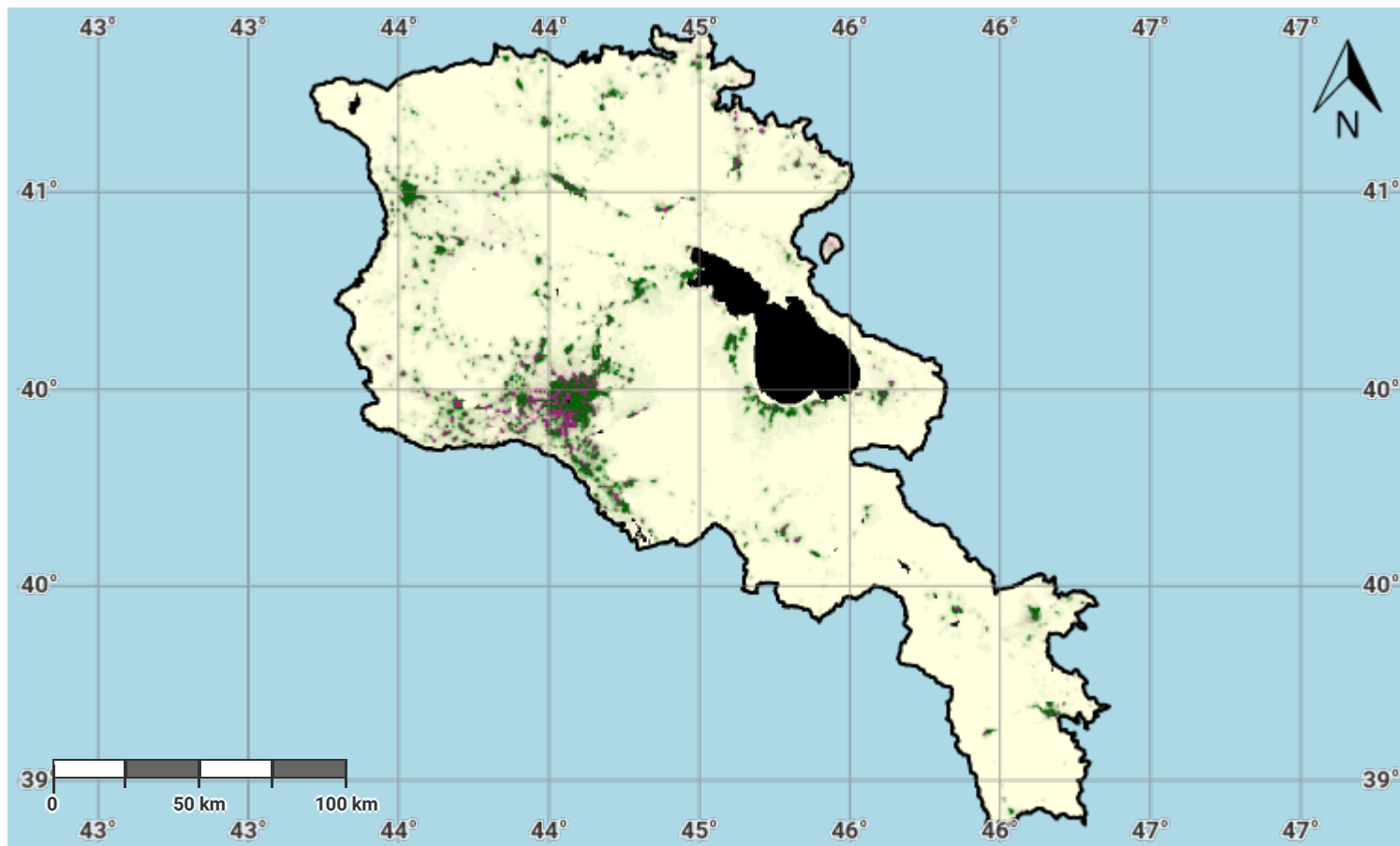Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

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

Armenia – SO2-3.M2
Female Population exposed to land degradation (baseline)

Legend

- No data
- Population exposed to degradation (number of people, female): 0 - 190
- No land degradation
- Population not exposed to degradation (number of people, female): 0 - 190

- International Boundary

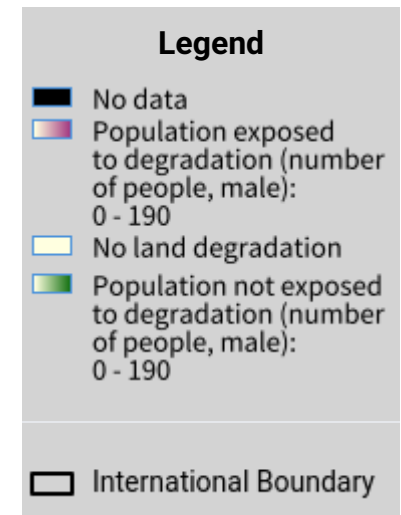Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

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

Armenia – SO2-3.M3
Male Population exposed to land degradation (baseline)

Legend

- No data
- Population exposed to degradation (number of people, male): 0 - 190
- No land degradation
- Population not exposed to degradation (number of people, male): 0 - 190

- International Boundary

Projection: EPSG:3857 (Web Mercator)
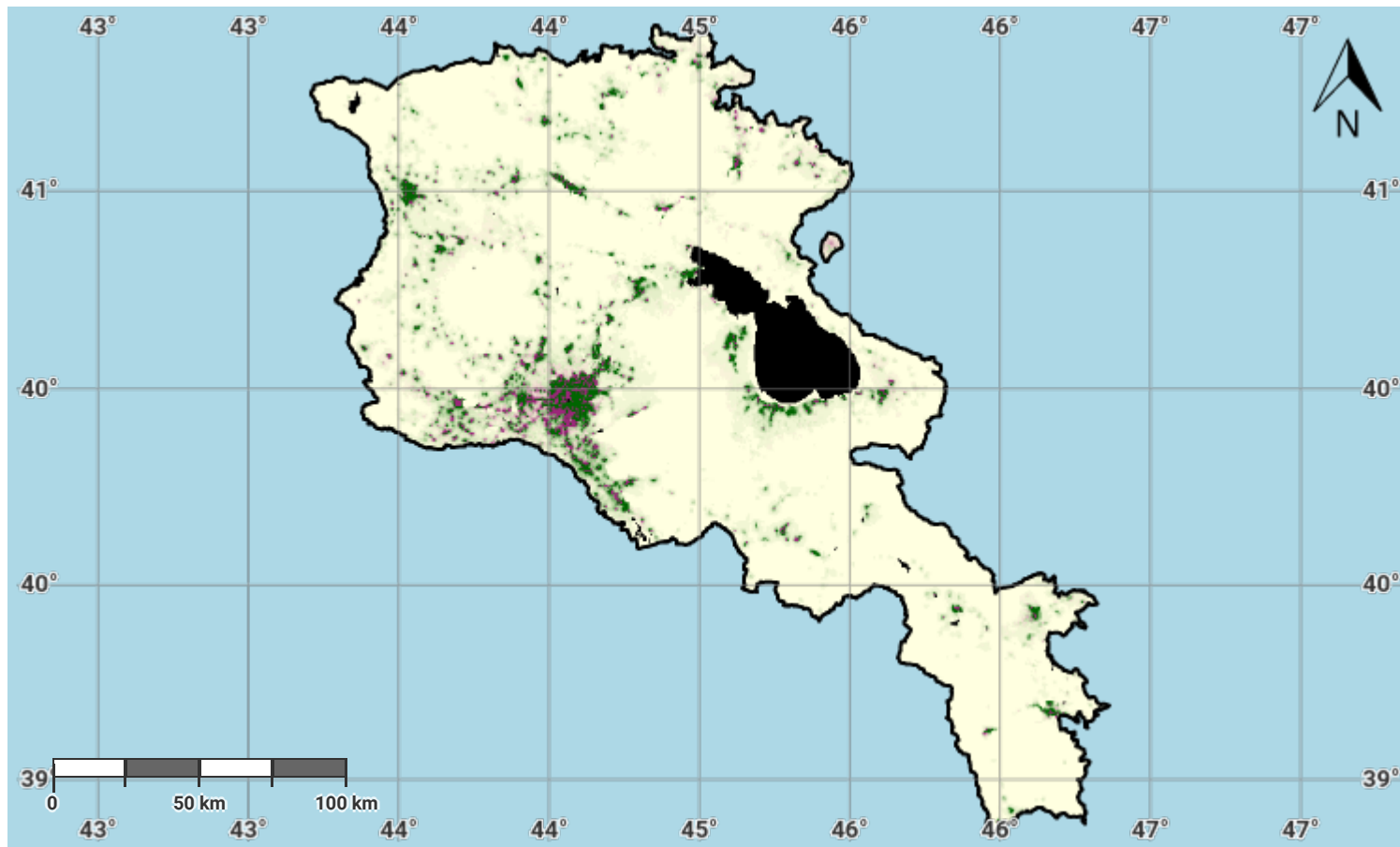
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Source Data Credits

