

Report from Thailand



United Nations
Convention to Combat
Desertification

praus₄

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

SO1-1 Trends in land cover

Land area

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

Year	Total land area (km ²)	Water bodies (km ²)	Total country area (km ²)	Comments
2 006	499 991 .31	13 123 .72	513 115 .03	
2 008	499 372 .57	13 742 .46	513 115 .03	
2 010	498 742 .63	14 372 .40	513 115 .03	
2 015	498 424 .59	14 690 .44	513 115 .03	
2 019	497 406 .80	15 708 .23	513 115 .03	

Land cover legend and transition matrix

SO1-1.T2: Key Degradation Processes

Degradation Process	Starting Land Cover	Ending Land Cover
Other Human activities	Other 2006-2010	Other 2016-2020

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

- Yes
 No

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

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

Land cover

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

	Tree-covered areas (km ²)	Grasslands (km ²)	Croplands (km ²)	Wetlands (km ²)	Artificial surfaces (km ²)	Other Lands (km ²)	Water bodies (km ²)	No data (km ²)
2000	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	148 505 .48	31 735 .66	363 774 .49	4 034 .18	2 319 .59	1 .80	40 530 .95	0

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

	Tree-covered areas (km ²)	Grasslands (km ²)	Croplands (km ²)	Wetlands (km ²)	Artificial surfaces (km ²)	Other Lands (km ²)	Water bodies (km ²)	No data (km ²)
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0
2010	148 842 .28	30 896 .70	363 676 .49	4 102 .82	2 929 .32	1 .65	40 452 .90	0
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0
2016	151 928 .29	29 799 .17	360 169 .90	4 177 .97	4 342 .24	1 .12	40 483 .47	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0
2019	0	0	0	0	0		0	0
2020	153 712 .97	29 153 .37	358 751 .52	4 198 .86	4 581 .44	1 .12	40 502 .87	0

Land cover change

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

	Tree-covered areas (km ²)	Grasslands (km ²)	Croplands (km ²)	Wetlands (km ²)	Artificial surfaces (km ²)	Other Lands (km ²)	Water bodies (km ²)	Total (km ²)
Tree-covered areas (km ²)	148 186 .75	157 .48	144 .58	2 .99	4 .50	0	9 .17	148 505 .47
Grasslands (km ²)	486 .60	30 699 .28	538 .77	1 .50	9 .51	0	0	31 735 .66
Croplands (km ²)	163 .06	25 .69	362 971 .49	32 .02	576 .56	0	5 .68	363 774 .5
Wetlands (km ²)	0 .45	1 .42	2 .63	4 025 .12	3 .50	0	1 .07	4 034 .19
Artificial surfaces (km ²)	0	0	0	0	2 319 .59	0	0	2 319 .59
Other Lands (km ²)	0	0	0	0	0 .15	1 .65	0	1 .8
Water bodies (km ²)	5 .42	12 .83	19 .03	41 .18	15 .50	0	40 436 .98	40 530 .94
Total	148 842 .28	30 896 .7	363 676 .5	4 102 .81	2 929 .31	1 .65	40 452 .9	

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

	Tree-covered areas (km ²)	Grasslands (km ²)	Croplands (km ²)	Wetlands (km ²)	Artificial surfaces (km ²)	Other Lands (km ²)	Water bodies (km ²)	Total land area (km ²)
Tree-covered areas (km ²)	151 101 .93	575 .54	209 .99	35 .28	3 .23	0	2 .32	151 928 .29
Grasslands (km ²)	995 .51	28 456 .33	328 .40	2 .39	14 .67	0	1 .87	29 799 .17
Total	153 712 .96	29 153 .38	358 751 .53	4 198 .86	4 581 .44	1 .12	40 502 .87	

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

	Tree-covered areas (km ²)	Grasslands (km ²)	Croplands (km ²)	Wetlands (km ²)	Artificial surfaces (km ²)	Other Lands (km ²)	Water bodies (km ²)	Total land area (km ²)
Croplands (km ²)	1 609 .56	116 .69	358 180 .45	29 .94	218 .04	0	15 .23	360 169 .91
Wetlands (km ²)	5 .96	4 .82	31 .44	4 129 .49	3 .26	0	3	4 177 .97
Artificial surfaces (km ²)	0	0	0	0	4 342 .24	0	0	4 342 .24
Other Lands (km ²)	0	0	0	0	0	1 .12	0	1 .12
Water bodies (km ²)	0	0	1 .25	1 .76	0	0	40 480 .45	40 483 .46
Total	153 712 .96	29 153 .38	358 751 .53	4 198 .86	4 581 .44	1 .12	40 502 .87	

Land cover degradation

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

	Area (km ²)	Percent of total land area (%)
Land area with degraded land cover	968 .66	0 .2
Land area with non-degraded land cover	589 933 .49	115 .0
Land area with no land cover data	0	0 .0

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

	Area (km ²)	Percent of total land area (%)
Land area with improved land cover	2 933 .47	0 .6
Land area with stable land cover	586 702 .21	114 .3
Land area with degraded land cover	1 266 .47	0 .2
Land area with no land cover data	0	0 .0

General comments

The land degradation according to indicator standard of the Land Use/Land Cover Change (LUC) is caused by the country's development during the past 10 years, leading to rapid economic and social expansion. As a result, the demand for land increases. There is the encroachment of forests for farming plus the expansion of industrial urban areas into agricultural areas, workforce migration to industry, and workers migrated to big cities leaving agricultural areas to be abandoned. These causes result in land degradation due to lack of proper land use planning and management. Land degradation problems have directly and indirectly affected on farmers, provinces and the country as well as the global environment. In addition to land degradation caused by human activities, land degradation is also caused by nature, such as the origin of the soil itself and natural disasters. Considering at the provincial level, the Land Development Department has implemented a project to set target indicators for the Land Degradation Neutrality (LDN) to develop measures for land degradation management in 13 provinces, including the northern region (Nan, Tak, Lampang), the southern region (Phatthalung, Surat Thani), the central region (Nakhon Nayok, Kanchanaburi, Phitsanulok, Chanthaburi) and the northeastern region (Nakhon Ratchasima, Maha Sarakham, Roi Et, Buriram) and it was found that 12 out of 13 provinces (except Maha Sarakham) had more degraded land areas than the improved areas. The first 5 provinces with more degraded land areas than the improved areas are Nan, Tak, Lampang, Nakhon Ratchasima and Kanchanaburi respectively.

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

Land productivity dynamics

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

Land cover class	Net land productivity dynamics (km ²) for the baseline period					
	Declining (km ²)	Moderate Decline (km ²)	Stressed (km ²)	Stable (km ²)	Increasing (km ²)	No Data (km ²)
Tree-covered areas	19 227 .30	30 178 .06	13 .48	95 867 .83	3 346 .29	209 .32
Grasslands	4 059 .45	5 879 .40	34 .84	20 020 .36	815 .87	86 .80
Croplands	20 874 .47	55 427 .77	320 .58	256 341 .40	29 989 .62	722 .64
Wetlands	260 .88	761 .06	46 .80	2 480 .28	251 .90	301 .90
Artificial surfaces	287 .70	513 .56	70 .07	1 833 .64	178 .33	46 .02
Other Lands	0 .30	0 .15	0 .37	0 .52	0	0 .30
Water bodies	260 .78	426 .70	168 .30	1 400 .08	228 .43	37 968 .61

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

Land cover class	Net land productivity dynamics (km ²) for the reporting period					
	Declining (km ²)	Moderate Decline (km ²)	Stressed (km ²)	Stable (km ²)	Increasing (km ²)	No Data (km ²)
Tree-covered areas	3 087 .13	20 887 .39	22 .31	123 934 .54	5 618 .63	162 .96
Grasslands	755 .41	4 156 .01	32 .42	23 281 .59	844 .36	83 .59
Croplands	16 940 .04	79 153 .18	354 .55	245 242 .26	16 366 .89	694 .59
Wetlands	131 .79	647 .05	52 .44	2 761 .34	276 .52	329 .72
Artificial surfaces	438 .42	855 .75	141 .45	2 891 .12	188 .22	66 .48
Other Lands	0 .07	0	0 .30	0 .30	0 .15	0 .30
Water bodies	149 .40	378 .31	142 .74	1 592 .13	228 .30	38 011 .98

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

Land Conversion		Net land productivity dynamics (km ²) for the baseline period					
From	To	Net area change (km ²)	Declining (km ²)	Moderate Decline (km ²)	Stressed (km ²)	Stable (km ²)	Increasing (km ²)
Tree-covered areas	Grasslands	157 .48	40 .61	41 .49	0 .07	74 .79	0 .44
Tree-covered areas	Croplands	144 .58	23 .94	47 .37	0 .23	68 .13	3 .79
Grasslands	Tree-covered areas	486 .60	26 .36	48 .43	0 .00	378 .85	32 .88
Grasslands	Croplands	538 .77	196 .92	155 .13	0 .30	180 .51	5 .10
Croplands	Artificial surfaces	2 649	2	253	1 530	258	602

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 (km ²) for the reporting period					
From	To	Net area change (km ²)	Declining (km ²)	Moderate Decline (km ²)	Stressed (km ²)	Stable (km ²)	Increasing (km ²)
Tree-covered areas	Grasslands	575.54	9.58	59.10	0.00	480.82	26.04
Tree-covered areas	Croplands	209.99	10.49	55.63	0.08	135.28	8.00
Grasslands	Tree-covered areas	995.51	19.92	150.18	0.00	810.74	14.46
Grasslands	Croplands	328.40	21.41	103.06	0.00	200.17	3.60
Croplands	Artificial surfaces	218.04	35.56	26.51	30.14	106.41	15.15

Land Productivity degradation

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

	Area (km ²)	Percent of total land area (%)
Land area with degraded land productivity	138 157.58	27.7
Land area with non-degraded land productivity	413 408.99	82.9
Land area with no land productivity data	39 335.59	7.9

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

	Area (km ²)	Percent of total land area (%)
Land area with improved land productivity	23 523.07	4.7
Land area with stable land productivity	400 449.51	80.5
Land area with degraded land productivity	127 579.96	25.6
Land area with no land productivity data	39 349.62	7.9

General comments

At the national level, the causes of land use changes from the tree-covered lands to the croplands and the grasslands and land use changes from the grasslands to the croplands came from rapid economic and social expansion causing the demand for land to increase and resulting in the encroachment of forests for farming and the conversion of the grasslands to the croplands. When considering changes from the base year and the reporting year, it was found that areas with improved land productivity decreased significantly, while areas with degraded land productivity increased. From the project to set target indicators for the Land Degradation Neutrality (LDN) to develop measures for land degradation management in 13 provinces, including the northern region (Nan, Tak, Lampang), the southern region (Phatthalung, Surat Thani), the central region (Nakhon Nayok, Kanchanaburi, Phitsanulok, Chanthaburi) and the northeastern region (Nakhon Ratchasima, Maha Sarakham, Roi Et, Buriram) by the Land Development Department. It was found that, overall, the areas with improved land productivity were not much different from the areas with degraded land productivity. However, when considering in detail, it was found that in Lampang, Surat Thani, Maha Sarakham, Phatthalung, Nakhon Nayok and Roi Et provinces, there was a significant increase in degraded land productivity compared to areas with improved land productivity. In addition, there was a loss of land with high net primary productivity (NPP) ranging over 10.01 tons of carbon/square meter up to 1,315.38 km², although there were areas with the NPP in the range of 7.51-10.00 tons of carbon/square meter increased by 2,886.61 km².

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							
2001							
2002							
2003							
2004							
2005							
2006	93.18	82.64	59.79	110.81	66.43	83.12	
2007							
2008							
2009							
2010	93.19	82.77	59.77	110.86	60.25	82.04	
2011							
2012							
2013							
2014							
2015							
2016	93.13	82.76	59.58	110.72	50.77	85.52	
2017							
2018							
2019							
2020	92.96	83.15	59.49	111.08	44.29	85.52	

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

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

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

Land Conversion		Soil organic carbon (SOC) stock change in the baseline period					
From	To	Net area change (km ²)	Initial SOC stock (t/ha)	Final SOC stock (t/ha)	Initial SOC stock total (t)	Final SOC stock total (t)	SOC stock change (t)
Croplands	Artificial surfaces	2 649	59.7	40.6	15 825 941	10 750 995	-5 074 946

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

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

From	To	Net area change (km ²)	Initial SOC stock (t/ha)	Final SOC stock (t/ha)	Initial SOC stock total (t)	Final SOC stock total (t)	SOC stock change (t)
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Soil organic carbon stock degradation

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

	Area (km ²)	Percent of total land area (%)
Land area with degraded soil organic carbon (SOC)	1 179 .42	0 .2
Land area with non-degraded SOC	548 445 .30	110 .0
Land area with no SOC data	746 .48	0 .1

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

	Area (km ²)	Percent of total land area (%)
Land area with improved SOC	0	0 .0
Land area with stable SOC	546 635 .78	109 .9
Land area with degraded SOC	3 068 .39	0 .6
Land area with no SOC data	714 .52	0 .1

General comments

At the national level, areas with degraded soil organic carbon have increased from the baseline period to the reporting period. When considering at a provincial level from the project to set target indicators for the Land Degradation Neutrality (LDN) to develop measures for land degradation management in 13 provinces, including the northern region (Nan, Tak, Lampang), the southern region (Phatthalung, Surat Thani), the central region (Nakhon Nayok, Kanchanaburi, Phitsanulok, Chanthaburi) and the northeastern region (Nakhon Ratchasima, Maha Sarakham, Roi Et, Buriram) by the Land Development Department, it was found that most of the change areas were found in the areas with accumulated soil organic carbon in the range of 0-8 tons/rai, with Nan province losing the area with the highest soil organic carbon while Buriram has the area with the highest increase in organic content. When considering by using soil organic carbon (SOC) indicators, it was found that overall, the improved areas increased more than the degraded areas. The most degraded areas were found in Nan, Phitsanulok and Chanthaburi, respectively, and the areas with the most improvement were found in Surat Thani, Buriram and Phitsanulok, respectively.

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

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

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

	Total area of degraded land (km ²)	Proportion of degraded land over the total land area (%)
Baseline Period	138 671 .56	27 .8
Reporting Period	130 123 .51	26 .2
Change in degraded extent	-8548.05	

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 Land Development Department has implemented the Land Degradation Neutrality (LDN) goal setting indicator project in only 13 provinces, which does not cover 77 provinces nationwide. There are plans to complete all 77 provinces in 2027; however, from consulting with experts, technically all 77 provinces could be completed by the year 2024. In addition, the Land Degradation Neutrality (LDN) goal setting indicator project in each province has different base year and reporting year, so the calculation of changes in land degradation areas may be inaccurate.

False positives/ False negatives

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

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

SO1-4.T4: Degradation hotspots

Hotspots	Location	Area (km ²)	Assessment Process	Direct drivers of land degradation hotspots	Action(s) taken to redress degradation in terms of Land Degradation Neutrality response hierarchy	Remediating action(s) (both forward-looking and current)	Edit Polygon
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SO-1: To improve the condition of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality.

Hotspots	Location	Area (km ²)	Assessment Process	Direct drivers of land degradation hotspots	Action(s) taken to redress degradation in terms of Land Degradation Neutrality response hierarchy	Remediating action(s) (both forward-looking and current)	Edit Polygon
Nan province	Nan province	4 662 .04	Site-based data	<ol style="list-style-type: none"> 1. Deforestation and clearance of other native vegetation 2. Infrastructure, industry and urbanization 3. Grazing land management 4. Cropland and agroforestry management 	None		
phitsanulok province	phitsanulok province	4 059 .80	Site-based data	<ol style="list-style-type: none"> 1. Deforestation and clearance of other native vegetation 2. Infrastructure, industry and urbanization 3. Grazing land management 4. Cropland and agroforestry management 	None		
lampang province	lampang province	4 044 .35	Site-based data	<ol style="list-style-type: none"> 1. Deforestation and clearance of other native vegetation 2. Infrastructure, industry and urbanization 3. Grazing land management 4. Cropland and agroforestry management 	None		
Total no. of hotspots	3						
Total hotspot area	12 766 .19						

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

None

SO1-4.T5: Improvement brightspots

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

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

None

General comments

Remarks: Actions to address soil degradation problems have been integrated at the national level, consisting of: 1) Drafting policies and plans for managing land and soil resources of the country (2018-2037); 2) Promoting an action plan for organic agriculture 2017-2022 and drafting an action plan for organic agriculture 2023-2027; 3) Setting goals and indicators for the Land Degradation Neutrality in order to determine measures to manage degraded soil at the pilot area level; 4) Studying forms and mechanisms to support land value creation in all types of land provided by the government to the public; 5) Developing local organic farming to obtain standard certification, including expanding and increasing the number of organic farming areas; 6) Improving and organizing soil and water conservation systems in areas prone to agricultural disasters and other areas; and 7) Implementing cooperation with ASEAN countries for sustainable soil

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

management.

SO1 Voluntary Targets

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

Target	Year	Location(s)	Total Target Area (km ²)	Overarching type of Land Degradation Neutrality (LDN) intervention	Targeted action(s)	Status of target achievement	Is this an LDN target? If so, under which process was it defined/adopted?	Which other important goals are also being addressed by this target?	Edit Polygon
The productivity of the land and ecosystem of the area can be maintained or restored	2018			None	<ul style="list-style-type: none"> Other/general /unspecified <ul style="list-style-type: none"> Avoid/prevent/halt degradation (of degraded lands) Increase soil fertility and carbon stock <ul style="list-style-type: none"> Reduce soil erosion 	Achieved	<input checked="" type="radio"/> Yes <input type="radio"/> No	<ul style="list-style-type: none"> Other: Land productivity improvement 	
Reduction of the vulnerability of affected ecosystems and the resilience of ecosystems increases.	2018			None	<ul style="list-style-type: none"> Restore/improve croplands Other/general /unspecified <ul style="list-style-type: none"> Achieve LDN Other/general /unspecified Avoid/prevent/halt degradation (of degraded lands) Restore/improve tree-covered areas Increase tree-covered area extent Increase soil fertility and carbon stock <ul style="list-style-type: none"> Reduce soil erosion Maintain the current level of SOC Improve watershed/landscape management Rehabilitate bare land and/or restore degraded land Increase carbon stock and reduce soil/land degradation 	Achieved	<input checked="" type="radio"/> Yes <input type="radio"/> No	<ul style="list-style-type: none"> Convention on Biological Diversity – National Biodiversity Strategies and Action Plans & National Targets Other: Ecosystem development United Nations Framework Convention on Climate Change – Nationally Determined Contributions 	
Targets for the land degradation neutrality have been established, including the establishment of voluntary monitoring measures at the national level.	2018			None	<ul style="list-style-type: none"> Other/general /unspecified <ul style="list-style-type: none"> Achieve LDN Avoid/prevent/halt degradation (of degraded lands) Restore/improve multiple land uses 	Achieved	<input checked="" type="radio"/> Yes <input type="radio"/> No	<ul style="list-style-type: none"> Convention on Biological Diversity – National Biodiversity Strategies and Action Plans & National Targets Other: Goals and monitoring measures setting 	
Total			Sum of all targeted areas 0						

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

Target	Year	Location(s)	Total Target Area (km ²)	Overarching type of Land Degradation Neutrality (LDN) intervention	Targeted action(s)	Status of target achievement	Is this an LDN target? If so, under which process was it defined/adopted?	Which other important goals are also being addressed by this target?	Edit Polygon
Sustainable land management measures against desertification and land degradation are shared, promoted and implemented.	2018			None	<ul style="list-style-type: none"> Restore/improve croplands Other/general /unspecified <ul style="list-style-type: none"> Other/general /unspecified Restore/improve protected areas Restore/improve tree-covered areas <ul style="list-style-type: none"> Reduce/halt deforestation and conversion of tree cover to other land cover types (e.g. conserving forest land) 	Achieved	<input type="radio"/> Yes <input type="radio"/> No	<ul style="list-style-type: none"> Convention on Biological Diversity – National Biodiversity Strategies and Action Plans & National Targets Other: Sustainable land management 	
At least 15 million rai of agricultural land managed by land development technology to achieve neutrality and sustainability by 2027.	2023			None	<ul style="list-style-type: none"> Restore/improve multiple land uses Restore/improve tree-covered areas <ul style="list-style-type: none"> Increase land productivity in tree covered areas Restore tree-covered areas 		<input type="radio"/> Yes <input type="radio"/> No	<ul style="list-style-type: none"> Convention on Biological Diversity – National Biodiversity Strategies and Action Plans & National Targets Other: 	
10% reduction in unsuitable crop areas by 2027.	2023			None	<ul style="list-style-type: none"> Restore/improve multiple land uses Restore/improve tree-covered areas <ul style="list-style-type: none"> Increase land productivity in tree covered areas Restore tree-covered areas 		<input type="radio"/> Yes <input type="radio"/> No		
Effective preservation of country's lands and preserving natural balance	2023			None	<ul style="list-style-type: none"> Restore/improve grasslands Restore/improve protected areas <ul style="list-style-type: none"> Restore protected areas Improve management of protected areas Restore/improve tree-covered areas <ul style="list-style-type: none"> Reduce/halt deforestation and conversion of tree cover to other land cover types (e.g. conserving forest land) Reduce/halt conversion of multiple land uses 		<input type="radio"/> Yes <input type="radio"/> No		
Total				Sum of all targeted areas					
			0						

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

Target	Year	Location(s)	Total Target Area (km ²)	Overarching type of Land Degradation Neutrality (LDN) intervention	Targeted action(s)	Status of target achievement	Is this an LDN target? If so, under which process was it defined/adopted?	Which other important goals are also being addressed by this target?	Edit Polygon
Use of land and soil resources for maximum benefit.	2023			None	<ul style="list-style-type: none"> • Restore/improve croplands <ul style="list-style-type: none"> ◦ Practise sustainable land management • Restore/improve protected areas • Restore/improve multiple land uses • Restore/improve tree-covered areas 		<input type="radio"/> Yes <input type="radio"/> No		
Fair distribution of land ownership to enhance people's quality of life	2023			None	<ul style="list-style-type: none"> • Other/general /unspecified <ul style="list-style-type: none"> ◦ Improve land productivity (unspecified land use) ◦ Avoid/prevent/halt degradation (of degraded lands) • Reduce/halt conversion of multiple land uses 		<input type="radio"/> Yes <input type="radio"/> No		
Integrating and enhancing participation for unified management of land and soil resources	2023			None	<ul style="list-style-type: none"> • Other/general /unspecified <ul style="list-style-type: none"> ◦ Other/general /unspecified ◦ Improve land productivity (unspecified land use) ◦ Avoid/prevent/halt degradation (of degraded lands) • Restore/improve multiple land uses • Reduce/halt conversion of multiple land uses 		<input type="radio"/> Yes <input type="radio"/> No		
The management of the country's forest land is efficient and unified, including agencies, policies, plans, laws, committees and other mechanisms related to forestry.	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
Total			Sum of all targeted areas		0				

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

Target	Year	Location(s)	Total Target Area (km ²)	Overarching type of Land Degradation Neutrality (LDN) intervention	Targeted action(s)	Status of target achievement	Is this an LDN target? If so, under which process was it defined/adopted?	Which other important goals are also being addressed by this target?	Edit Polygon
Boundaries of all types of state forest land are accurate and consistent with the boundaries in the actual area. There is unity among agencies with the application of appropriate technology	2023			None			<input type="radio"/> Yes <input type="radio"/> No		
The country's forests are classified for appropriate management at both national and area levels, consistent with the definition and classification of forests in the National Forest Policy, with clear designated responsible agencies for each area.	2023			None			<input type="radio"/> Yes <input type="radio"/> No		
The management and use of forest land in each area is appropriate according to the potential or carrying capacity of the area. It is in line with the provisions of the national forestry policy and achieves a sustainable balance with the development of the economy, society, environment, and national security.	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
Total			Sum of all targeted areas 0						

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

Target	Year	Location(s)	Total Target Area (km ²)	Overarching type of Land Degradation Neutrality (LDN) intervention	Targeted action(s)	Status of target achievement	Is this an LDN target? If so, under which process was it defined/adopted?	Which other important goals are also being addressed by this target?	Edit Polygon
The forest resource information system, both nationally and locally, has a unified standard that is up-to-date covering all types of forest areas and linked to information on socio-economic and other national resources.	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
The national forest area corresponding to the definition and classification of forests in the National Forest Policy is as follows: - 2022, a forest area is $\geq 33.04\%$ - 2027, a forest area is $\geq 35.35\%$ - 2032, a forest area is $\geq 37.67\%$ - 2037, a forest area is $\geq 40\%$	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
Degraded forest areas are restored or managed to have a fertile or forested state in accordance with the forest definition in the National Forest Policy.	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
Community forests are managed efficiently and can benefit the community, raise awareness of forest conservation of people as a part of strengthening communities & local communities & developing sustainable forest resources.	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
Total			Sum of all targeted areas 0						

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

Target	Year	Location(s)	Total Target Area (km ²)	Overarching type of Land Degradation Neutrality (LDN) intervention	Targeted action(s)	Status of target achievement	Is this an LDN target? If so, under which process was it defined/adopted?	Which other important goals are also being addressed by this target?	Edit Polygon
It can effectively stop and prevent the destruction of forest resources in all forms of state forest lands.	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
Promote and support various sectors related to forest resource management to have awareness and participation, including responsibility for the conservation, management, and sustainable development of forest resources.	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
Develop appropriate economic and market mechanisms in line with the situation to support sustainable development of forest resources.	2023			None			<input type="radio"/> Yes <input type="radio"/> No		
All types of state forest lands are organized and disputes about their ownership or use have been resolved fairly and fairly.	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
Thailand has model forests of both national and international importance.	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
Total			Sum of all targeted areas						
			0						

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

Target	Year	Location(s)	Total Target Area (km ²)	Overarching type of Land Degradation Neutrality (LDN) intervention	Targeted action(s)	Status of target achievement	Is this an LDN target? If so, under which process was it defined/adopted?	Which other important goals are also being addressed by this target?	Edit Polygon
Working with organizations and implementing international agreements on forest resources is effective and responsive to national policies, plans and laws.	2037			None			<input type="radio"/> Yes <input type="radio"/> No		
Total			Sum of all targeted areas						
			0						

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

Relevant Target	Implemented Action	Location (placename)	Action start date	Extent of action	Total Area Implemented So Far (km ²)	Edit Polygon
Targets for the land degradation neutrality have been established, including the establishment of voluntary monitoring measures at the national level.	Other ~Being implemented	13 provinces: Kanchanaburi, Phatthalung, Suratthani, Nakhon Nayok, Chanthabiri, Ratchasima, Buriram, Nan, Phitsanulok, Tak, and Lampang.	2023-10-01	45 500	45 500 .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 (km ²)	Edit Polygon
					Sum of all areas relevant to actions under the same target	
					The productivity of the land and ecosystem of the area can be maintained or restored:	0 .00
					Reduction of the vulnerability of affected ecosystems and the resilience of ecosystems increases.:	0 .00
					Targets for the land degradation neutrality have been established, including the establishment of voluntary monitoring measures at the national level.:	45 500 .00
					Sustainable land management measures against desertification and land degradation are shared, promoted and implemented.:	0 .00
					At least 15 million rai of agricultural land managed by land development technology to achieve neutrality and sustainability by 2027.:	0 .00
					10% reduction in unsuitable crop areas by 2027.:	0 .00
					Effective preservation of country's lands and preserving natural balance:	0 .00
					Use of land and soil resources for maximum benefit.:	0 .00
					Fair distribution of land ownership to enhance people's quality of life:	0 .00
					Integrating and enhancing participation for unified management of land and soil resources:	0 .00
					The management of the country's forest land is efficient and unified, including agencies, policies, plans, laws, committees and other mechanisms related to forestry.:	0 .00
					Boundaries of all types of state forest land are accurate and consistent with the boundaries in the actual area. There is unity among agencies with the application of appropriate technology:	0 .00
					The country's forests are classified for appropriate management at both national and area levels, consistent with the definition and classification of forests in the National Forest Policy, with clear designated responsible agencies for each area. :	0 .00
					The management and use of forest land in each area is appropriate according to the potential or carrying capacity of the area. It is in line with the provisions of the national forestry policy and achieves a sustainable balance with the development of the economy, society, environment, and national security.:	0 .00
					The forest resource information system, both nationally and locally, has a unified standard that is up-to-date covering all types of forest areas and linked to information on socio-economic and other national resources.:	0 .00
					The national forest area corresponding to the definition and classification of forests in the National Forest Policy is as follows: - 2022, a forest area is $\geq 33.04\%$ - 2027, a forest area is $\geq 35.35\%$ - 2032, a forest area is $\geq 37.67\%$ - 2037, a forest area is $\geq 40\%$:	0 .00
					Degraded forest areas are restored or managed to have a fertile or forested state in accordance with the forest definition in the National Forest Policy.:	0 .00

Relevant Target	Implemented Action	Location (placename)	Action start date	Extent of action	Total Area Implemented So Far (km ²)	Edit Polygon
					Community forests are managed efficiently and can benefit the community, raise awareness of forest conservation of people as a part of strengthening communities & local communities & developing sustainable forest resources.:	0 .00
					It can effectively stop and prevent the destruction of forest resources in all forms of state forest lands.:	0 .00
					Promote and support various sectors related to forest resource management to have awareness and participation, including responsibility for the conservation, management, and sustainable development of forest resources.:	0 .00
					Develop appropriate economic and market mechanisms in line with the situation to support sustainable development of forest resources.:	0 .00
					All types of state forest lands are organized and disputes about their ownership or use have been resolved fairly and fairly.:	0 .00
					Thailand has model forests of both national and international importance.:	0 .00
					Working with organizations and implementing international agreements on forest resources is effective and responsive to national policies, plans and laws.:	0 .00

General comments

General comments In 2017, the government set up national forestry policies as a guideline for the development of the country's forests to achieve unity and balance in conservation, utilization and development of natural resources, economy and society covering 3 areas. These include forest management, utilization of forest products and services, and the forest industry and the development of management systems and organizations related to forestry. Subsequently, the National Forest Development Master Plan was formulated to serve as a practical framework for improving and developing the entire forest system and to formulate and drive the country's policy on the entire forest management system to keep pace with the situation and to be in a unity and equilibrium with economic, social and environmental development, including having measures to coordinate, monitor and support the management of Thailand's forestry according to the law on forestry and the operations of various agencies to be efficient, effective and sustainable as well as to respond to the 20-year National Strategy, the national reform plan and the national economic and social development plans in relation to forest resources. Furthermore, the government of Thailand is committed to achieve the Sustainable Development Goals (SDGs) especially Target 15.3 which clearly states "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". The government has set targets and measures to combat desertification and land degradation and to reach a situation of Land Degradation Neutrality by 2030 as shown below: Target 1: Increase the proportion of national forest cover through reforestation and rehabilitation degraded forest including headwater and mangrove forests by participation of local community. Measures - Review and conduct agricultural land use planning in consistent with national directions and development targets indicated in national strategy - Promote reforestation and fast-growing trees especially at the household and community level under the appropriate concept and mechanisms such as tree banks in order to increase biodiversity and soil carbon stocks - Promote the development of community rules that relate to the forest conservation, reforestation in the area of forest complex that connects to the corridor of land owned by the state by participatory of all sectors. Target 2: Restore and rehabilitate degraded land to be productive land, emphasized on sustainable agriculture. Measures - Apply principle of sufficiency economy in agriculture, sustainable land development, good agriculture practices, organic farming, integrated farming and agricultural system enhance resilient to climate change in corporation with local wisdom. - Support and promote learning and land management for land degradation neutrality - Formulate strategy and action plan to halt land degradation - Increase efficiency of water management for agricultural areas Target 3: Reduce soil carbon loss and increase soil carbon sequestration by soil and water conservation and promote awareness raising and community participation in land management. Measures - Promote soil and water conservation measures by both mechanical and vegetative measures, appropriate soil improvement in agricultural areas in highland and lowland - Promote campaigns to reduce stubble burning plant, control the forests burning and agricultural residues management - Develop land productivity and soil organic carbon database in national level by 2022 Sources: 1) National Forestry Development Master Plan. National Forest Policy Committee. 2022. 2) National Forest Policy. Subcommittee on the preparation of the National Forest Policy and the National Forest Development Master Plan. 2019. 3) Operational Performance over a 5-year period (2018-2022) in driving the goals according to the United Nations Convention to Combat Desertification Strategic Plan 2018-2030. Land Development Department. Ministry of Agriculture and Cooperatives. 2023. 4) Land Development Department operational plan (2023-2027). 5) Policy and plan for managing land and soil resources of the country (2023-2037).