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

Armenia – SO2-3.M4
Total Population exposed to land degradation (reporting)

Legend

- **No data**
- **Population exposed to degradation (number of people, total): 0 - 410**
- **No land degradation**
- **Population not exposed to degradation (number of people, total): 0 - 410**

- **International Boundary**

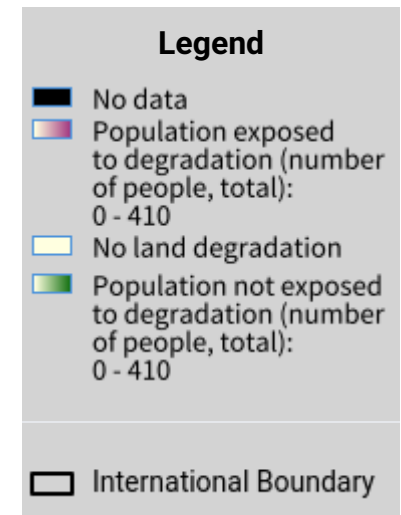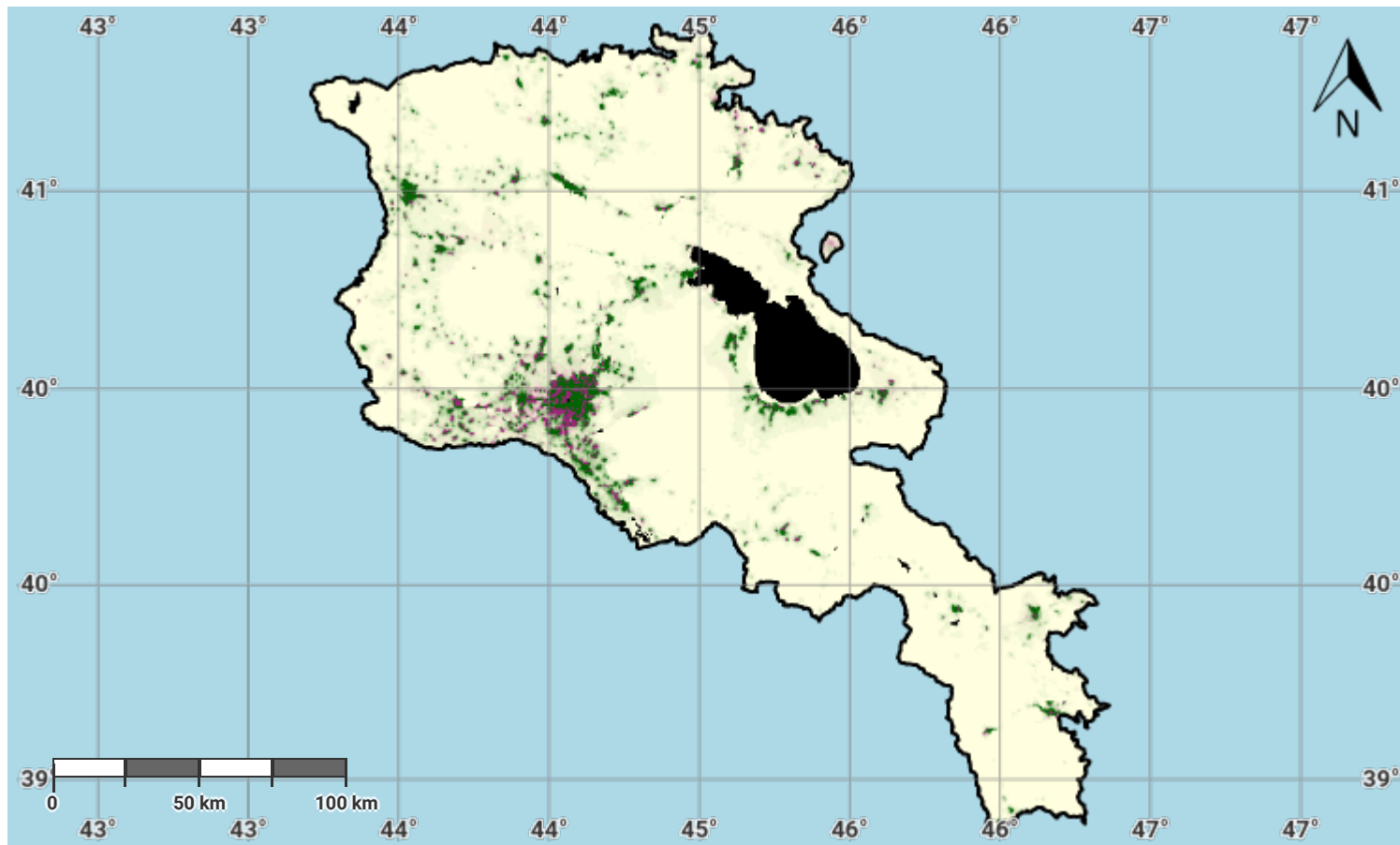Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

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

Armenia − SO2-3.M5

Female Population exposed to land degradation (reporting)

Legend

- ⬛ No data
- Population exposed to degradation (number of people, female): 0 - 210
- No land degradation
- Population not exposed to degradation (number of people, female): 0 - 210

- ☐ International Boundary

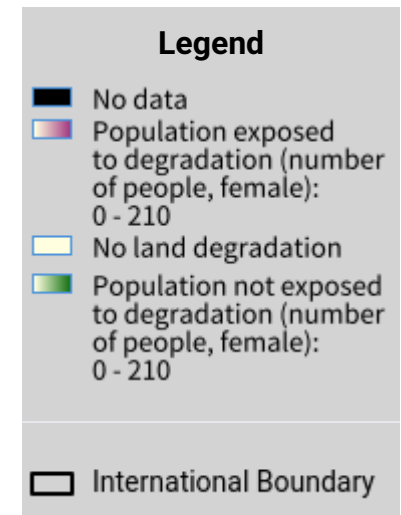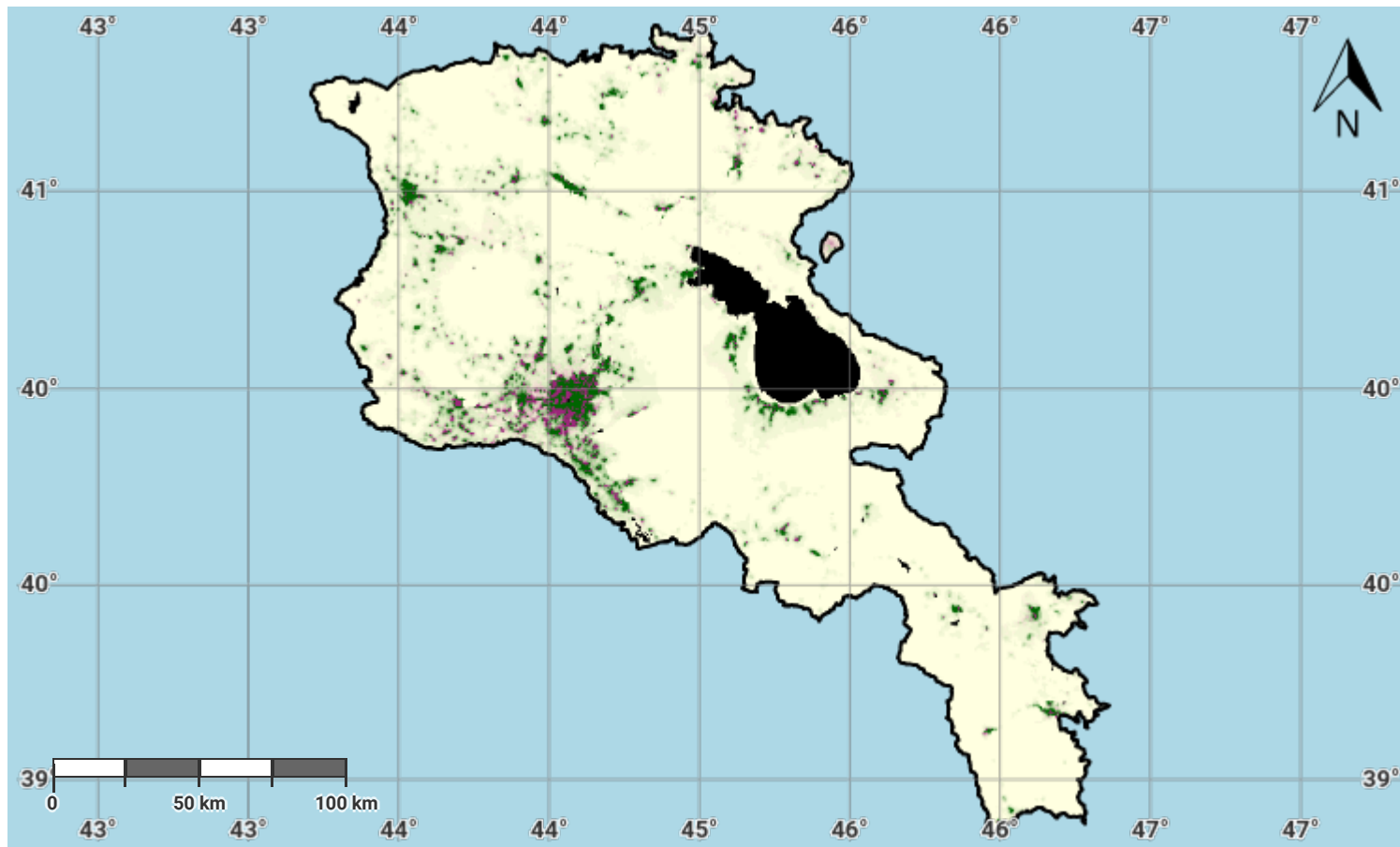Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

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

Armenia – SO2-3.M6
Male Population exposed to land degradation (reporting)

Legend

- ■ No data
- Population exposed to degradation (number of people, male): 0 - 210
- No land degradation
- Population not exposed to degradation (number of people, male): 0 - 210

- ▢ International Boundary

Projection: EPSG:3857 (Web Mercator)
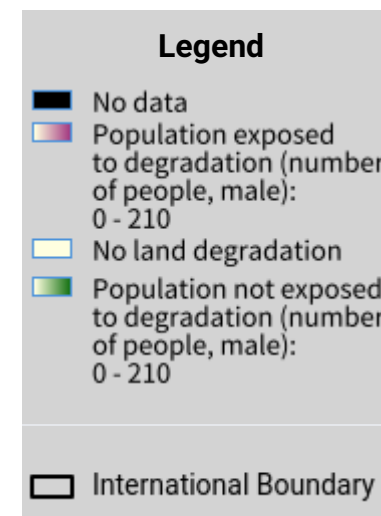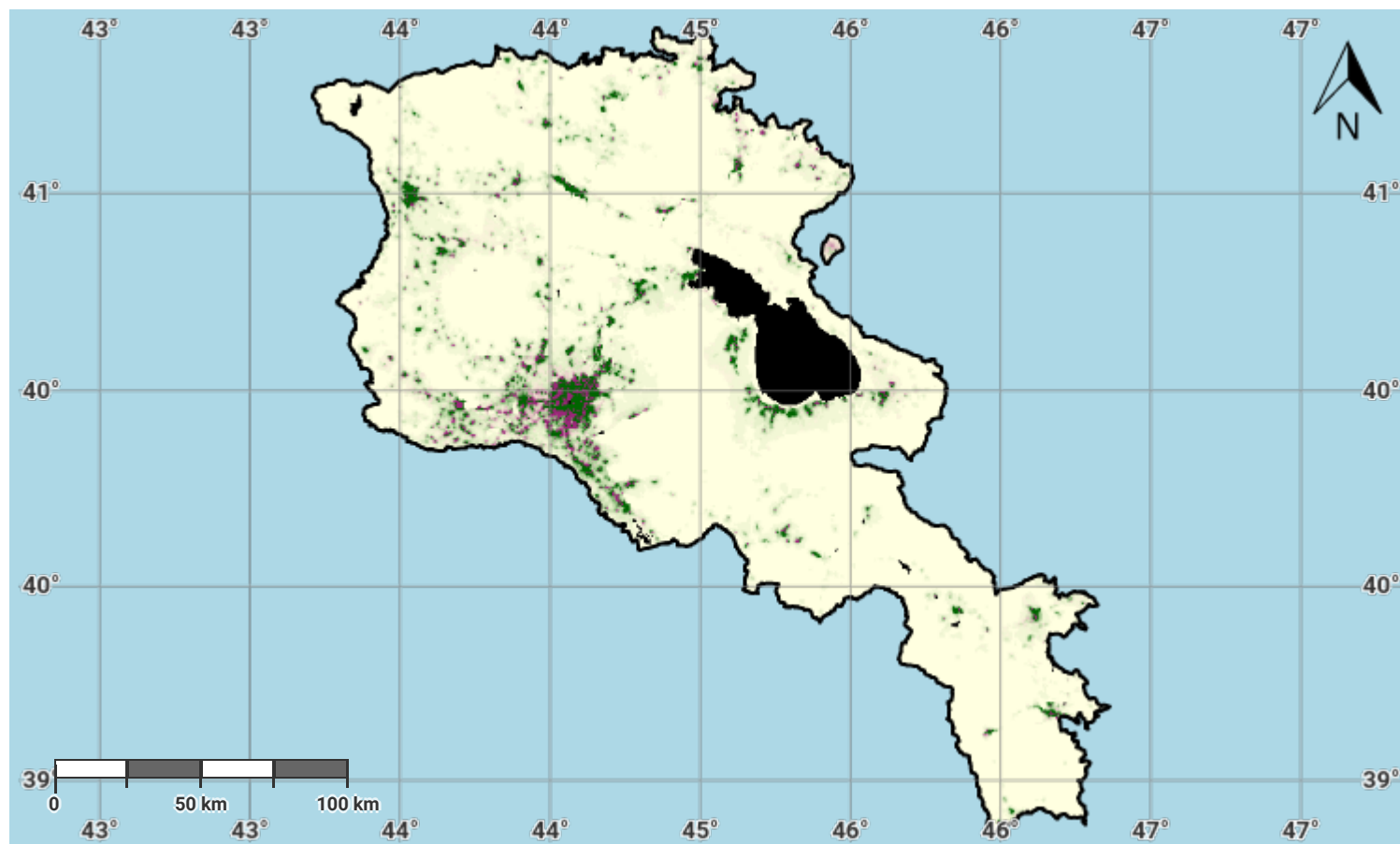
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Source Data Credits

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

Armenia – SO3-1.M1
Drought hazard in first epoch of baseline period

Legend

- No data
- Extreme drought
- Severe drought
- Moderate drought
- Mild drought
- Normal
- Mildly wet
- Moderately wet
- Severely wet
- Extremely wet

- International Boundary
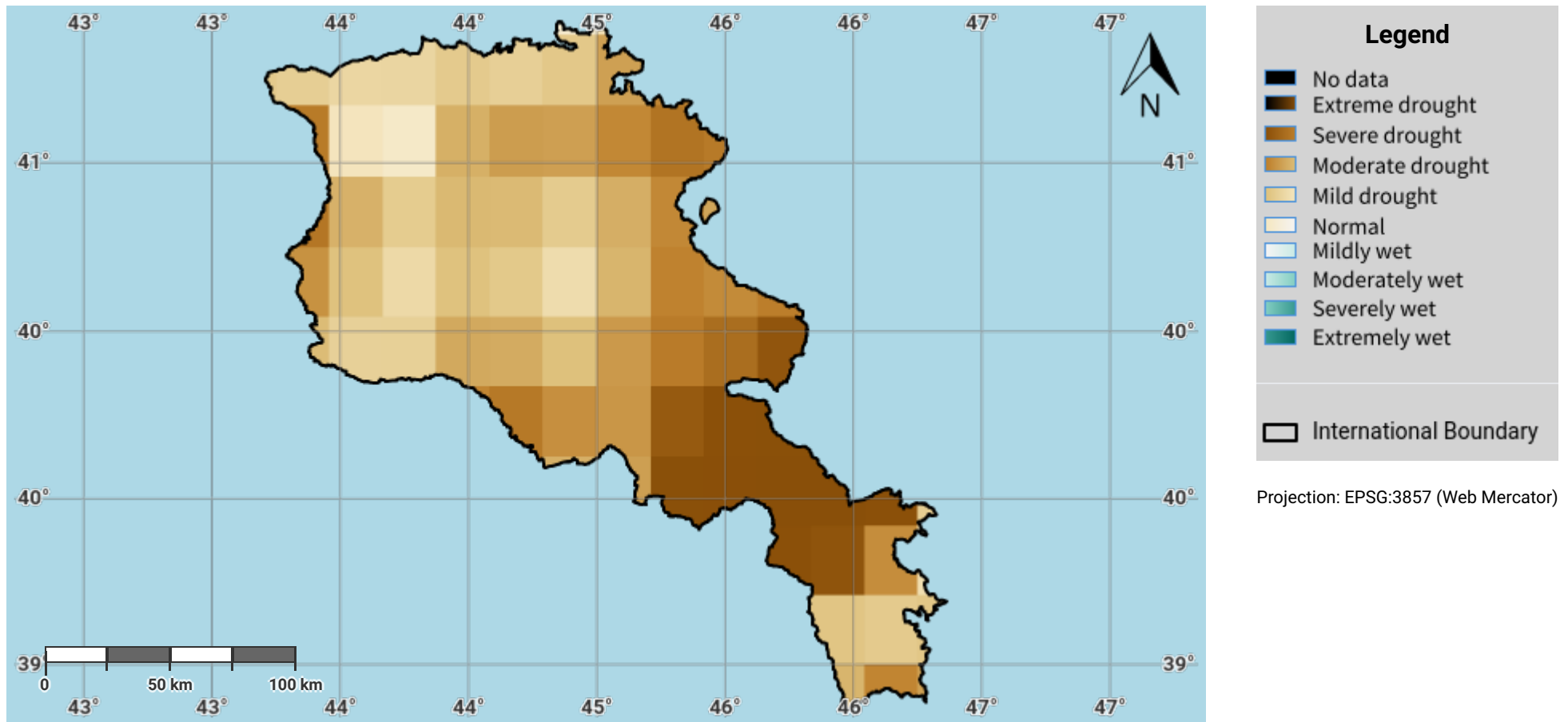
Projection: EPSG:3857 (Web Mercator)