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	2.4
2 001	
2 002	1.1
2 003	
2 004	1.2
2 005	
2 006	0.9
2 007	0.5
2 008	0.3
2 009	0.2
2 010	0.3
2 011	0.1
2 012	0.1
2 013	0.1
2 014	0.1
2 015	0.0
2 016	0.0
2 017	0.0
2 018	0.0
2 019	0.1
2 020	

Qualitative assessment

SO2-1.T3: Interpretation of the indicator

Indicator metric	Change in the indicator	Comments

Indicator metric	Change in the indicator	Comments
		Thailand continues to focus on solving poverty problem by changing the economic system depending on agriculture toward the economic system depending on industry and service. The government also seeks to increase educational opportunities from childhood to college education, enabling labors to enter the labor market with higher compensation than the minimum wage.
		Although there is less poverty, there is still greater inequality due to the implementation of economic policy toward Capitalism and educational inequality. The government's been trying to increase educational opportunities for poor children to access education services by providing specific welfare such as supporting the education for poor students especially who lives in remote areas by providing transportation and other costs to reduce the educational burden of poor households. The government also creates opportunities for poor children to study at higher levels which can help people get out of poverty.

General comments

General comments Overview of Poverty and Inequality in Thailand Over the past three decades, the decline in poverty and inequality tends to slow down, but rather slowly. Especially in the past three years, the government continued to implement various policies to solve the problem of poverty and inequality. Most of them were measures that focused on helping and healing people in various groups affected by the COVID-19 epidemic, especially the poor, low-income and vulnerable groups which were a group that was significantly affected more severely than other groups in society. Furthermore, the Government's implemented various policies to solve poverty and social inequality according to the national strategy and national reform plan. The proportion of the poor decreased from 65.17% of the total population in 1988 to 38.63% in 1998, and then to 20.43% in 2008, 8.6% in 2016, and 6.32% in 2021 of the total population (4.4 million people), respectively. Thailand's revenue disparity has declined slightly. The income disparity in Thailand is in the moderate level reflected by the Gini Coefficient which is ranging from 0.4-0.5 and was slightly reduced from 0.487 in 1998 to 0.445 in 2015 and to 0.430 in 2021. The indicator of wage earning in 2021 also indicated that the 10% of the lowest income earners (decile 1) had an decreasing share of wage income from 3.79% in 2016 to 2.04% in 2021. It also found that the income structure of the decile 1 and 10 population differed quite markedly, with half of the income in the country's lowest-income 10 percent coming from government aids 30.0% (increase from 22.3% in 2020) and assistance from other persons 21.0%, while income from work was at 48.5% which was a result of various government assistance measures implemented during the year 2021, aiming to help those affected by the COVID-19 epidemic. The tendency for revenue from government subsidies gradually decrease in line with higher income levels. It shows that the government assistance plays an important role in helping and maintaining the livelihoods of low-income people (decile 1 - 2). Additionally, when looking at the difference in spending between the richest and poorest group, the difference was about 8.61 times in 2021. As for educational inequality, it was found that access to compulsory education was higher but there were still a number of children out of the education system. The net enrollment rates for primary and junior high school students in 2021 were 87.6% and 69.5%, respectively. It also found that the trend of entering secondary school and university was uncertain. Children in well-off households are more likely to receive an education than those who are less fortunate. In addition, the enrollment rate of the population with good living status in the first 10% had access to high school (including a vocational certificate) and bachelor's degree (including a high vocational certificate) at 80.9% and 50%, respectively, while the top 10% of the population with very poor living status had access to a high school (including a vocational certificate) and bachelor's degree (including a high vocational certificate) only 51.4% and 11.1%, respectively, with urban children having higher education than children living in rural areas. In addition, the allocation of educational resources has problems in terms of efficiency, such as lack of teachers and availability of educational resources, etc., resulting in education quality problems. Although inequality in access to education has improved and the enrollment rate of high school and undergraduate students has increased, there are still children who are left out of the education system especially students in the lowest economic households. The COVID-19 epidemic situation, in addition to affecting students dropping out of the education system, also affected the quality of education. Due to the COVID-19 epidemic, educational institutions had to close schools, resulting in inability to teach in the classroom, thereby reducing learning efficiency. This was reflected in the average scores of the National Basic Education Test (O-Net), which decreased in all levels. It also resulted in the problem of learning loss, especially among young children. Although Thailand seems to have no poverty problem when considering the international poverty line criteria, when considering the country's poverty line in 2021 (2,808 baht/person/month), it was found that there were still many poverty problems. Pattani, Narathiwat and Yala had high levels of poverty, being ranked as the provinces with the highest poverty-to-population ratio in the country, ranked 1st, 6th and 7th with a proportion of 30.85%, 19.25%, and 18.69% respectively, with Pattani being the province with the highest proportion of poor people in the country for the past 3 years and being a province with chronic poverty problems, ranked in the top 6 with the highest proportion of poor people continuously for 16 years from 22 years (from 2000 – 2021). The reason why the southern region has the highest poverty problem is caused by the violent situation from the 3 border provinces (Pattani, Yala and Narathiwat), which is a major obstacle in the development of the area to have economic confidence. In addition, the southern region relies mainly on income from the tourism sector which during 2020 - 2021, many tourists were unable to travel in the country due to the COVID situation. When considering the country's poverty line (in 2021 at the level of 2,808 baht/person/month), it was found that Mae Hong Son was a province with chronic poverty problems with the highest proportion of the poor in the top three in the country continuously for 17 years (from 2004 - 2021). In 2021, it was the third highest proportion of the poor in the country, accounting for 24.59% of the total population in the province. Although the proportion of the poor population has decreased, it is still at a high level. Poverty in Mae Hong Son Province is caused by geographic limitations in which most of the area is mountainous and plateau, making it difficult to travel and develop. In addition, there are labor problems with low levels of education and most of them are informal workers. While compared to other regions of the country, the Northeast region has always been the region with the highest number of poor people in the country and the lowest per capita income. This is partly due to the fact that most workers in the Northeast work in agriculture, which has low labor productivity, coupled with a low level of education and mostly informal workers. Sources: 1) Bureau of Database Development and Social Indicators. Office of the National Economic and Social Development. July 2021. 2) Analysis of the situation of poverty and inequality in Thailand in 2021. www.nesdc.go.th/ewt_dl_link.php?nid=13081

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			
2001			
2002			
2003			
2004			
2005			
2006	97.6	92.5	94.0
2007			
2008			
2009			
2010			
2011			
2012	98.3	96.0	97.0
2013			
2014			
2015			98.0
2016	99.2	97.0	98.0
2017			
2018			
2019			99.5
2020			

Qualitative assessment

SO2-2.T2: Interpretation of the indicator

Change in the indicator	Comments
	The Government has worked to improve the quality of all piped water, including in all rural areas, so that the country's piped supply is safe to drink directly from a tap. Government is also focusing more heavily on a cleaner or more hygienic environment in general. The Clean Environment Programme, which started in 1996, promotes healthy living, healthy schools and healthy cities, covering food hygiene, healthy workplaces and cleanliness in household and village environments.

General comments

General comments Thailand's faced water crises that include droughts, floods, and deteriorating water resources from increasing demand for water and the Country may suffer from severe water shortages if there is still careless water usage and lack of effective water management, together with the deterioration of some water resources. For example, in 2021, the Wang River area (around the junction of Lampang and Tak provinces) and the Yom River (in the areas of Sukhothai, Phitsanulok and Phichit) were in a dry state without water. There is also a problem of water quality from the occurrence of algae (Algal bloom), which is found in water sources where the amount of water is reduced until it lacks circulation causing the accumulation of plant food (nitrogen and phosphorus), which are substances produced by agricultural activities, industry and domestic wastewater. Although Thailand is stepping up its efforts to provide clean drinking water to remote and hard-to-reach communities, the Country is facing increasing demand for water from various economic sectors. This could lead to water scarcity in the future, mainly caused by deforestation and global warming. The deterioration of water quality has also become a serious concern, mainly due to the use of agricultural chemicals, industrial waste pollution and untreated urban sewage that flows directly through the waterways. According to the Pollution Control Department's inspection of water quality in main rivers and still water sources during 2013-2022, it was found that most water sources had improved quality but there were still water sources that had a continually

deteriorated quality. Most of them were water sources in the central region (lower Chao Phraya River and the lower Tha Chin River Basin) and the eastern region (Lower Rayong and the eastern seaboard basin) and the lower part of Lamtakong which were water sources affected by drought, resulting in insufficient water supply to support waste that was discharged into water sources all the time, both from community wastewater, water discharged from agricultural activities, industries and businesses. While clean water supply infrastructure is inaccessible in remote rural areas and mountainous areas in Kanchanaburi, Chiang Rai and Chiang Mai. It was also found that bacteria accounted for the largest proportion of water contamination, followed by water physical and chemical, respectively. Although the groundwater quality in remote areas is within drinkable standards, in some areas iron and fluoride have been reported to be higher than drinking water standards. In addition, in some coastal areas there have been reports of salinity intrusion in groundwater. And in some cases, there are chemical contaminants such as arsenic in the underground water in Nakhon Si Thammarat province, which has many tin mines. Sources: 1) Water quality problems during the dry season. Pollution Control Department. 2022. 2) Situation of water quality in surface water sources. Pollution Control Department. 2022. 3) Report on the operation of the Water Quality Management Division 2022. Pollution Control Department. 2565. <https://www.pcd.go.th/publication/29365> 4) (Draft) 20-Year Master Plan on Water Resources Management (Revised Phase 1 2023 - 2037). National Water Resources Office.

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	19002610	27.2		0.0		0.0
Reporting period	28185647	38.2		0.0		0.0

Qualitative assessment

SO2-3.T2: Interpretation of the indicator

Change in the indicator	Comments
	Overall, there is an increase in the population that is exposed to soil degradation. Due to rapid socio-economic expansion, the demand for land is increasing which encroaches forest areas for farming, community and buildings, converting grasslands to agriculture and the transition from agricultural land to community area and the expansion of land to resorts and tourist attractions. Another reason is the inappropriate use of land, especially in agricultural areas, the use of land for monocultures repeatedly for a long time, lack of maintenance and improvement, which causes the plants to not fully grow. In addition, Thailand does not collect data separately at the male and gender level. It is expected that there is little difference between males and females. However, separate data collection for males and females should be conducted in the future to validate the above assumptions.

General comments

General comments Although looking at international poverty lines shows that Thailand's poverty situation is improving, when looking at poverty lines measured in terms of consumption expenditures prepared by the Office of the National Economic and Social Development Council, it is found that that Thailand still has a proportion of poor people when measured in terms of consumption expenditures, approximately 6.26%, 6.83%, and 6.32% in 2019, 2020, and 2021, respectively, which shows that the poverty situation has not improved during those years. Therefore, relevant agencies must urgently find ways to further eliminate the poverty problem which may include increasing educational opportunities for poor children to access educational services and a reduction of unconditional subsidies to increased conditional subsidies to farmers, that should incentivize farmers to adapt to improve production efficiency and make production more environmentally friendly, improve degraded soil quality, reduce damage from climate change and enable rotational and integrated farming which will enhance net income and reduce farmers' vulnerability to climate change. Relevant agencies should adopt more demand-side management measures for water use instead of supplying water through the construction of dams or reservoirs. This is to increase the efficiency of water use, which will help alleviate problems of drought, flooding, as well as problems with deteriorated water sources from increased demand for water. Sources: 1) The Office of the National Economic and Social Development Council. 2022. Statistics on poverty and income distribution. <https://www.nesdc.go.th/main.php?filename=social>. 2) Attavanich, W., Chantarat, S., Chenphuengpaw, J., Mahasuweerachai, P., & Thampanishvong, K. (2019). Farms, farmers and farming: a perspective through data and behavioral insights (No. 122). Puey Ungphakorn Institute for Economic Research. 3) (Draft) Agricultural Action Plan to Support Climate Change 2023 – 2027. Ministry of Agriculture and Cooperatives. 4) (Draft) 20-Year Master Plan on Water Resources Management (Revised Phase 1 2023 - 2037). National Water Resources Office.

SO2 Voluntary Targets

SO2-VT.T1

Target	Year	Level of application	Status of target achievement	Comments
Food security and access to adequate water resources for those affected by poverty have been improved.	2030	National	Achieved	Activities to drive the implementation of the UNCCD Strategic Plan that have been implemented during 2018-2023 include: - Land development for agricultural disasters and climate change adaptation; - Construction of water sources in farms outside irrigation areas; - Conservation and restoration of water sources and water distribution systems; - Development of groundwater for agriculture; - Area management (1 subdistrict, 1 new theory group); - Land development for farmers in Thung Kula Rong Hai, Thung Samrit, Thung Ma Hew and specific areas; - Encouraging farmers to plant economic trees on land that has legal rights; - Development of Agricultural Learning Center (ALC) in soil and fertilizer management; - Development of volunteer soil doctors and little soil doctors; and - Soil quality development in large-scale agricultural extension system
All citizens have access to clean drinking water at an affordable price. (SDG 6.1)	2030	National	Not achieved	It is possible to achieve the target if implemented as planned.
All citizens have access to adequate and equitable sanitation and hygiene and end open defecation by paying particular attention to the needs of women, girls and vulnerable groups. (SDG 6.2)	2030	National	Not achieved	It is possible to achieve the target if implemented as planned.
Improving water quality by reducing pollution, eliminating waste disposal and reducing emissions of hazardous chemicals and hazardous materials, halving the proportion of untreated wastewater and increasing sustainable safe recycling and reuse worldwide. (SDG 6.3)	2030	National	Not achieved	It is possible to achieve the target if implemented as planned.
Increasing the efficiency of water use across all sectors and ensuring sustainable water use and supply to address water scarcity and reduce the population suffering from water scarcity. (SDG 6.4)	2030	National	Not achieved	It is possible to achieve the target if implemented as planned.
Implement holistic water resource management at all levels, including through appropriate cross-border cooperation. (SDG 6.5)	2030	National	Not achieved	It is possible to achieve the target if implemented as planned.
Protecting and restoring water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes. (SDG 6.6)	2030	National	Not achieved	It is possible to achieve the target if implemented as planned.
Expanding international cooperation and supporting capacity building for developing countries in water and sanitation-related activities and programs, including water storage, desalination, water efficiency, wastewater treatment, and water recycling technology. (SDG 6.A)	2030	National	Not achieved	It is possible to achieve the target if implemented as planned.

SO-2: To improve the living conditions of affected populations.

Target	Year	Level of application	Status of target achievement	Comments
Encouraging and strengthening the participation of local communities in improving water and sanitation management. (SDG 6.B)	2030	National	Not achieved	It is possible to achieve the target if implemented as planned.
Providing clean water for consumption to every community, village or household, urban communities, important tourist destinations and special economic areas, including providing a reserve water source in areas with water shortages, developing drinking water standards at a reasonable price and saving water by reducing water consumption in the household, service and government sectors.	2037	National	Achieved	Higher than the target of the first 5-year plan (2018-2022) It is possible to achieve the target if implemented as planned.
Developing new water storage and delivery systems to their full potential along with providing water in rainwater agricultural areas to expand opportunities from the potential of small projects and reduce the risk in areas without potential, reduce the risk / damage by 50%, including increasing productivity and restructuring water use by working with the national strategy on building competitiveness and creating opportunities and social equality to raise the productivity of the entire water system	2037	National	Not achieved	Lower than the target of the first 5-year plan (2018-2022) Page 18 Achievements in the 2nd aspect It is possible to achieve the target if implemented as planned.
Increasing drainage efficiency, organizing urban flood protection systems, managing flood areas and slowing areas, including systematic flood relief at the basin level and critical areas (area based) in large watersheds and tributaries to reduce the risk and violence by at least 60%.	2037	National	Achieved	Higher than the target of the first 5-year plan (2018-2022) It is possible to achieve the target if implemented as planned.
Developing and increasing the efficiency of the community's collection system and wastewater treatment system; reuse of wastewater to prevent and reduce the occurrence of wastewater at source; control of water flow to preserve the ecosystem as well as restore rivers and canals and natural water sources that are important in all dimensions for conservation, restoration and utilization throughout the country	2037	National	Achieved	Higher than the target of the first 5-year plan (2018-2022) It is possible to achieve the target if implemented as planned.
Conserving and restoring degraded watershed forests, preventing and reducing soil erosion in watershed areas and steep slopes.	2037	National	Achieved	Lower than the target of the first 5-year plan (2018-2022) Page 18 Achievements in the 2nd aspect It is possible to achieve the target if implemented as planned.
There is an organizational law on unified water management, promoting research studies and building cooperation on water with foreign countries, as well as participating in water management.	2037	National	Achieved	It is possible to achieve the target if implemented as planned.