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Source Data Credits

- Global Precipitation Climatology Centre (GPCC) monthly precipitation products,1982–present. URL: https://opendata.dwd.de/climate_environment/GPCC/html/gpcc_monitoring_v6_doi_download.html

Armenia − SO3-1.M2
Drought hazard in second epoch of baseline period

Legend

- No data
- Extreme drought
- Severe drought
- Moderate drought
- Mild drought
- Normal
- Mildly wet
- Moderately wet
- Severely wet
- Extremely wet

- International Boundary

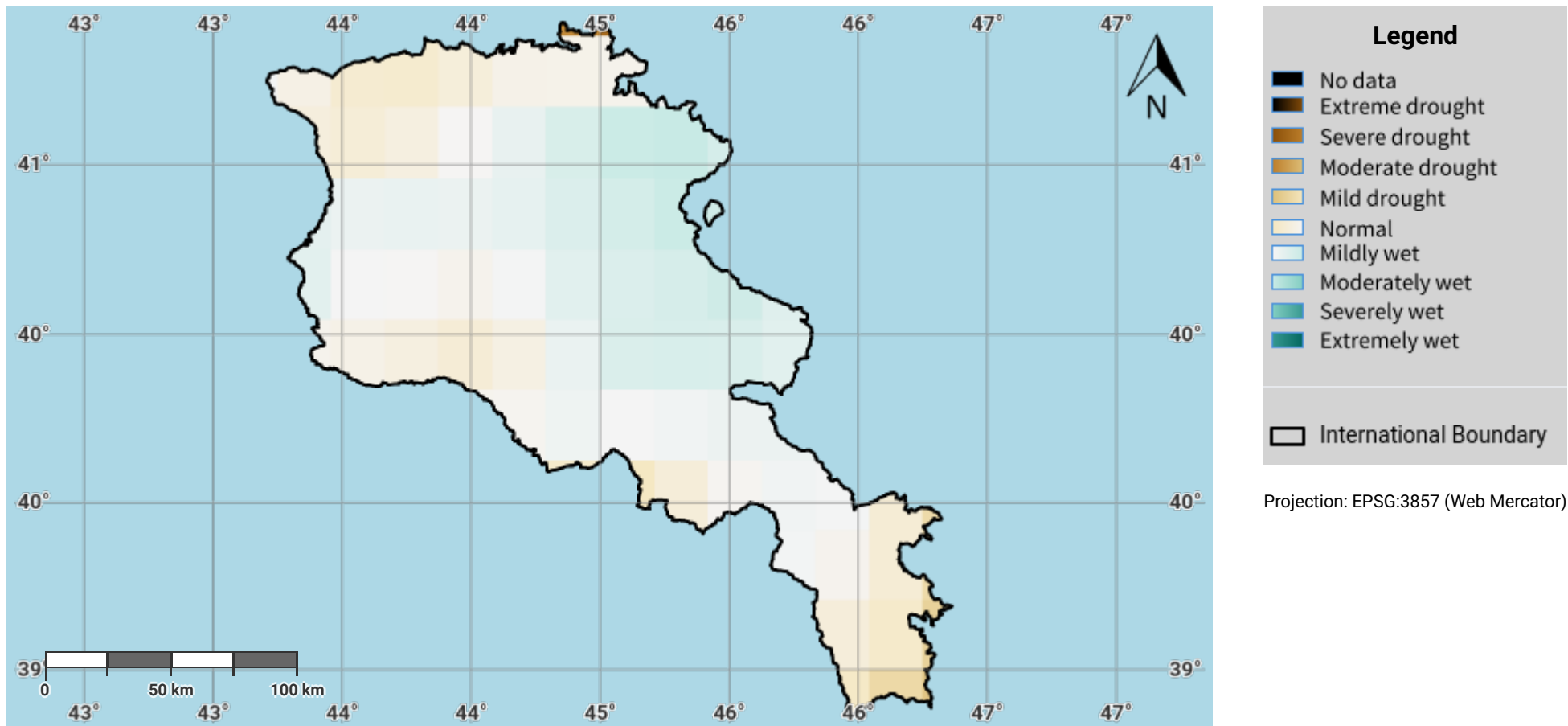Projection: EPSG:3857 (Web Mercator)

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Armenia − SO3-1.M3
Drought hazard in third epoch of baseline period

Legend

- No data
- Extreme drought
- Severe drought
- Moderate drought
- Mild drought
- Normal
- Mildly wet
- Moderately wet
- Severely wet
- Extremely wet