General comments

General comments (Draft) 20-Year Master Plan on Water Resources Management (2018-2037) has been prepared to be a framework for

developing and increasing the efficiency of the country's water resource management in order to prevent and mitigate potential impacts on the people, which is in line with the 20-year National Strategy (2018-2037) and the master plan under the strategy on the issue of water management throughout the system by targeting water indicators together among agencies related to water management in order to unite in the same direction, starting from jointly analyzing the causes of the overall problem at the country and area levels and linking to the Sustainable Development Goals (SDGs) 2020, as a framework for developing water resources in 6 areas: (1) Management of water consumption; (2) Creating water security in production; (3) Flood management; (4) Water quality management and water resource conservation; (5) Conservation and rehabilitation of degraded watershed forests and preventing soil erosion; and (6) Management. These led to the determination of area-based solutions in a systematic way in 66 areas, which are areas with repetitive water problems, including being the country's development target areas that must be provided to support development. Sources: 1) Driving the 20-year Master Plan on Water Resources Management. National Water Resources Office. May 2021. 2) (Draft) 20-Year Master Plan on Water Resources Management (Revised Phase 1 2023 - 2037). National Water Resources Office. 3) Operational Performance over a 5-year period (2018-2022) in driving the goals according to the United Nations Convention to Combat Desertification Strategic Plan 2018-2030. Land Development Department. Ministry of Agriculture and Cooperatives. 2023. 4) Office of the National Business and Social Development Council. Sustainable Development Goal 6: Ensure water and sanitation are sustainably managed and available to all. <https://sdgs.nesdc.go.th/เกี่ยวกับ-sdgs/เป้าหมายที่-6-สร้างหลักป/> 5) Thailand's SDG Progress Report 2016-2020. The Office of the National Economic and Social Development Council.

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

Drought hazard indicator

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

	Drought intensity classes				
	Mild drought (km ²)	Moderate drought (km ²)	Severe drought (km ²)	Extreme drought (km ²)	Non-drought (km ²)
2000	86 428	0	0	0	428 982
2001	116 690	25 299	11 185	0	362 237
2002	124 827	17 608	7 041	10	365 924
2003	275 884	96 629	2 074	0	140 824
2004	224 905	70 777	41 022	6 734	171 972
2005	211 129	24 992	4 064	855	274 371
2006	126 368	6 532	0	0	382 511
2007	178 956	11 914	0	0	324 540
2008	74 154	8 024	3 586	0	429 647
2009	188 809	46 261	8 552	7 488	264 301
2010	136 454	30 497	7 045	739	340 675
2011	11 083	1 462	0	0	502 866
2012	171 029	33 994	14 247	9 430	286 711
2013	79 552	8 864	0	0	426 995
2014	0	37 209 .08	23 724 .23	2 534 .02	0
2015	0	7 122 .83	4 356 .29	1 578 .79	0
2016	112 887	7 140	830	220	394 333
2017	0	6 144 .74	1 364 .42	75 .51	0
2018	0	6 512 .10	258 .40	3 .78	0
2019	0	1 966 .07	2 .98	0	0
2020	0	31 625 .17	10 435 .12	35 894 .44	0
2021	0	14 124 .15	6 287 .88	22 732 .92	0

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

	Total area under drought (km ²)	Proportion of land under drought (%)
2000	86 428	17 .3
2001	153 174	30 .6
2002	3 314 .50	0 .7
2003	774 .70	0 .2
2004	2 368 .33	0 .5

SO-3: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems.

	Total area under drought (km ²)	Proportion of land under drought (%)
2005	21 978 .66	4 .4
2006	926 .00	0 .2
2007	2 160 .19	0 .4
2008	840 .00	0 .2
2009	951 .09	0 .2
2010	2 746 .96	0 .6
2011	1 298 .69	0 .3
2012	2 378 .42	0 .5
2013	3 850 .66	0 .8
2014	2 680 .02	0 .5
2015	3 829 .54	0 .8
2016	4 365 .37	0 .9
2017	103 .00	0 .0
2018	0	0 .0
2019	30 456 .82	6 .1
2020	3 731 .80	0 .8
2021	323 .36	0 .1

Qualitative assessment:

Remarks: 1) Thailand's drought severity rating is based on the number of recurring droughts: (1) no more than 3 times in a 10-year period, (2) 4-5 times in a 10-year period, and (3) 6 or more times in a 10-year period. The preparation of this data therefore shows the data as moderate drought, severe drought, and very severe drought, respectively. 2) In each reporting period, the Land Development Department provides repeated droughts data at the regional level, therefore there is no information at the national level. The information presented in this report shows information by region, including: - Year 2014 shows only data of the northeastern region. - Year 2015 shows only data of the northern region. - Year 2017 shows only data of the central region. - Year 2018 shows only data of the eastern region. - Year 2019 shows only data of the southern region. - Year 2020 shows only data of the northeast region. - Year 2021 shows only data of the northern region.

General comments

Source: Department of Disaster Prevention and Mitigation, Ministry of Interior and Office of Agricultural Economics, Ministry of Agriculture and Cooperatives Remark: The data shows only agricultural areas affected by drought, with the total area of land used for agriculture.

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	51317220	32.5		0.0	0	0.0	0	0.0	106515260	67.5	106 515 260	67.5
2001	43374982	69.6		0.0		0.0		0.0	18933905	30.4	18 933 905	30.4
2002	49958763	79.6		0.0		0.0		0.0	12841110	20.4	12 841 110	20.4
2003	57253412	90.6		0.0		0.0		0.0	5939282	9.4	5 939 282	9.4
2004	53586908	86.5		0.0		0.0		0.0	8388728	13.5	8 388 728	13.5
2005	51270415	82.1		0.0		0.0		0.0	11147627	17.9	11 147 627	17.9
2006	50966337	81.1		0.0		0.0	0	0.0	11862358	18.9	11 862 358	18.9
2007	46283267	73.4		0.0		0.0	0	0.0	16754980	26.6	16 754 980	26.6
2008	50090835	79.0		0.0		0.0		0.0	13298895	21.0	13 298 895	21.0
2009	46171704	72.7		0.0		0.0		0.0	17353358	27.3	17 353 358	27.3
2010	48137443	75.4		0.0		0.0		0.0	15740824	24.6	15 740 824	24.6
2011	47515472	74.2		0.0		0.0	0	0.0	16560561	25.8	16 560 561	25.8
2012	49220865	76.4		0.0		0.0		0.0	15235830	23.6	15 235 830	23.6
2013	55715765	86.0		0.0		0.0	0	0.0	9070144	14.0	9 070 144	14.0
2014	59352761	91.1		0.0		0.0		0.0	5771955	8.9	5 771 955	8.9
2015	61740973	93.9		0.0		0.0		0.0	3988125	6.1	3 988 125	6.1
2016	62916159	95.4		0.0		0.0		0.0	3015391	4.6	3 015 391	4.6
2017	66141707	99.9		0.0		0.0	0	0.0	46796	0.1	46 796	0.1
2018	66413979	100.0		0.0		0.0		0.0	0	0.0	0	0.0
2019	64954746	97.6		0.0		0.0		0.0	1604189	2.4	1 604 189	2.4
2020	64752092	-		-		-		-	1434635	-	-	-
2021	66153027	-		-		-		-	18412	-	-	-

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	-	0	-

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Reporting year	Non-exposed		Mild drought		Moderate drought		Severe drought		Extreme drought		Exposed female population	
	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%	Population count	%
2001		-		-		-		-	0	-	0	-
2002		-		-		-		-		-	0	-
2003		-		-		-		-	0	-	0	-
2004		-		-		-		-		-	0	-
2005		-		-		-		-		-	0	-
2006		-		-		-	0	-	0	-	0	-
2007		-		-		-	0	-	0	-	0	-
2008		-		-		-		-	0	-	0	-
2009		-		-		-		-		-	0	-
2010		-		-		-		-		-	0	-
2011		-		-		-	0	-	0	-	0	-
2012		-		-		-		-		-	0	-
2013		-		-		-	0	-	0	-	0	-
2014		-		-		-		-		-	0	-
2015		-		-		-		-		-	0	-
2016		-		-		-		-		-	0	-
2017		-		-		-	0	-	0	-	0	-
2018		-		-		-		-		-	0	-
2019		-		-		-		-		-	0	-
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	-	0	-
2001		-		-		-		-	0	-	0	-
2002		-		-		-		-		-	0	-
2003		-		-		-		-	0	-	0	-
2004		-		-		-		-		-	0	-
2005		-		-		-		-		-	0	-
2006		-		-		-	0	-	0	-	0	-
2007		-		-		-	0	-	0	-	0	-
2008		-		-		-		-	0	-	0	-
2009		-		-		-		-		-	0	-
2010		-		-		-		-		-	0	-
2011		-		-		-	0	-	0	-	0	-
2012		-		-		-		-		-	0	-
2013		-		-		-	0	-	0	-	0	-
2014		-		-		-		-		-	0	-

SO-3: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems.

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	%
2015		-		-		-		-		-	0	-
2016		-		-		-		-		-	0	-
2017		-		-		-	0	-	0	-	0	-
2018		-		-		-		-		-	0	-
2019		-		-		-		-		-	0	-
2020		-		-		-		-		-	-	-
2021		-		-		-		-		-	-	-

Qualitative assessment

Interpretation of the indicator

The information in this section cannot be assessed due to insufficient data. Interpretation of the indicator The information in this section cannot be assessed due to insufficient data.

General comments

General comments The estimates of the proportion of the total population of the country for each level of drought severity reported by the Department of Disaster Prevention and Mitigation may not reflect the actual drought-affected population as it is based on the declaration of relief zones which received financial assistance from the government. As a result, areas that are experiencing drought but do not qualify for government subsidy will not be included in the above statistics.

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	-1.13		
2002	-4.74		
2003	-5.18		
2004	-7.01		
2005	-8.09		
2006	-0.57		
2007	-4.26		
2008	1.45		
2009	-4.27		
2010	-10.47		
2011	4.96		
2012	-4.76		
2013	-5.16		
2014	-5.02		
2015	-7.46		
2016	5.92		
2017	2.14		
2018	1.03		
2019	-11.26		
2020	-11.96		
2021	0.19		

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
	Drought vulnerability has increased in severity from the past.

General comments

General comments From 2001 to 2022, Thailand experienced drought 16 times in 22 years, with the Standardized Precipitation-Evapotranspiration Index (SPEI) value being negative, reflecting the drought situation. In addition, the SPEI value continues to make new highs. In 2020, it made a new high at -11.96 from the previous highs in 2010 at -10.47 and in 2005 at -8.09. Therefore, it is necessary to expedite the solution of the drought problem, which is likely to become more severe in the future, for examples: 1) The awareness of the public as well as administrators of various agencies, both government and private sectors, should be raised about the importance of conserving and restoring soil, water, forest and ecosystem resources; 2) There should be more promotion and support for cooperation from the private sector through CSR projects as well as various incentive measures such as corporate income tax reductions, providing low interest loans, etc.; 3) Economic incentives should be designed and implemented, such as Payment for Ecosystem Services (PES), conditional subsidies, carbon credits, etc., in order to motivate farmers, the private sector, civil society, communities and localities to jointly conserve soil, water, forests and ecosystems; 4) There should be promotion and support for the development of models for the restoration and conservation of soil, water, forests and ecosystems at the local level with the participation of all sectors and lessons learned to be extended in different areas; 5) There should be promotion and support to enhance the participation of civil society, communities and localities in conserving and restoring soil, water, forest and ecosystem resources; 6) Promoting and supporting integrated mobilization in the conservation and restoration of soil, water, forest and ecosystem resources, such as soil management through crop rotation with primary crops, which requires sufficient water for cultivation; and 7) Promoting and supporting the evaluation of results and impacts of various measures taken to conserve and restore soil, water, forest and ecosystem resources to improve operations along with using analyzed data to raise awareness and asking for a budget to support the mission for the following years.

S03 Voluntary Targets

S03-VT.T1

Target	Year	Level of application	Status of target achievement	Comments
The vulnerability of ecosystems to drought is reduced as a result of sustainable soil and water resource management practices	2030	National	Achieved	Activities to drive the implementation of the UNCCD Strategic Plan that have been implemented during 2018-2023 include: - Development of a database system for decision making to drive and expand sustainable land management results - Mekong-Lanchang cooperation in developing and promoting a network of soil doctors for sustainable land and agricultural management in the Mekong-Lanchang sub-region. - Land development for agricultural disasters and climate change - Construction of water sources in farms outside irrigation areas - Conservation and rehabilitation of water sources and water distribution systems - Development of groundwater for agriculture - Area management (1 subdistrict, 1 new theory group)
The communities have increased resistance to drought.	2030	National	Achieved	Activities to drive the implementation of the UNCCD Strategic Plan that have been implemented during 2018-2023 include: - Development of a database system for decision making to drive and expand sustainable land management results - Mekong-Lanchang cooperation in developing and promoting a network of soil doctors for sustainable land and agricultural management in the Mekong-Lanchang sub-region. - Land development for agricultural disasters and climate change - Construction of water sources in farms outside irrigation areas - Conservation and rehabilitation of water sources and water distribution systems - Development of groundwater for agriculture - Area management (1 subdistrict, 1 new theory group)
Industry in the eastern region can reduce, reuse and recycle, resulting in water savings of 10%, and water control and allocation mechanisms is established for the eastern, central and western regions of Thailand.	2026	National		
Efficient water management is in line with an appropriate cropping system in approximately 5 million hectares of irrigated land, focusing on the Chao Phraya, Chi and Mun river watersheds.	2026	National		
The efficiency of existing water storage will be maximized, water use in existing irrigated areas will be reduced by 10%, and the water distribution efficiency of small water bodies in basins with low development potential will increase.	2026	National		
Reduce damage from river bank overflow in 10 critical watersheds and develop flood support areas in the Chao Phraya River Basin including preventing flooding in 185 urban/economic areas.	2026	National		

SO-3: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems.

Target	Year	Level of application	Status of target achievement	Comments
Provide water for farmland that relies on rainwater at least once a year by restoring natural water sources to increase water volume to 2,700 million cubic meters, digging 270,000 animal husbandry ponds, developing groundwater sources for agriculture covering an area of 0.16 million hectares and 1,715 community water resources.	2026	National		
Water storage will be especially developed in low-capacity watersheds, which are water scarce areas. The development of water resources in various forms aims to meet the needs of development, climate change and water security by increasing the water supply to 9.5 billion cubic meters, which can increase the irrigation area by 1.4 million hectares.	2026	National		
Upstream forests are restored to a total of 0.8 million hectares, which will reduce flood flow in upstream areas.	2026	National		
A total of 1.5 million hectares of land is protected from surface loss, which reduces soil erosion in the upstream areas.	2026	National		
Transfer knowledge and technologies developed for climate change adaptation in high-risk provinces.	2026	National		
Promote participatory processes in policy formulation and planning for land use, water and forest management in each watershed.	2026	National		
Promote the integration of local wisdom with water management by using innovations suitable for water management according to the context of each region.	2037	National		
Increase the efficiency of water management and water storage by determining the proportion of water use in various activities to suit the amount of runoff and water storage in each watershed.	2026	National		
Develop infrastructure to prepare for flooding that is consistent and suitable for the area, ecosystem and community.	2026	National		
Develop infrastructure for rainwater reserves and water allocation in areas experiencing repeated drought, non-irrigated areas and areas that still use groundwater.	2026	National		

SO-3: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems.

Target	Year	Level of application	Status of target achievement	Comments
Increase efficiency in managing saltwater intrusion problems from sea level changes, drought situations and changes in runoff from human actions.	2026	National		
Promote the development and use of wastewater treatment technology to recycle water.	2037	National		
Develop a system for forecasting water situations and early warning system.	2026	National		
Build a disaster surveillance network in risky areas by empowering communities to prepare themselves from the household level to the national level.	2026	National		
Increase the efficiency of groundwater management in conjunction with the use of surface water in drought-prone areas.	2026	National		
Develop a system for assistance, compensation, or a disaster insurance system related to water management.	2026	National		

General comments

Sources: 1) Operational Performance over a 5-year period (2018-2022) in driving the goals according to the United Nations Convention to Combat Desertification Strategic Plan 2018-2030. Land Development Department. Ministry of Agriculture and Cooperatives. 2023. 2) The Strategic Plan on Thailand's Water Resources Management 2015-2026. The Policy Committee for Water Resources Management. 2015. 3) Master Plan on Climate Change 2015-2050. Office of Natural Resources and Environmental Policy and Planning. Ministry of Natural Resources and Environment. 2015. 4) Agricultural Strategic Plan for Climate Change. Agricultural and Cooperative Development Policy and Plan Committee. Ministry of Agriculture and Cooperatives. 2017. 5) Thailand's National Adaptation Plan. Office of Natural Resources and Environmental Policy and Planning. Ministry of Natural Resources and Environment. 2018. General comments Thailand has several plans/policies related to impact mitigation, adaptation and drought management, which should be integrated to avoid duplication and enable the use of limited budgets to maximum efficiency and analyze physical data together with spatial economic and social information to lead to accurate and effective problem solving.

S04-1 Trends in carbon stocks above and below ground

Soil organic carbon stocks

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

SO4-2 Trends in abundance and distribution of selected species

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

Year	Red List Index	Lower Bound	Upper Bound	Comment
2000	0.83464	0.82888	0.84097	
2001	0.8357	0.8293	0.8412	
2002	0.8320	0.8256	0.8380	
2003	0.8295	0.8237	0.8353	
2004	0.8256	0.8196	0.8329	
2005	0.8239	0.8171	0.8304	
2006	0.8203	0.8143	0.8272	
2007	0.8177	0.8103	0.8243	
2008	0.8156	0.8074	0.8218	
2009	0.8122	0.8028	0.8186	
2010	0.8100	0.7986	0.8167	
2011	0.8072	0.7944	0.8158	
2012	0.8040	0.7898	0.8149	
2013	0.8008	0.7852	0.8140	
2014	0.7982	0.7797	0.8133	
2015	0.7953	0.7750	0.8130	
2016	0.7921	0.7719	0.8126	
2017	0.7895	0.7648	0.8117	
2018	0.7858	0.7604	0.8111	
2019	0.7833	0.7559	0.8104	
2020	0.7799	0.7522	0.8104	

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
					The diversity and distribution of living things in Thailand tends to decrease continuously, which requires serious solutions.

General comments

General comments From interviews with officials from the Office of Natural Resources and Environmental Policy and Planning, it was found that Thailand has created a Red List Index of the International Union for Conservation of Nature (Red List Index) in 2015 only for vertebrates and in 2020 assessed the data for invertebrates as well. The Office of Natural Resources and Environmental Policy and Planning has prepared a report on indicators "Threatened Vertebrate Species (2016-2020)" to examine changes in the status of threatened vertebrates in

Thailand using the criteria of IUCN (2001) Version 3.1. In 2020, there were 5,005 animal species in Thailand, an increase of 274 from the original number of 4,731 in 2015, divided into 345 species of mammals, 1,075 species of birds, and 461 species of reptiles, 184 species of amphibians and 2,940 species of fish. In addition, there were 676 Threatened Species, including Critically Endangered, Endangered, and Vulnerable species. This was an increase of 107 species (from 569 in 2015). Of the threatened species, 122 were mammals (1 decrease compared to 2015), 189 species of birds (up 18 species compared to 2015), 51 species of reptiles (up 2 species from 2015), 19 amphibians (up 1 species compared to 2015) and 295 species of fish (an increase of 87 species compared to 2015). For the status of plant biodiversity, a study and survey of plants by the Flora of Thailand Project found that there were approximately 12,050 species of plants, accounting for 3 percent of all plant species in the world (in 2022, they are being studied and surveyed. It will be completed by 2024.). A total of 10,531 species have been identified, consisting of 662 species of ferns (Pteridophytes), 26 species of bare seed plants (Gymnospermae), and 3,045 species of monocots (Monocotyledons) and 6,798 species of dicotyledonous plants (Dicotyledons) in 2020. The status of plant species in Thailand has been assessed according to the International Union Conservation of Nature (IUCN) in 1994 for endemic and rare species, and in 2001 it was found that 1,185 species was assessed, of which 999 were classified as threatened, which are classified into 647 species of plants that are in the status of likely endangered (Vulnerable: VU), 259 species of plants that are in the status of endangered (Endangered: EN) and 93 species, accounting for 9.08 percent of all identified plant species, are in the status of extremely endangered (Critically Endangered: CR). (Office of Natural Resources and Environmental Policy and Planning, 2020)

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	67.71	67 .71	67 .71	
2001	67.72	67 .72	67 .72	
2002	67.72	67 .72	67 .72	
2003	67.72	67 .72	67 .72	
2004	67.72	67 .72	67 .72	
2005	67.72	67 .72	67 .72	
2006	67.72	67 .72	67 .72	
2007	68.59	68 .59	68 .59	
2008	69.46	69 .46	69 .46	
2009	71.1	71 .1	71 .1	
2010	71.1	71 .1	71 .1	
2011	71.1	71 .1	71 .1	
2012	71.1	71 .1	71 .1	
2013	71.1	71 .1	71 .1	
2014	71.1	71 .1	71 .1	
2015	71.1	71 .1	71 .1	
2016	71.1	71 .1	71 .1	
2017	71.1	71 .1	71 .1	
2018	71.1	71 .1	71 .1	
2019	71.1	71 .1	71 .1	
2020	71.1	71 .1	71 .1	

Qualitative assessment

SO4-3.T2: Interpretation of the indicator

Qualitative Assessment	Comment
Increasing	The number of threatened species has been increased due to direct and indirect drivers. The direct drivers include deforestation, over-exploitation of vegetation for domestic use, industrial activities, urbanization, and discharge of waste water while the indirect drivers consist of population pressure, poverty, and governance, institutional settings, and policies. These drivers are caused by: 1) The lack of awareness and understanding of the importance and benefits of biodiversity; 2) The taxonomic operation of the country remains a problem due to the shortage of personnel and financial support; and 3) The difficulty of access to and sharing of genetic resources, biological resources, and the knowledge of tradition

General comments

SO-4: To generate global environmental benefits through effective implementation of the United Nations Convention to Combat Desertification.

General comments It is similar to SO4-2.T2.

SO4 Voluntary Targets

SO4-VT.T1

Target	Year	Level of application	Status of target achievement	Comments
Sustainable land management, combating desertification and restoring land degradation are linked to preserving biodiversity and managing climate change.	2030	National	Achieved	Activities to drive the implementation of the UNCCD Strategic Plan that have been implemented during 2018-2023 include: - Preparation of UNCCD reports in year 2018 and 2023. - Implementation of projects seeking funding from the Global Environment Fund (GEF 5, 7 and 8) within the framework of land degradation. - Development of a database system for decision-making in driving and expanding sustainable land management (DS-SLM) - Situational review to formulate a national plan of action for the UNCCD 2023-2030 - Raising awareness of preserving soil resources and the environment through activities on World Soil Day, World Day to Combat Desertification and Drought Day, World Water Day, World Environment Day, etc. - Participated in meetings of states parties to environmental conventions. (UNFCCC UNCBD UNCCD)
Integration with other environmental agreements has been enhanced.	2030	National	Achieved	Activities to drive the implementation of the UNCCD Strategic Plan that have been implemented during 2018-2023 include: - Preparation of UNCCD reports in year 2018 and 2023. - Implementation of projects seeking funding from the Global Environment Fund (GEF 5, 7 and 8) within the framework of land degradation. - Development of a database system for decision-making in driving and expanding sustainable land management (DS-SLM) - Situational review to formulate a national plan of action for the UNCCD 2023-2030 - Raising awareness of preserving soil resources and the environment through activities on World Soil Day, World Day to Combat Desertification and Drought Day, World Water Day, World Environment Day, etc. - Participated in meetings of states parties to environmental conventions. (UNFCCC UNCBD UNCCD)
Conservation and protection of conserved forest areas that still have fertile forests by emphasizing on conservation and management of forest groups, reforestation as an ecological corridor and reforestation as a buffer.	2037	National		
Supporting reforestation and increasing forest areas in areas of encroached or destroyed forests, degraded watershed forests, or open spaces outside natural forest boundaries.	2037	National		
Support the conservation of endemic and endangered species affected by climate change, as well as prevent the spread of exotic species that may increase due to climate change.	2037	National		

SO-4: To generate global environmental benefits through effective implementation of the United Nations Convention to Combat Desertification.

Target	Year	Level of application	Status of target achievement	Comments
Support and promote mechanisms for the utilization of natural resources and biodiversity in various ecosystems.	2037	National		
Conserve and protect marine and coastal resources as well as increase or restore mangrove areas to maintain the ecological balance through community participation.	2037	National		
Push for the declaration of protected areas in areas that are ecologically vulnerable and at risk of threatened biodiversity outside of protected forests.	2026	National		
Develop a database system to predict the impact of climate change on ecosystems and natural resources.	2026	National		
Develop a system for monitoring and evaluating biological indicators) of various ecosystems to cover risky areas and areas throughout the country.	2026			
Prepare an integrated management plan for coastal areas across the country to reduce the impact of coastal erosion problems through the process of participation from relevant sectors.	2026			
Develop mechanisms that promote the role of ecological communities in the preservation and conservation of natural resources, ecosystems and biodiversity.	2026			
Promote and develop communities with ecological lifestyles (Ecovillages) to be able to live in harmony with nature and increase the role of communities in preserving natural resources	2037			

Target	Year	Level of application	Status of target achievement	Comments
Promote cooperation from the private and public sectors in preserving and conserving natural resources and biodiversity through socially responsible business practices.	2037			
Develop a surveillance network for forest fire prone areas by creating community participation by increasing the capacity of citizen networks in forest fire prevention and control.	2037			
Promote networks of people, community organizations, and local governments in coastal areas to conserve and restore marine and coastal ecosystems.	2037			
Establish a surveillance network and monitor biological indicators.	2037			
Build knowledge and understanding of the impacts of climate change and empower all relevant sectors using the principles of the Ecosystem-based Adaptation (EbA) in managing natural resources and using biodiversity and benefits from the ecosystem.	2026			

Complementary information

1) Operational Performance over a 5-year period (2018-2022) in driving the goals according to the United Nations Convention to Combat Desertification Strategic Plan 2018-2030. Land Development Department. Ministry of Agriculture and Cooperatives. 2023. 2) Biodiversity Management Master Plan 2015-2021. Office of Natural Resources and Environmental Policy and Planning. Ministry of Natural Resources and Environment. 2015. Supporting information According to the report on the results of monitoring and evaluation of the half-plan phase of the 2017-2021 Biodiversity Management Action Plan in 2019, it was found that the operations of various agencies in the past have continually had limitations in terms of personnel and budget. In addition, the main obstacles are the unclear policy/strategy of the agency, the lack of clear operation agencies, the lack of serious support from decision-makers, and the lack of clear plans and operational goals. However, for the success of the country's biodiversity management operations, it is necessary to continue to promote awareness and integration of participation from all sectors. 3) Thailand's National Adaptation Plan. Office of Natural Resources and Environmental Policy and Planning. Ministry of Natural Resources and Environment. 2018.

S05-1 Bilateral and multilateral public resources

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

Trends in international bilateral and multilateral public resources provided

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

Trends in international bilateral and multilateral public resources received

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

Tier 2: Table 1 Financial resources provided and received

Provided / Received	Year	Total Amount USD	
		Committed	Disbursed / Received
Provided	2016	Committed	Disbursed
Provided	2017	Committed	Disbursed
Provided	2018	Committed 0	Disbursed 0
Provided	2019	Committed 0	Disbursed 0
Received	2016	Committed 1 .257	Received 1 .257
Received	2017	Committed 0 .4066	Received 0 .4066
Received	2018	Committed 494 302 .00	Received 687 858 .99
Received	2019	Committed 2 174 093 .00	Received 579 276 .60
Total resources provided:		0	0
Total resources received:		2 668 396 .66	1 267 137 .25

Documentation box

	Explanation
Year	2020-2023
Recipient / Provider	Research and Development for Land Management Division, Planning Division, Land Development Department, Ministry of Agriculture and Cooperatives, Thailand
Title of project, programme, activity or other	Promoting Integrated and Sustainable Agricultural System in Mekong-Lancang Countries
Total Amount USD	0.13 Million USD
Sector	Land management

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

	Explanation
Capacity Building	- An overview of each country's agricultural system and sustainable agriculture in the region. - Policy recommendations for planners, policymakers, and agricultural development operators in integrated and sustainable agriculture. - Capacity building and institutional strengthening through cooperation between different institutions in the Lancang-Mekong countries. - A model database of management excellence for soil and water conservation and lessons learned on successful approaches to the major obstacles in the implementation of each country under cooperation. - Information and recommendations for policy formulation for sustainable soil management operations.
Technology Transfer	Exchange of information and ideas, problems and land management in each country.
Gender Equality	Gender equality is taken into account.
Channel	Operational activities under the Land Development Department and related agencies
Type of flow	Official development assistance (ODA) with MLC Special Fund
Financial Instrument	Grants
Type of support	Direct Support (Rio Marker for desertification 2 ("principal"))
Amount mobilised through public interventions	0
Additional Information	The objective of the project is to apply and promote sustainable integrated agriculture in the Lancang-Mekong countries through international cooperation.

General comments

S05-2 Domestic public resources

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

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

- Up ↑
 Stable ↔
 Down ↓
 Unknown ~

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

- Up ↑
 Stable ↔
 Down ↓
 Unknown ~

Tier 2: Table 2 Domestic public resources

	Year	Amounts	Additional Information
Government expenditures			By using the budget of the Land Development Department
Directly related to combat DLDD			
Indirectly related to combat DLDD			
Subsidies			
Subsidies related to combat DLDD			
Total expenditures / total per year			

	Year	Amounts	Additional Information
Government revenues			
Environmental taxes for the conservation of land resources and taxes related to combat DLDD			
Total revenues / total per year			

Documentation box

	Explanation
Government expenditures	
Subsidies	
Government revenues	
Domestic resources directly or indirectly related to combat DLDD	

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

- Yes
 No

General comments

The Ministry of Agriculture and Cooperatives has prepared the Agricultural Action Plan to Support Climate Change 2023-2027 to provide a framework and guidelines for relevant agencies to carry out operations which are expected to have additional budgets to support activities according to the Convention. There are 5 development issues: 1. Improving the adaptive capacity of farmers and related businesses throughout the agricultural supply chain; 2. Participating in reducing greenhouse gas emissions throughout the agricultural supply chain to reduce the long-term effects of climate change; 3. Developing a knowledge base and supporting raising awareness of the impacts of climate change and the importance of adapting and participating in reducing greenhouse gas emissions; 4. Developing the potential of manpower in the agricultural sector and promoting cooperation among network partners to deal with climate change in all sectors and at

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

all levels; and 5. Advocating and driving action on climate change.

SO5-3 International and domestic private resources

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

Trends in international private resources

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

Trends in domestic private resources

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

Tier 2: Table 3 International and domestic private resources

Year	Title of project, programme, activity or other	Total Amount USD	Financial Instrument	Type of institution	Recipient	Additional Information
	Total	0				

Please provide methodological information relevant to data presented in table 3

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?

General comments

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?

S05-4 Technology transfer

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

Trends in international bilateral and multilateral public resources provided

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

Trends in international bilateral and multilateral public resources received

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

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

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

Please provide methodological information relevant to data presented in table 4

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

-

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

-

General comments

-

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.

Thailand has developed operations according to the Convention and has prepared a Convention Action Plan for 2018-2021 with a main plan related to management to increase operational potential, which has guidelines for planning the acquisition and mobilization of resources in the country through the development of the Convention Implementation Network with relevant agencies including universities and civil society organizations and the private sector to combat land degradation and drought and develop the potential of personnel in agencies involved in combating land degradation and drought to have skills and knowledge for effective operations such as land development, water resource management, forest conservation, weather forecasting and warning as well as research skills in evaluating situations with various related tools or models.

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.

Thailand has developed the implementation of the Convention and has prepared the Convention Action Plan for the year 2018-2021, with the main plans related to management to increase operational potential. which has guidelines for planning the procurement and mobilization of resources from abroad by integrating the implementation of the Convention with the Rio Convention to develop participation in working among themselves and developing projects to combat land degradation and drought that benefit other Rio Conventions, such as reducing impacts on climate change or increasing biodiversity, implementing projects to receive support from the Global Environmental Fund. (GEF) and developing cooperation in combating land degradation and drought with foreign countries. The fact that the Global Environmental Fund has allocated a budget for implementing land degradation projects with the Division of Foreign Affairs of the Ministry of Natural Resources and Environment as the GEF's main coordinating agency will allow for collaboration between implementing agencies and international organizations that have expertise in natural resource management, such as FAO, UNDP, and UNEP, etc., which leads to the development of mechanisms and tools in science and technology, policy, and systematic capacity development of agencies that help support combating land degradation and drought. In addition, developing cooperation with foreign countries in various cooperation frameworks will be part of the development that will help raise the efficiency of the implementation of the Convention.