- International Boundary
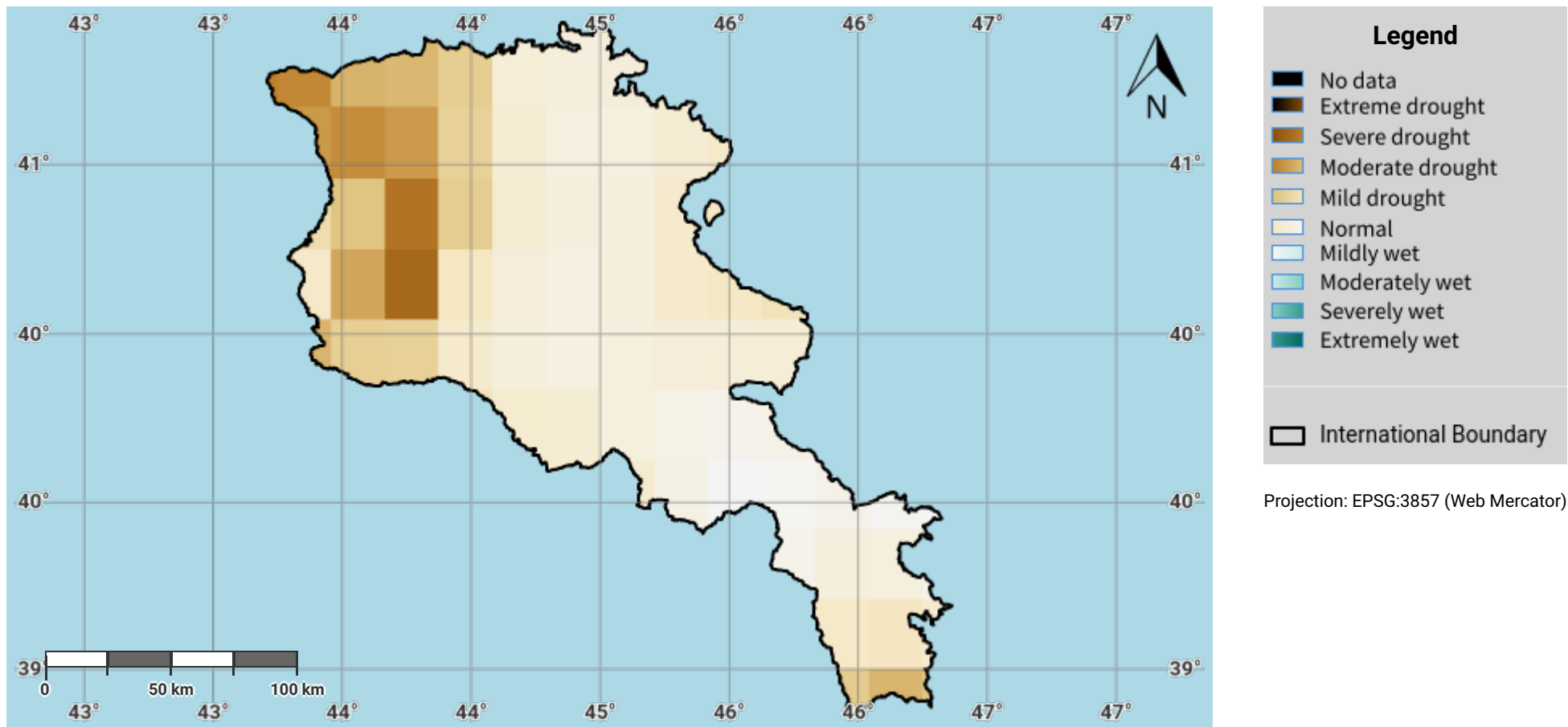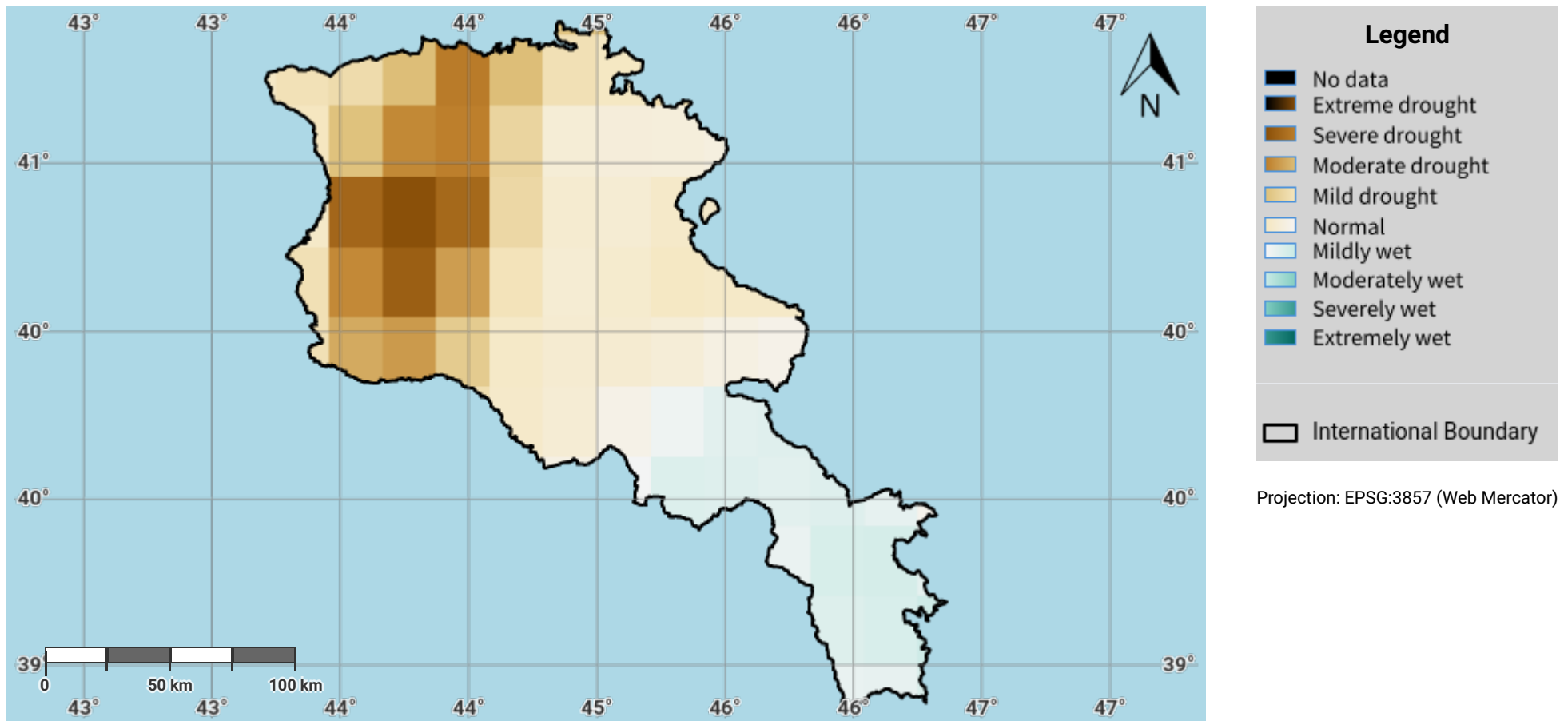
Projection: EPSG:3857 (Web Mercator)

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Armenia − SO3-1.M4
Drought hazard in fourth epoch of baseline period

Legend

- ■ No data
- ■ Extreme drought
- ■ Severe drought
- ■ Moderate drought
- ☐ Mild drought
- ☐ Normal
- ☐ Mildly wet
- ☐ Moderately wet
- ■ Severely wet
- ■ Extremely wet

- ☐ International Boundary

Projection: EPSG:3857 (Web Mercator)

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Armenia – SO3-1.M5
Drought hazard in the reporting period

Legend

- No data
- Extreme drought
- Severe drought
- Moderate drought
- Mild drought
- Normal
- Mildly wet
- Moderately wet
- Severely wet
- Extremely wet

- International Boundary
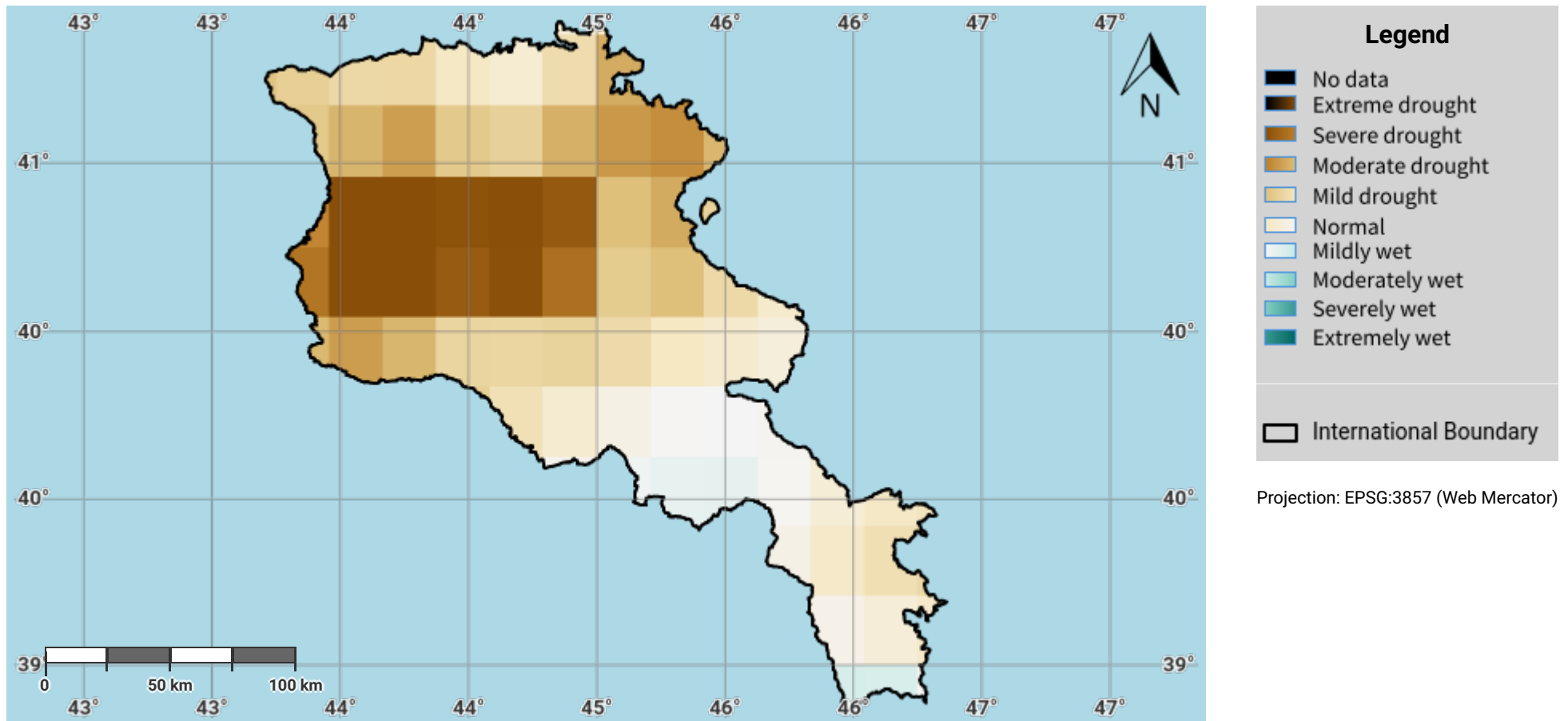
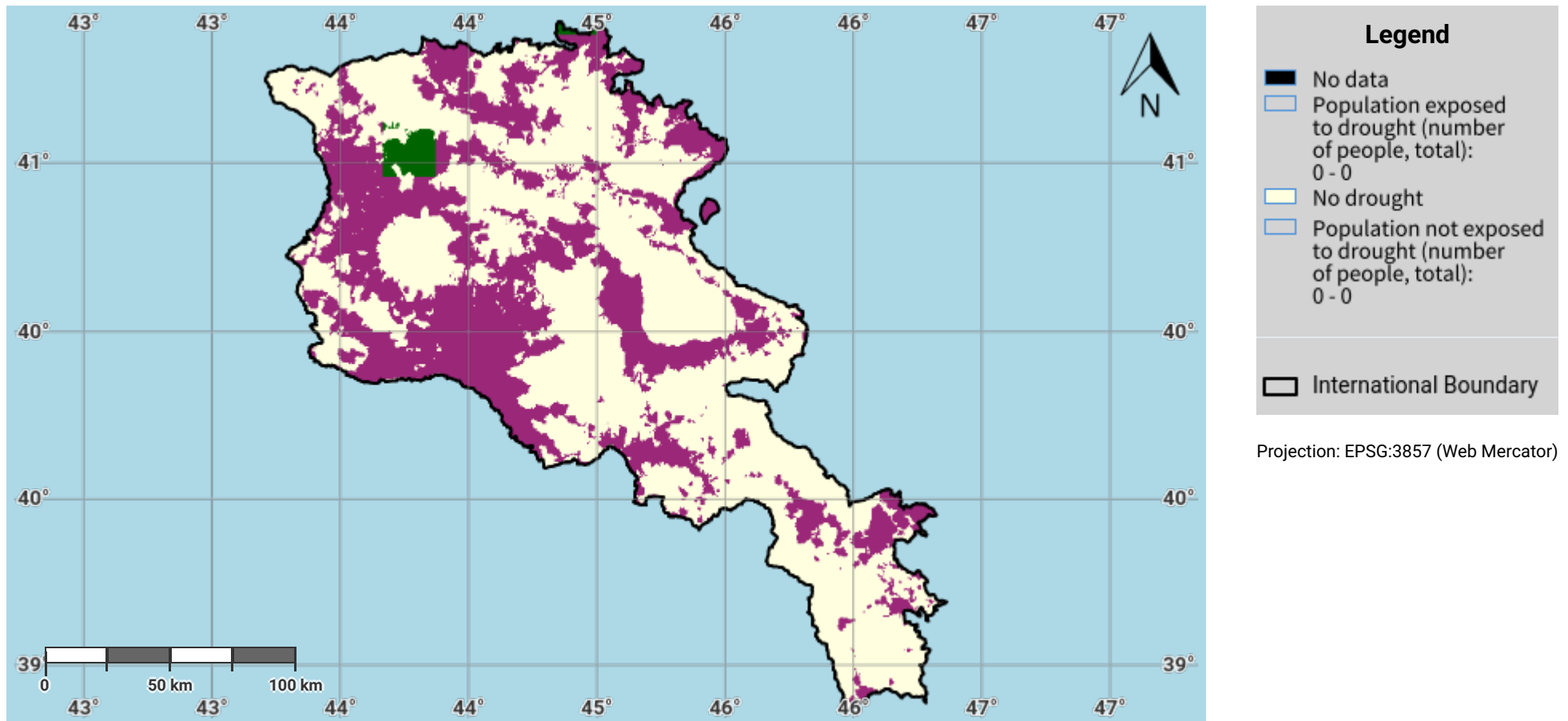Projection: EPSG:3857 (Web Mercator)