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.

A project that helps drive the prevention and degradation of land to achieve the goal of the project to prepare Land Degradation Neutrality: LDN indicators to set measures for managing degraded soils at the area level and SDG 13.5.1

General comments

Local data collection requires large budgets to achieve higher accuracy and nationwide coverage. Currently, the budget is limited, so it is not possible to collect data in every province in the same year, making it impossible to know the situation at the national level and the situation in areas where data is not collected, and thus unable to completely fill in the report on the implementation of the Convention.

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:

What were the challenges faced, if any?

What do you consider to be the lessons learned?

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

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

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

- Yes
 No

Use this space to describe the experience:

What were the challenges faced, if any?

Was part of the funding earmarked for women and/or women led activities/businesses?

What do you consider to be the lessons learned?

Using Land Degradation Neutrality as a framework to increase investment:

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

Yes

No

Improving existing and/or innovative financial processes and institutions

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

Yes

No

Policy and Planning

Action Programmes:

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

- Yes
 No

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

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?

What were the challenges faced, if any?

What do you consider to be the lessons learned?

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)

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)

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

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?

What were the challenges faced, if any?

What would you consider to be the lessons learned?

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

Has your country offered support related to or including the setting of policy measures in terms of mainstreaming gender in the implementation of the UNCCD?

- Yes
 No

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

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

What were the challenges faced, if any?

What would you consider to be the lessons learned?

Are women's land rights protected in national legislation?

- Yes
 No

If so, how (please provide the reference to the relevant law/policy)

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.

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

What were the challenges faced, if any?

What would you consider to be the lessons learned?

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.

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

What were the challenges faced, if any?

What would you consider to be the lessons learned?

Drought-related policies:

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

Yes

No

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

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

What were the challenges faced, if any?

What would you consider to be the lessons learned?

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

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

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

What were the challenges faced, if any?

What would you consider to be the lessons learned?

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:

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

What were the challenges faced, if any?

What do you consider to be the lessons learned?

How did you engage women and youth in these activities?

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:

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

What were the challenges faced, if any?

What do you consider to be the lessons learned?

How did you engage women and youth in SLM activities?

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

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

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

What were the challenges faced, if any?

What would you consider to be the lessons learned?

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

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

- A drought risk management plan
 Monitoring and early warning systems
 Safety net programmes

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

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

If you have or are developing a drought risk management plan as part of the Drought Initiative, please share here your experience on activities undertaken?

What were the challenges faced, if any?

What would you consider to be the lessons learned?

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

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

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

What were the challenges faced, if any?

What would you consider to be the lessons learned?

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.

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

What were the challenges faced, if any?

What would you consider to be the lessons learned?

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

Yes

No

Please elaborate

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

Please use this space to share/list the established systems available in your country for sharing information and knowledge and facilitating networking on best practices and approaches to drought management.

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

What were the challenges faced, if any?

What would you consider to be the lessons learned?

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

Yes

No

Please elaborate

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

What were the challenges faced, if any?

What would you consider to be the lessons learned?

AI: Additional indicators

Which additional indicator is your country using to measure progress towards strategic objectives 1, 2, 3 and 4?

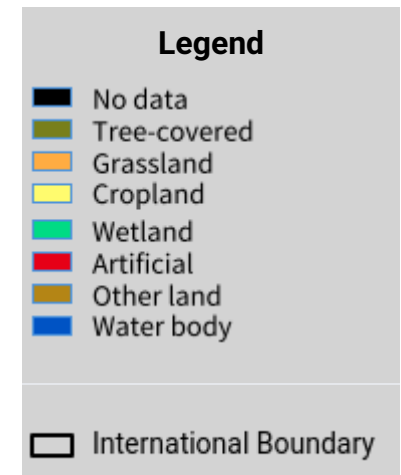
Indicator	Relevant strategic objective	Change in the indicator	Comments
Land Suitability	S01	Increasing	We use appropriate land use planning measure for agricultural area

Other files for Reporting

Thailand - SO5-1 recipient	Download	12.3 KB
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Thailand – S01-1.M1

Land cover in the initial year of the baseline period



Projection: EPSG:3857 (Web Mercator)

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Thailand – S01-1.M2

Land cover in the baseline year



Projection: EPSG:3857 (Web Mercator)

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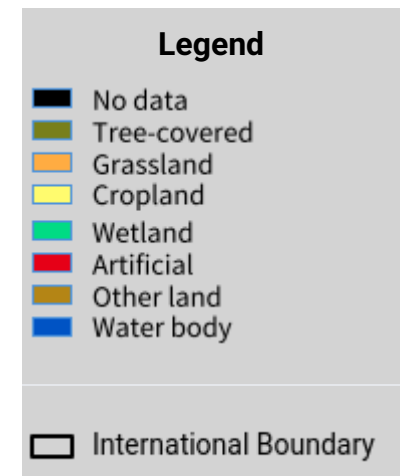
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Thailand – S01-1.M3

Land cover in the latest reporting year



Projection: EPSG:3857 (Web Mercator)

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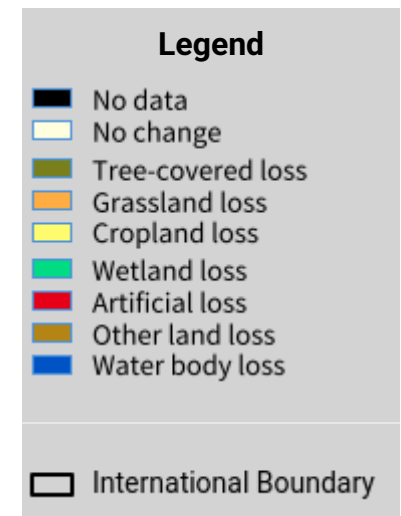
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Thailand – S01-1.M4

Land cover change in the baseline period



Projection: EPSG:3857 (Web Mercator)

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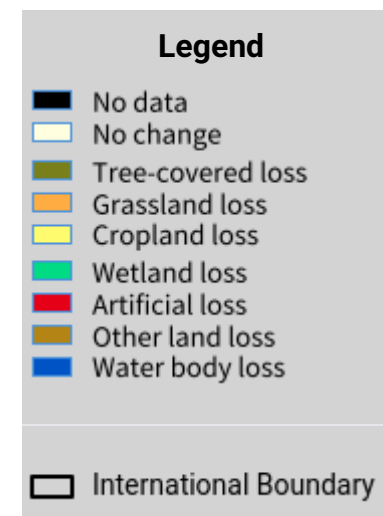
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Thailand – S01-1.M5

Land cover change in the reporting period



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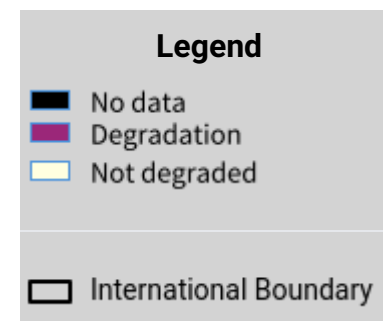
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Thailand – S01-1.M6

Land cover degradation in the baseline period



Projection: EPSG:3857 (Web Mercator)

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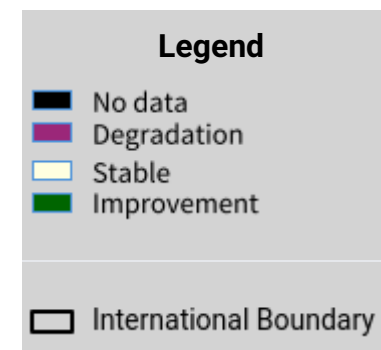
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Thailand – S01-1.M7

Land cover degradation in the reporting period



Projection: EPSG:3857 (Web Mercator)

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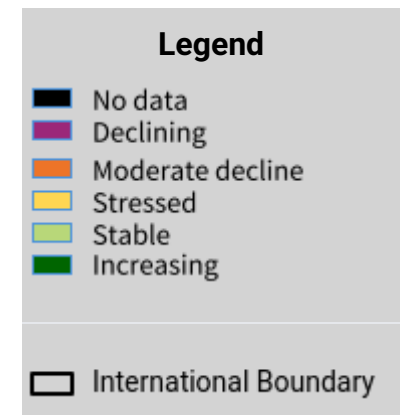
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Thailand – S01-2.M1

Land productivity dynamics in the baseline period



Projection: EPSG:3857 (Web Mercator)

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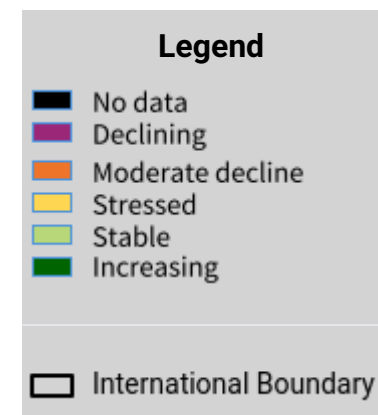
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Thailand – S01-2.M2

Land productivity dynamics in the reporting period



Projection: EPSG:3857 (Web Mercator)

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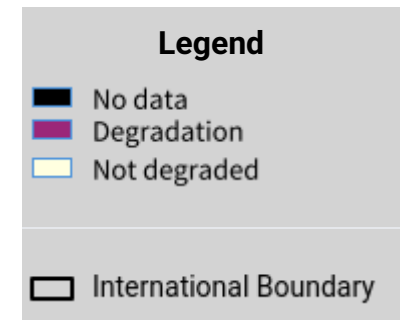
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Thailand – S01-2.M3

Land productivity degradation in the baseline period



Projection: EPSG:3857 (Web Mercator)

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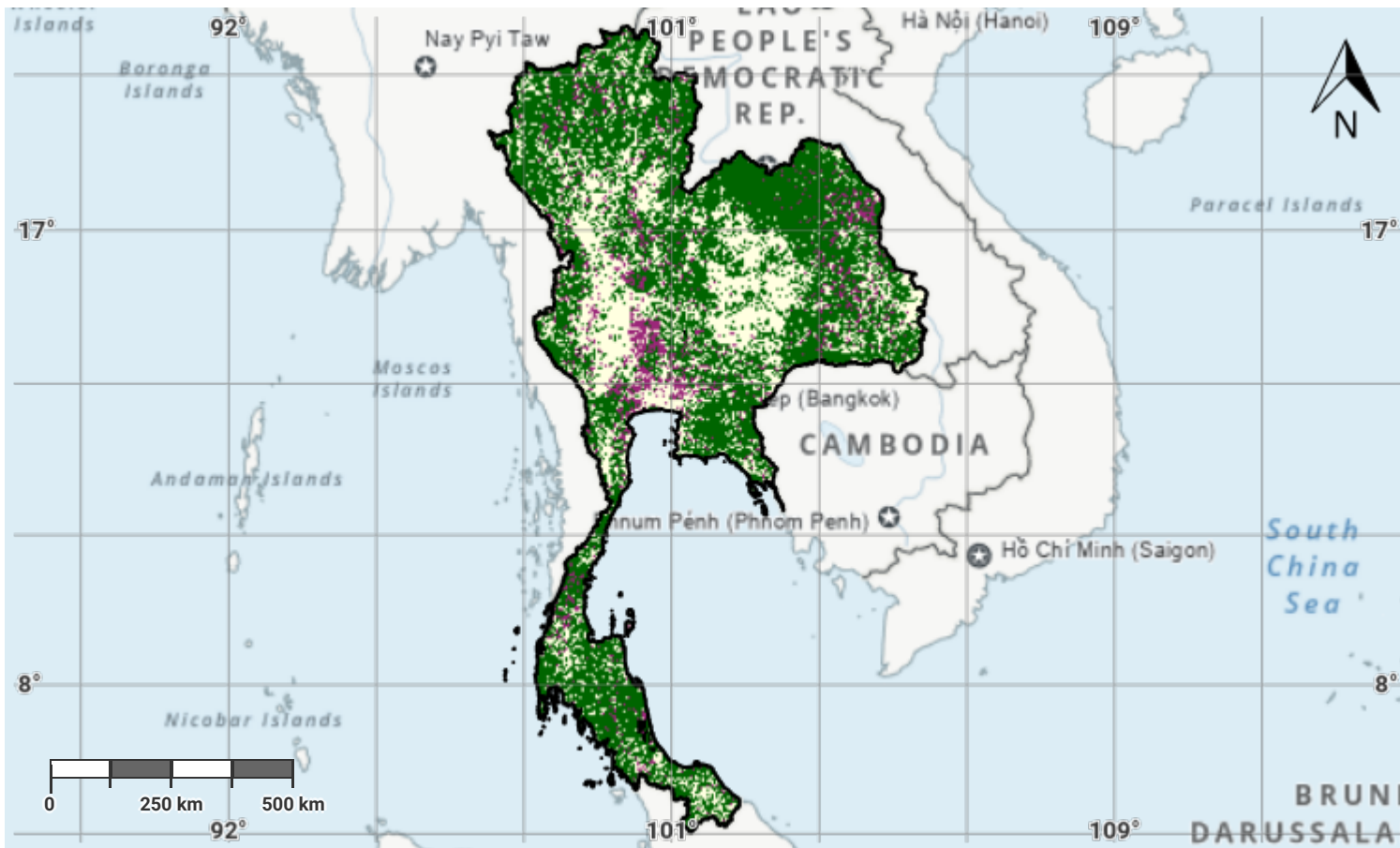
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Thailand – S01-2.M4

Land productivity degradation in the reporting period



Projection: EPSG:3857 (Web Mercator)

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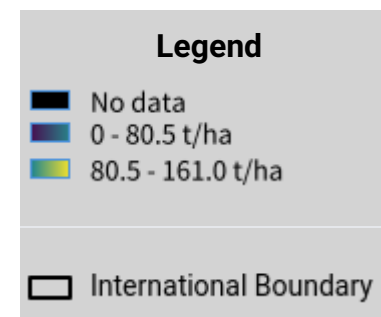
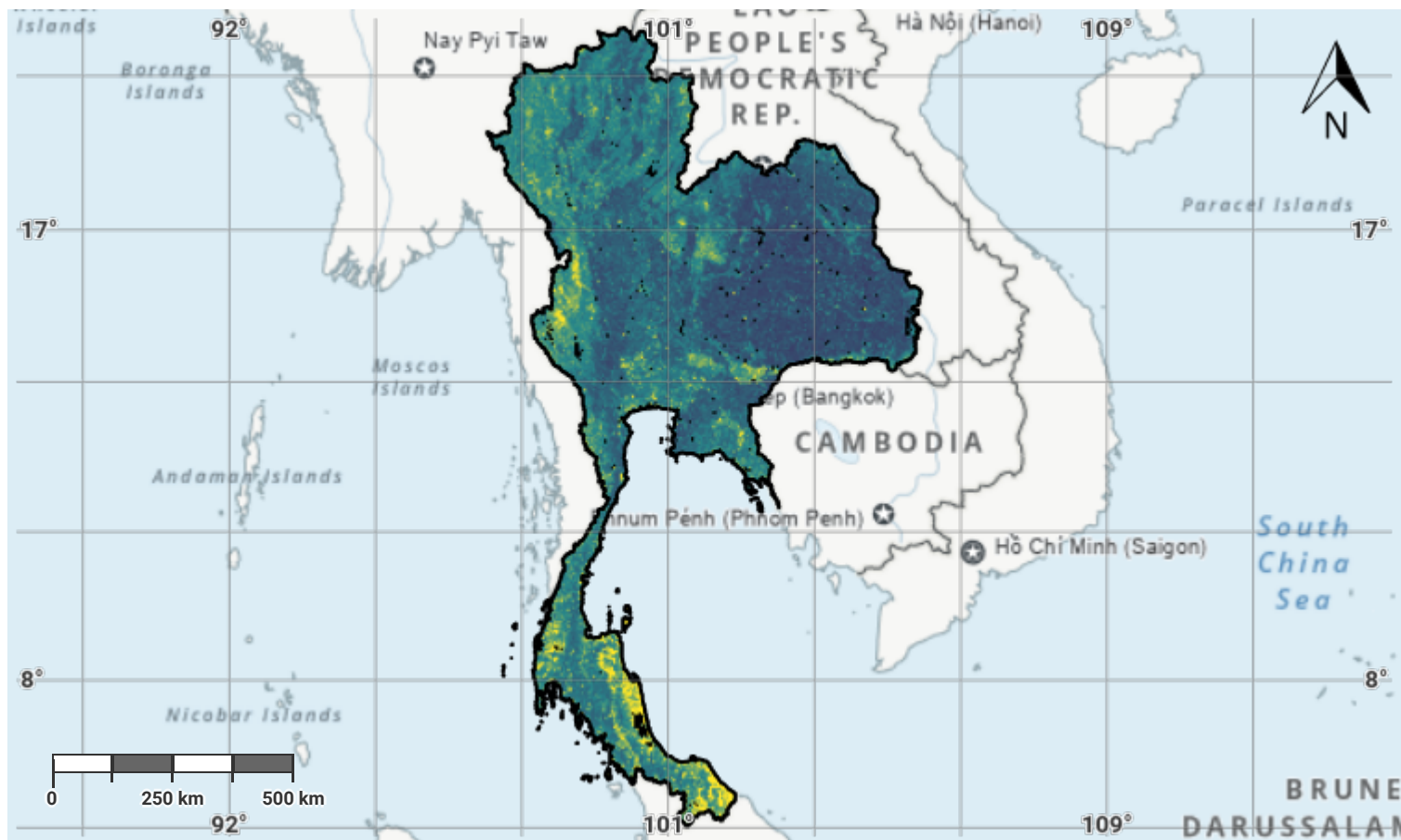
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Thailand – S01-3.M1

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



Projection: EPSG:3857 (Web Mercator)

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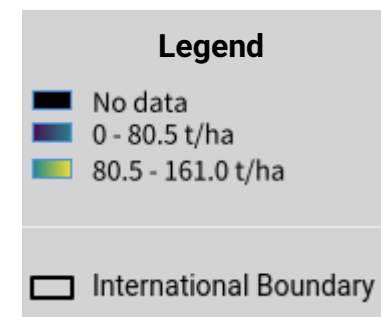
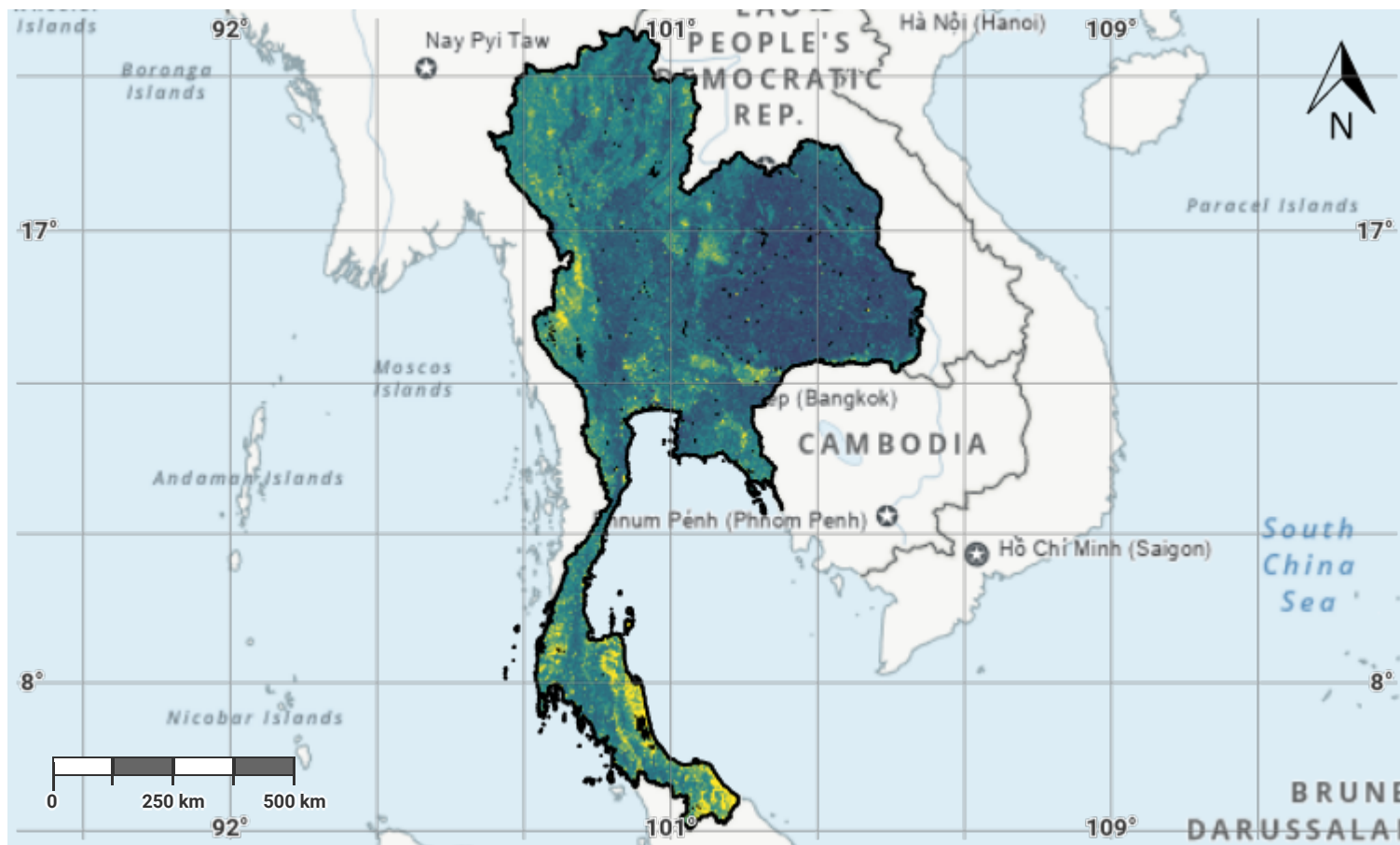
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- International Soil Reference and Information Centre (ISRIC) SoilGrids250m dataset. URL: <https://www.isric.org/explore/soilgrids>

Thailand – S01-3.M2

Soil organic carbon stock in the baseline year



Projection: EPSG:3857 (Web Mercator)

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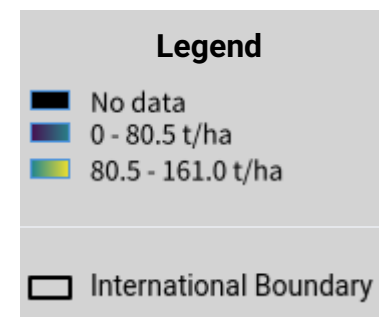
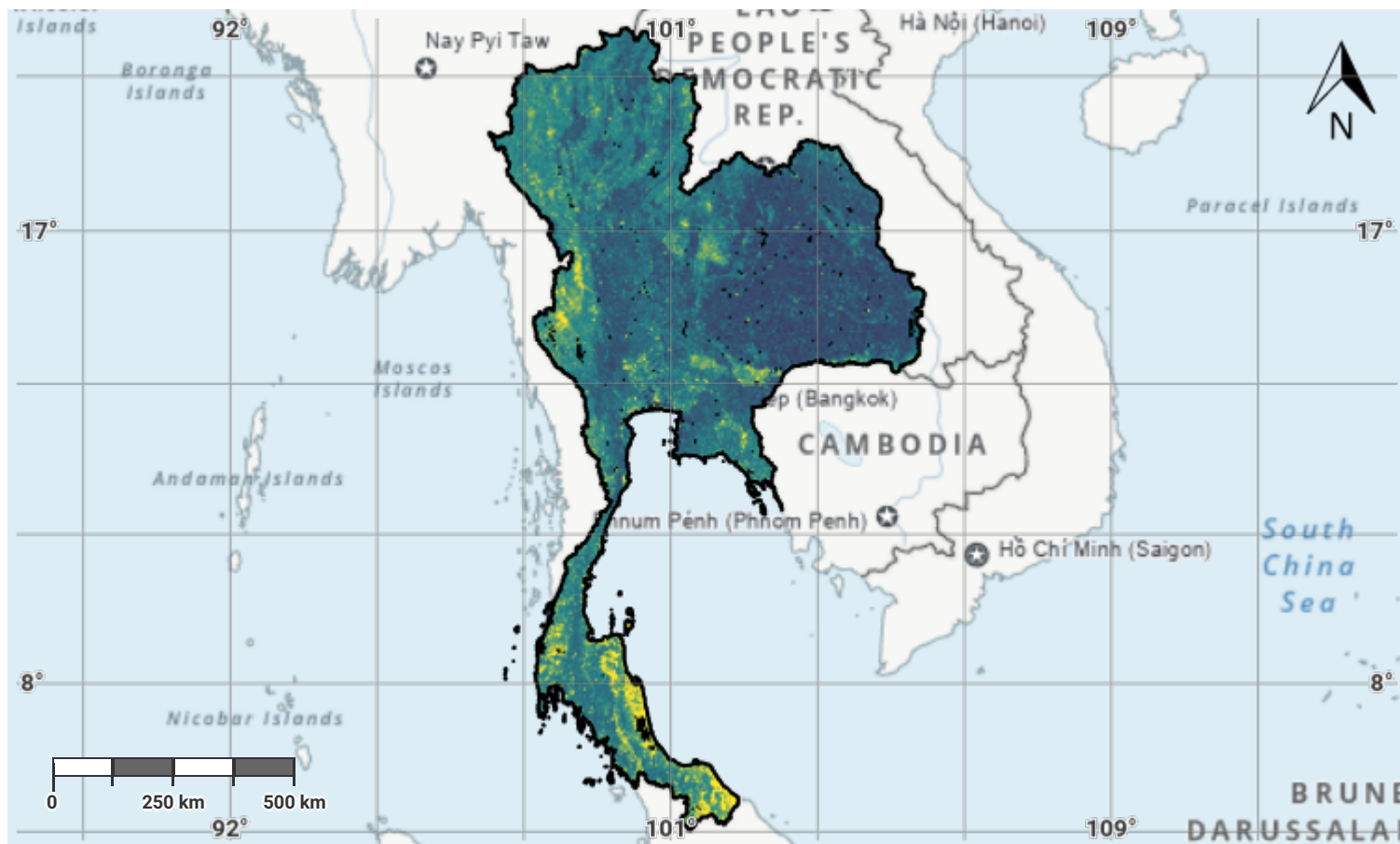
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Thailand – S01-3.M3

Soil organic carbon stock in the latest reporting year



Projection: EPSG:3857 (Web Mercator)

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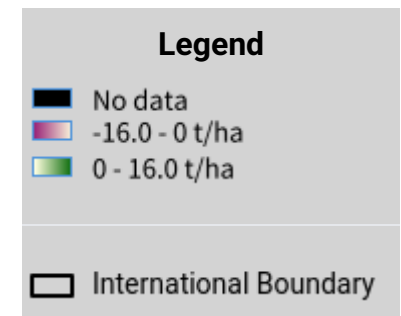
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Thailand – S01-3.M4

Change in soil organic carbon stock in the baseline period



Projection: EPSG:3857 (Web Mercator)

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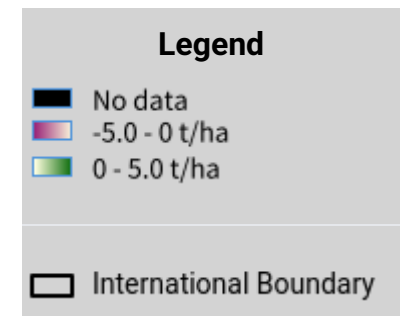
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Thailand – S01-3.M5

Change in soil organic carbon stock in the reporting period



Projection: EPSG:3857 (Web Mercator)

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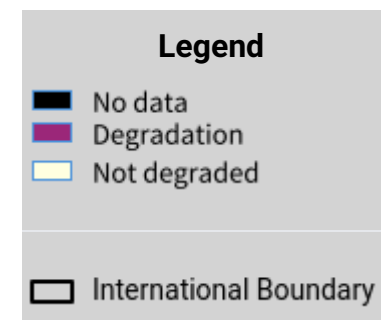
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Thailand – S01-3.M6

Soil organic carbon degradation in the baseline period



Projection: EPSG:3857 (Web Mercator)

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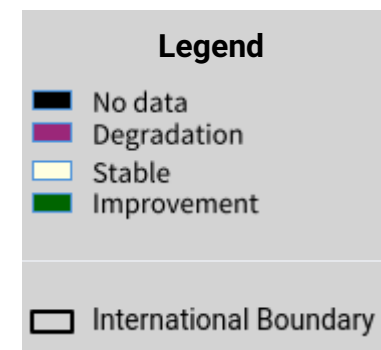
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Thailand – S01-3.M7

Soil organic carbon degradation in the reporting period



Projection: EPSG:3857 (Web Mercator)

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Thailand – S01-4.M1

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



Disclaimer

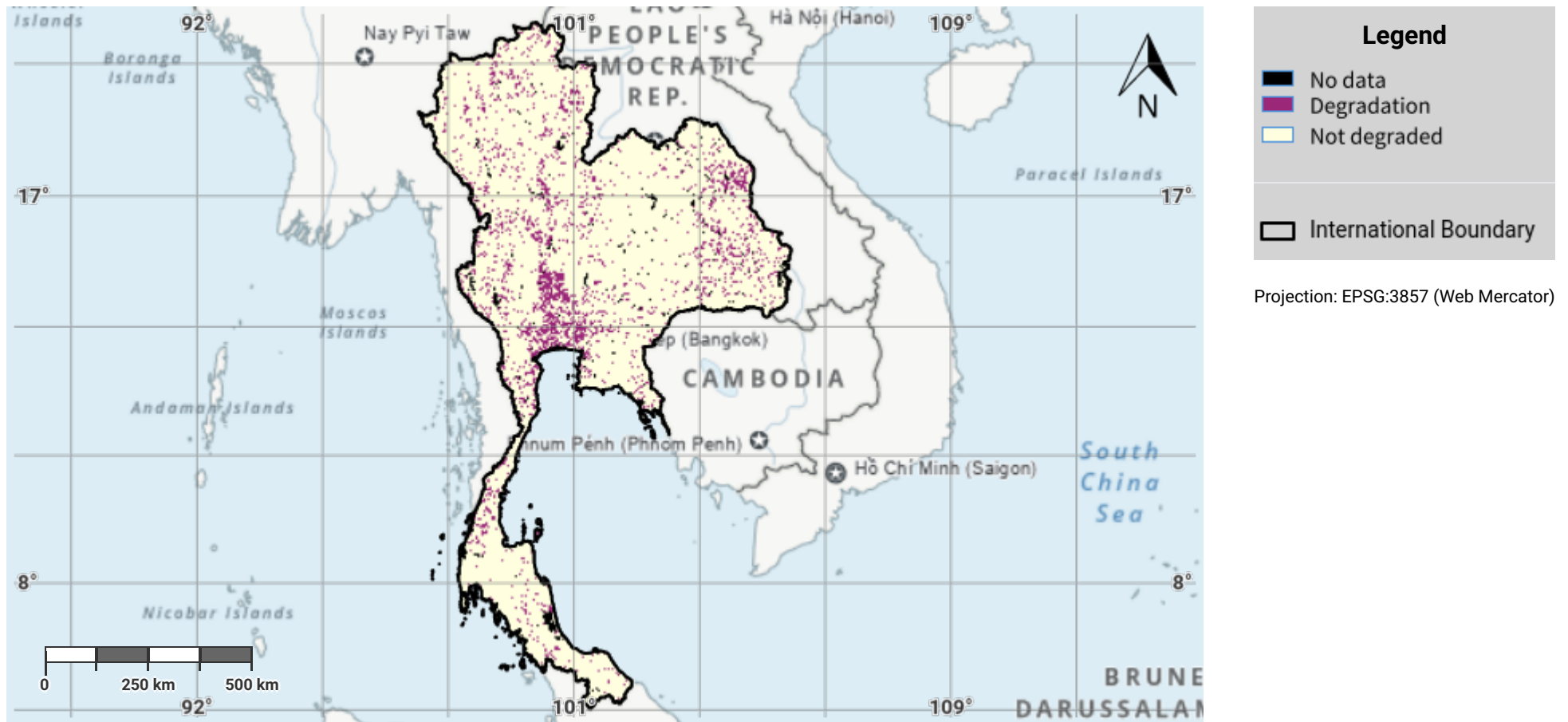
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Thailand – S01-4.M2