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Armenia – SO3-2.M1
Drought exposure in first epoch of baseline period

Legend

- No data
- Population exposed to drought (number of people, total): 0 - 0
- No drought
- Population not exposed to drought (number of people, total): 0 - 0

- International Boundary

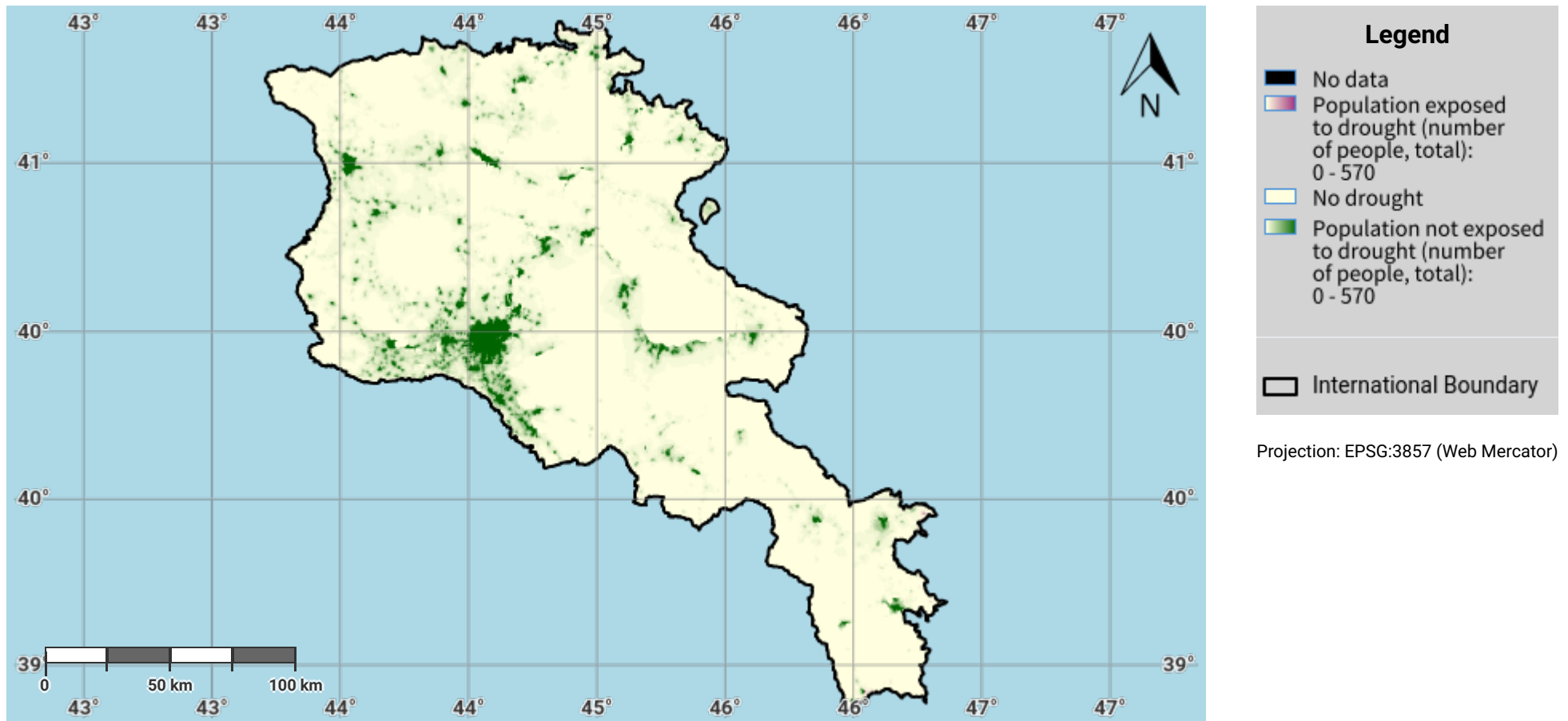Projection: EPSG:3857 (Web Mercator)

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Armenia – SO3-2.M2
Drought exposure in second epoch of baseline period

Legend

- No data
- Population exposed to drought (number of people, total): 0 - 570
- No drought
- Population not exposed to drought (number of people, total): 0 - 570

- International Boundary

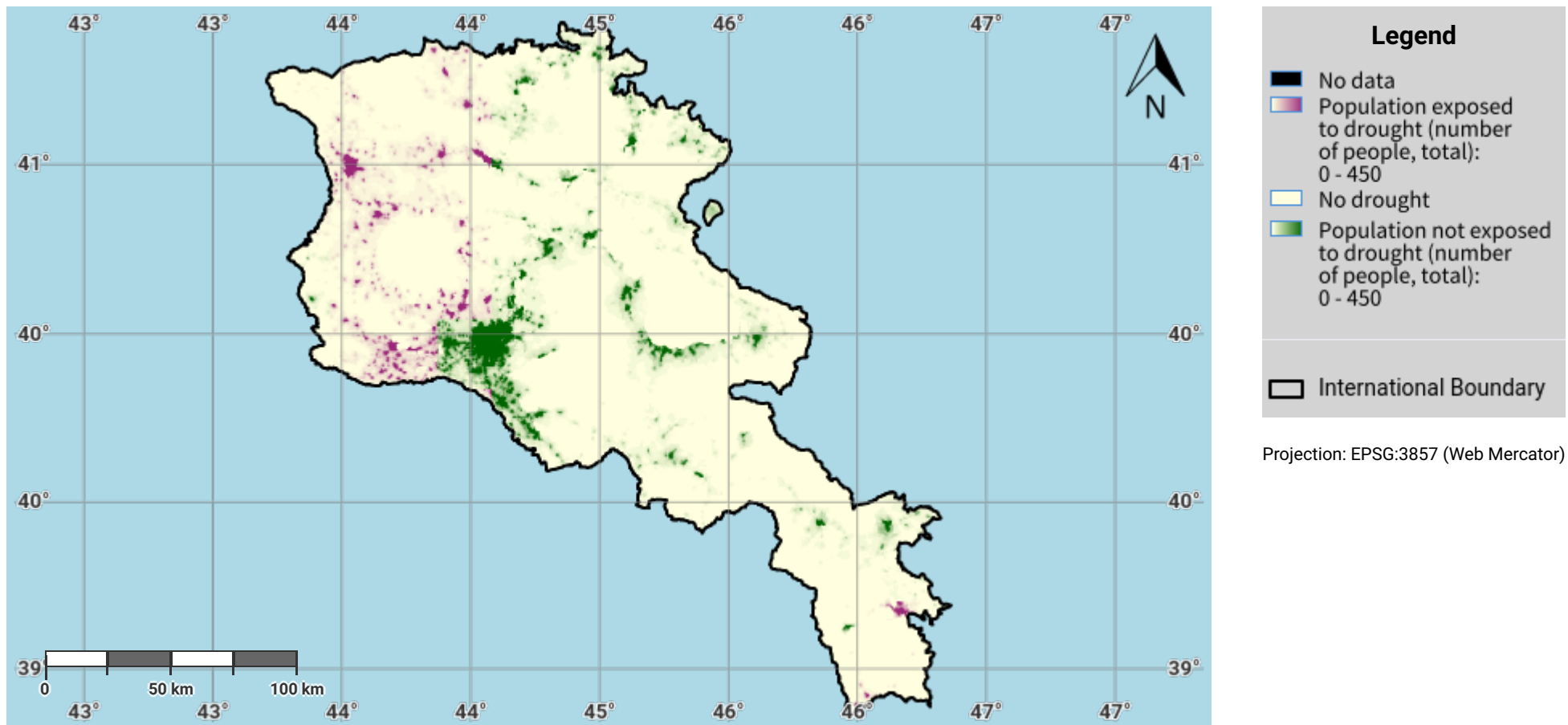Projection: EPSG:3857 (Web Mercator)

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Armenia – SO3-2.M3
Drought exposure in third epoch of baseline period

Legend

- No data
- Population exposed to drought (number of people, total): 0 - 450
- No drought
- Population not exposed to drought (number of people, total): 0 - 450

- International Boundary

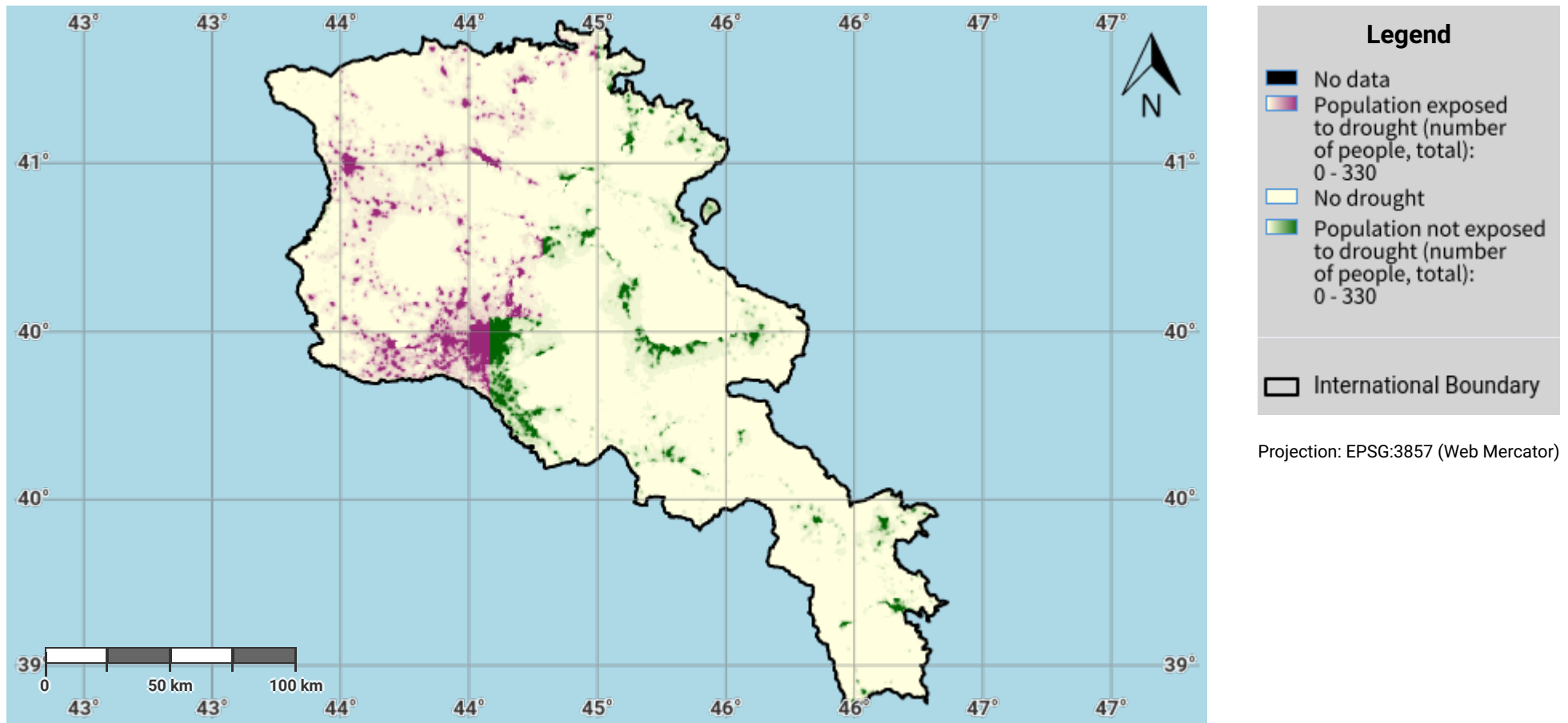Projection: EPSG:3857 (Web Mercator)

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Armenia – SO3-2.M4
Drought exposure in fourth epoch of baseline period

Legend

- ■ No data
- Population exposed to drought (number of people, total): 0 - 330
- No drought
- Population not exposed to drought (number of people, total): 0 - 330

- ☐ International Boundary

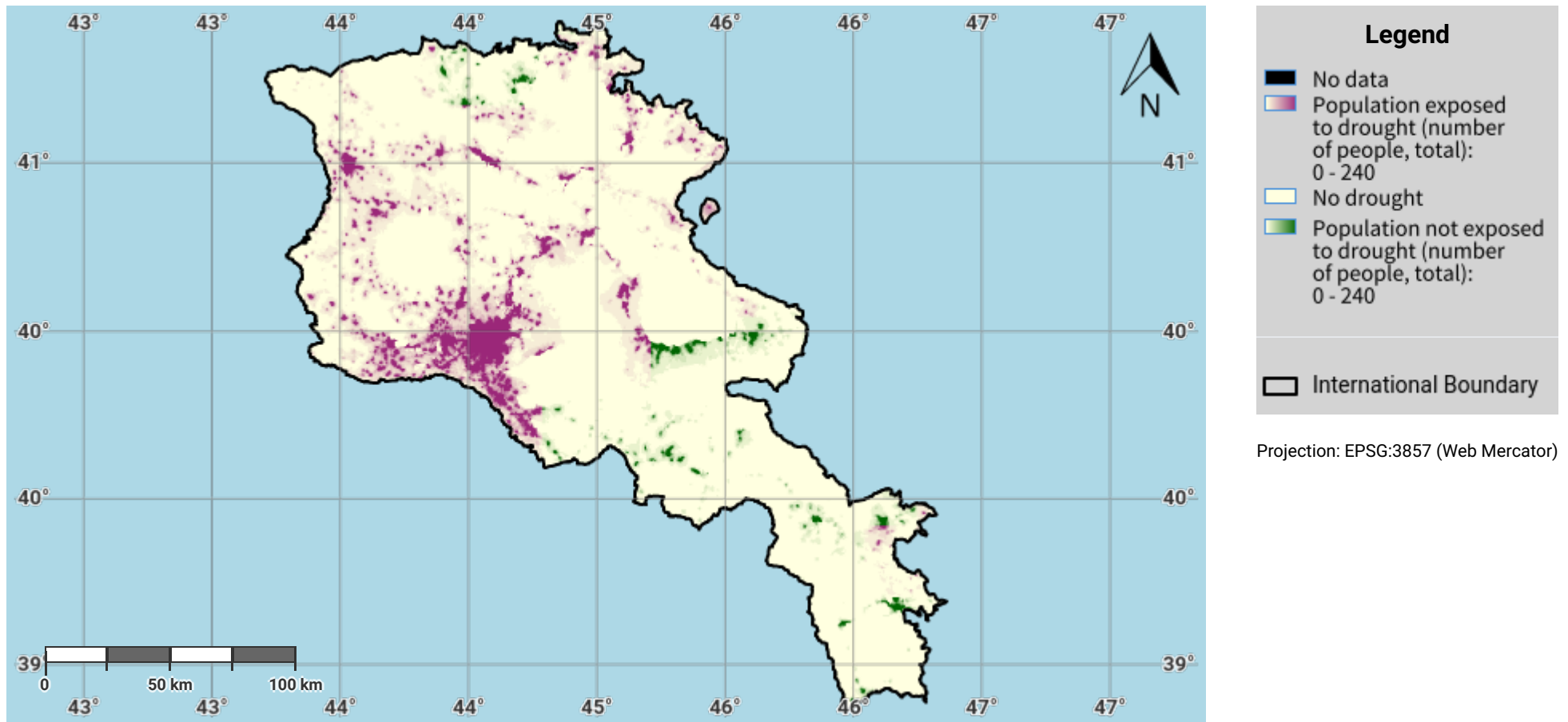Projection: EPSG:3857 (Web Mercator)

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Armenia − SO3-2.M5

Drought exposure in the reporting period

Legend

- ■ No data
- Population exposed to drought (number of people, total): 0 - 240
- □ No drought
- Population not exposed to drought (number of people, total): 0 - 240

- □ International Boundary

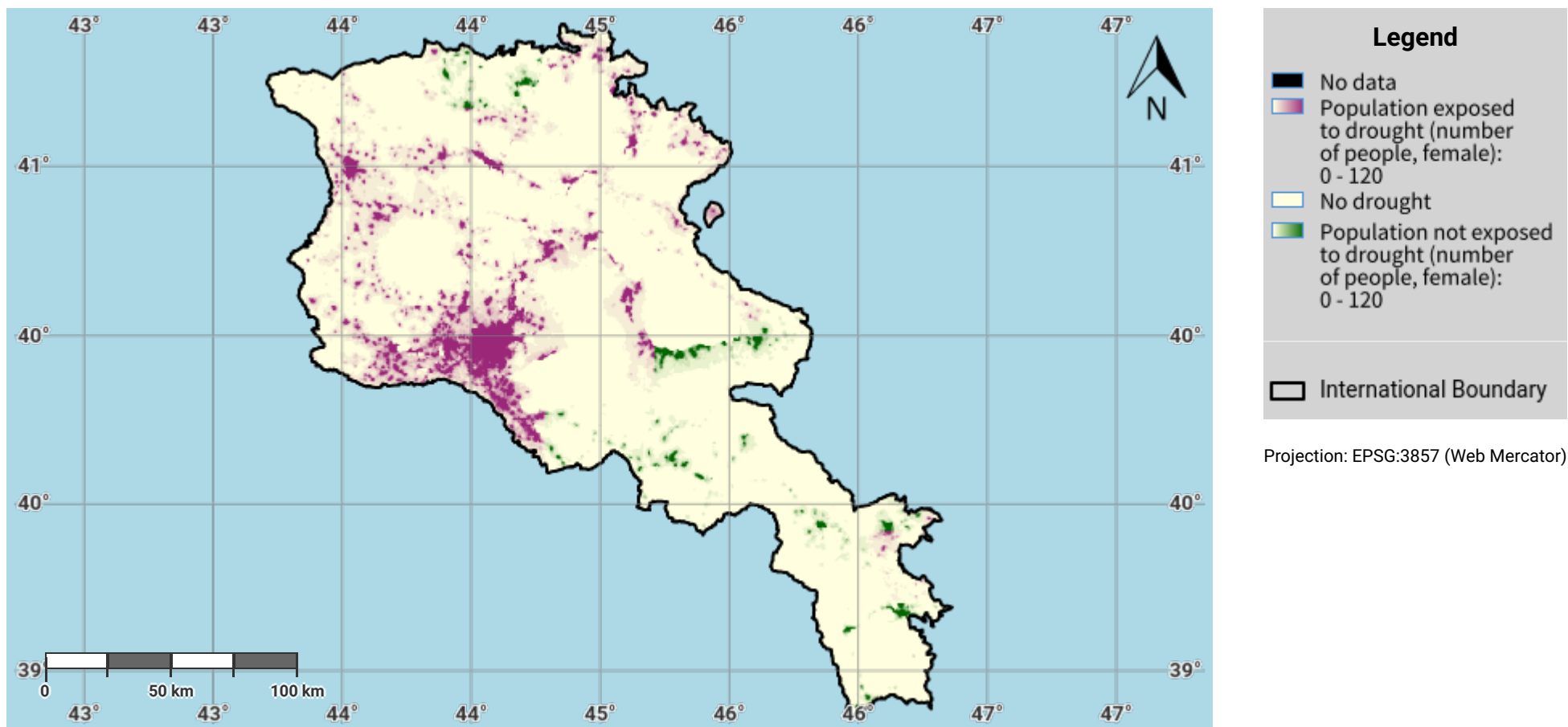Projection: EPSG:3857 (Web Mercator)

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Armenia − SO3-2.M6
Female drought exposure in the reporting period

Legend

- No data
- Population exposed to drought (number of people, female): 0 - 120
- No drought
- Population not exposed to drought (number of people, female): 0 - 120

- International Boundary

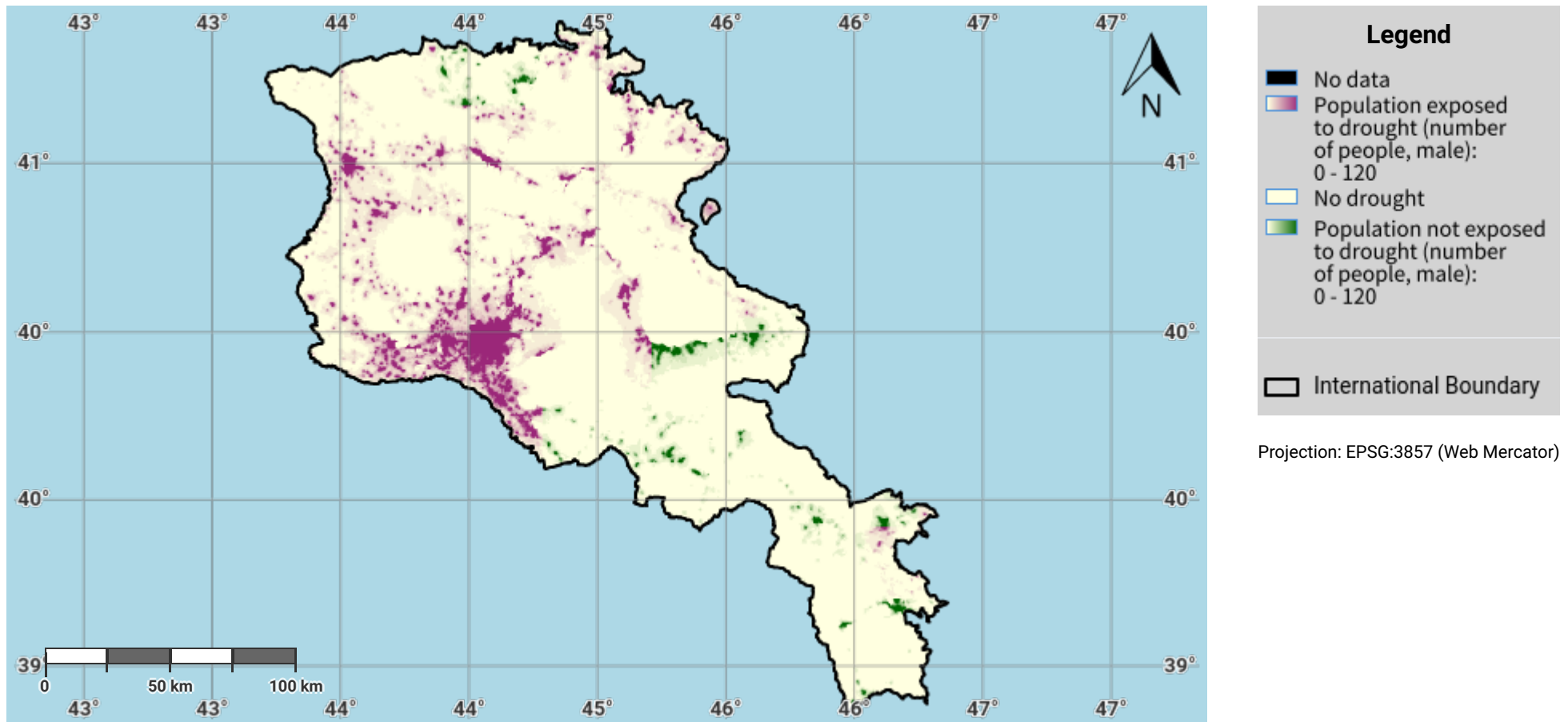Projection: EPSG:3857 (Web Mercator)

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Armenia – SO3-2.M7
Male drought exposure in the reporting period

Legend

- No data
- Population exposed to drought (number of people, male): 0 - 120
- No drought
- Population not exposed to drought (number of people, male): 0 - 120

- International Boundary

Projection: EPSG:3857 (Web Mercator)

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