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



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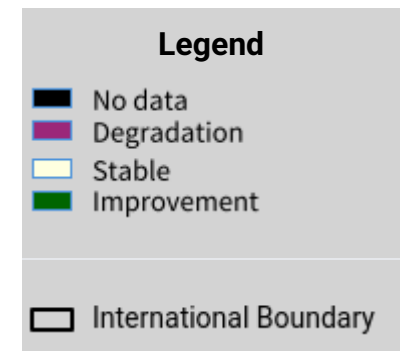
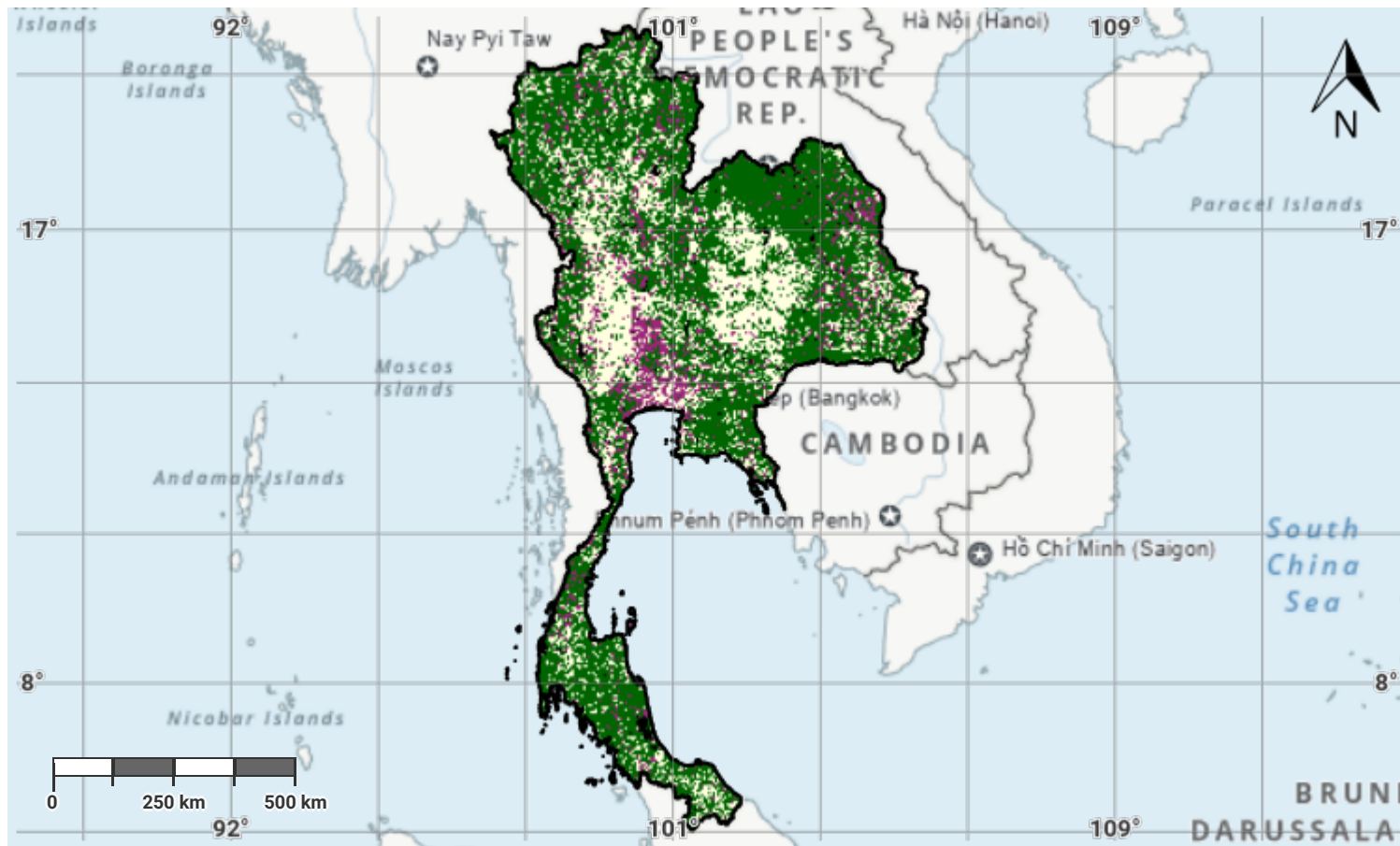
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Thailand – S01-4.M3

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



Projection: EPSG:3857 (Web Mercator)

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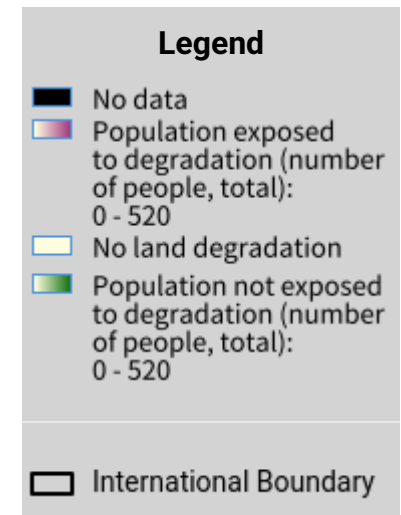
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Thailand – S02-3.M1

Total Population exposed to land degradation (baseline)



Projection: EPSG:3857 (Web Mercator)

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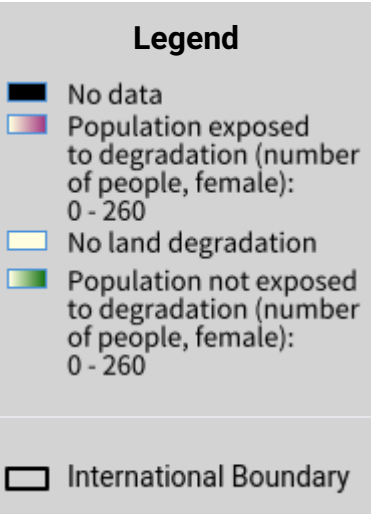
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Source Data Credits

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

Thailand – S02-3.M2

Female Population exposed to land degradation (baseline)



Projection: EPSG:3857 (Web Mercator)

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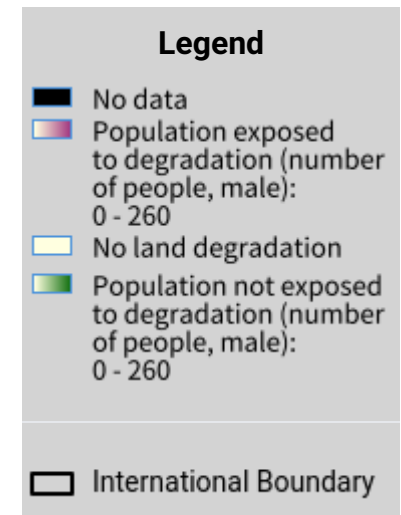
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Source Data Credits

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

Thailand – S02-3.M3

Male Population exposed to land degradation (baseline)



Projection: EPSG:3857 (Web Mercator)

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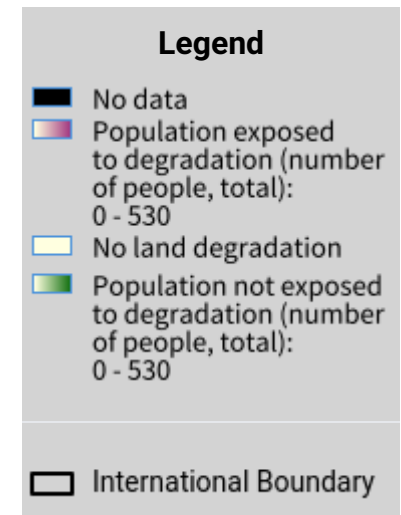
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Thailand – S02-3.M4

Total Population exposed to land degradation (reporting)



Projection: EPSG:3857 (Web Mercator)

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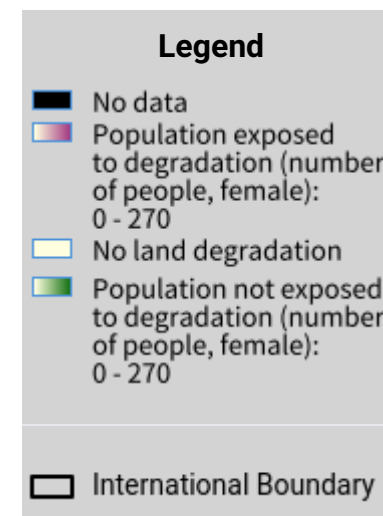
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Thailand – S02-3.M5

Female Population exposed to land degradation (reporting)



Projection: EPSG:3857 (Web Mercator)

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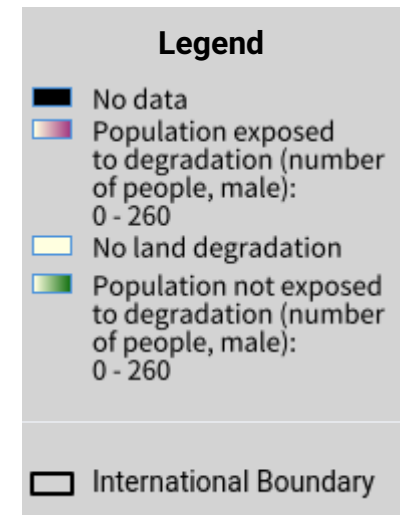
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- WorldPop project URL: <https://www.worldpop.org>

Thailand – S02-3.M6

Male Population exposed to land degradation (reporting)



Projection: EPSG:3857 (Web Mercator)

Disclaimer

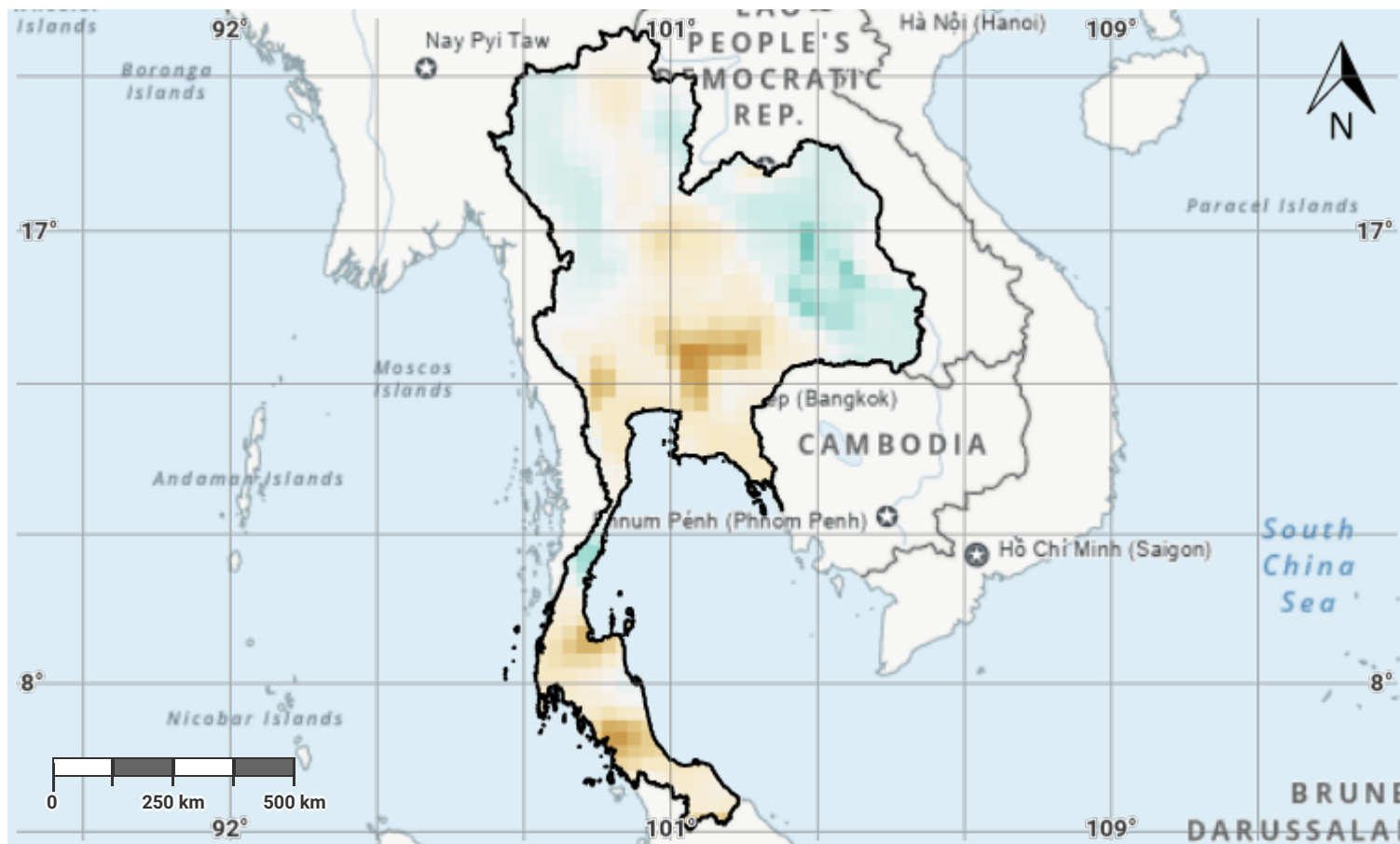
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Thailand – S03-1.M1

Drought hazard in first epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

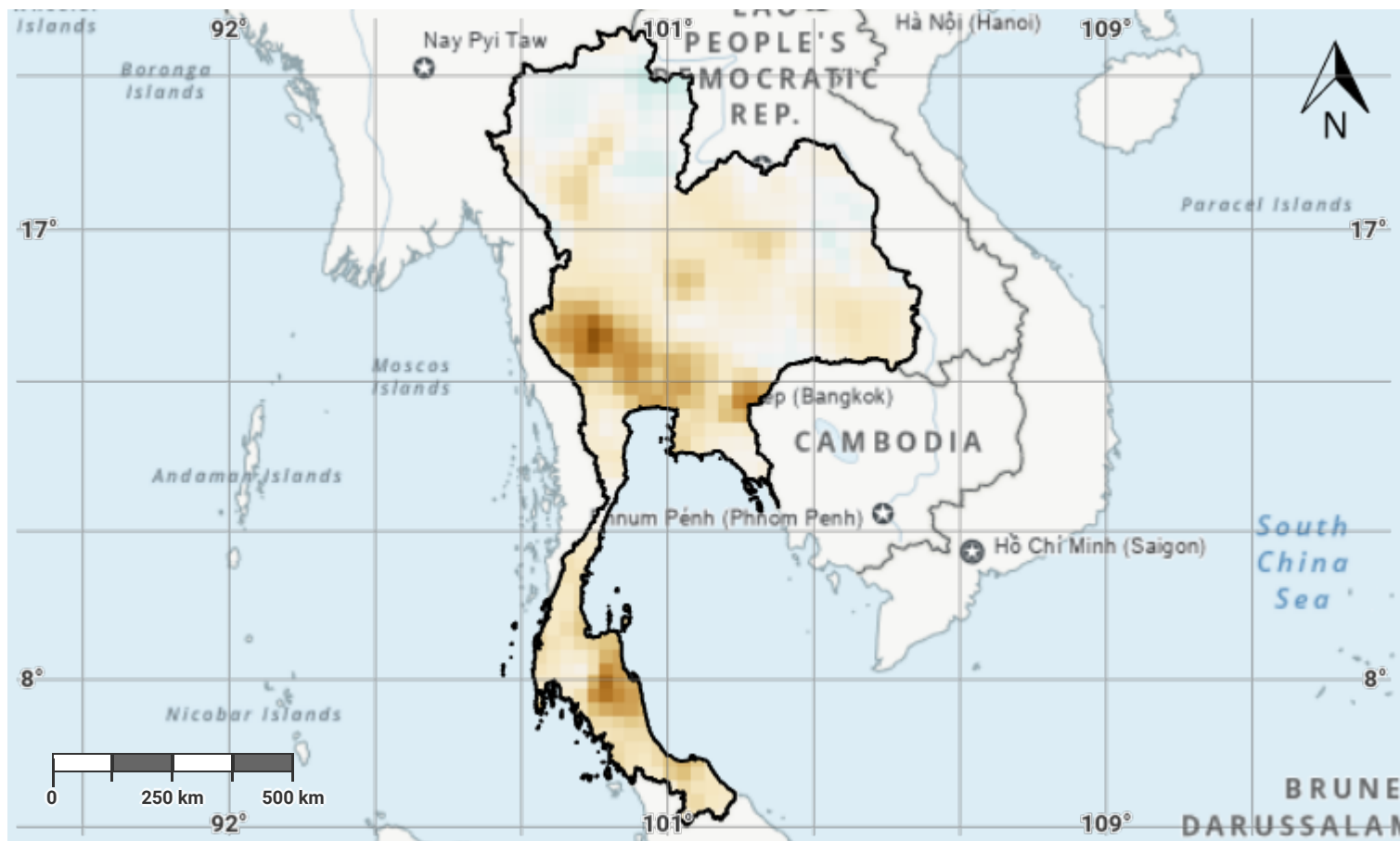
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Thailand – S03-1.M2

Drought hazard in second epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

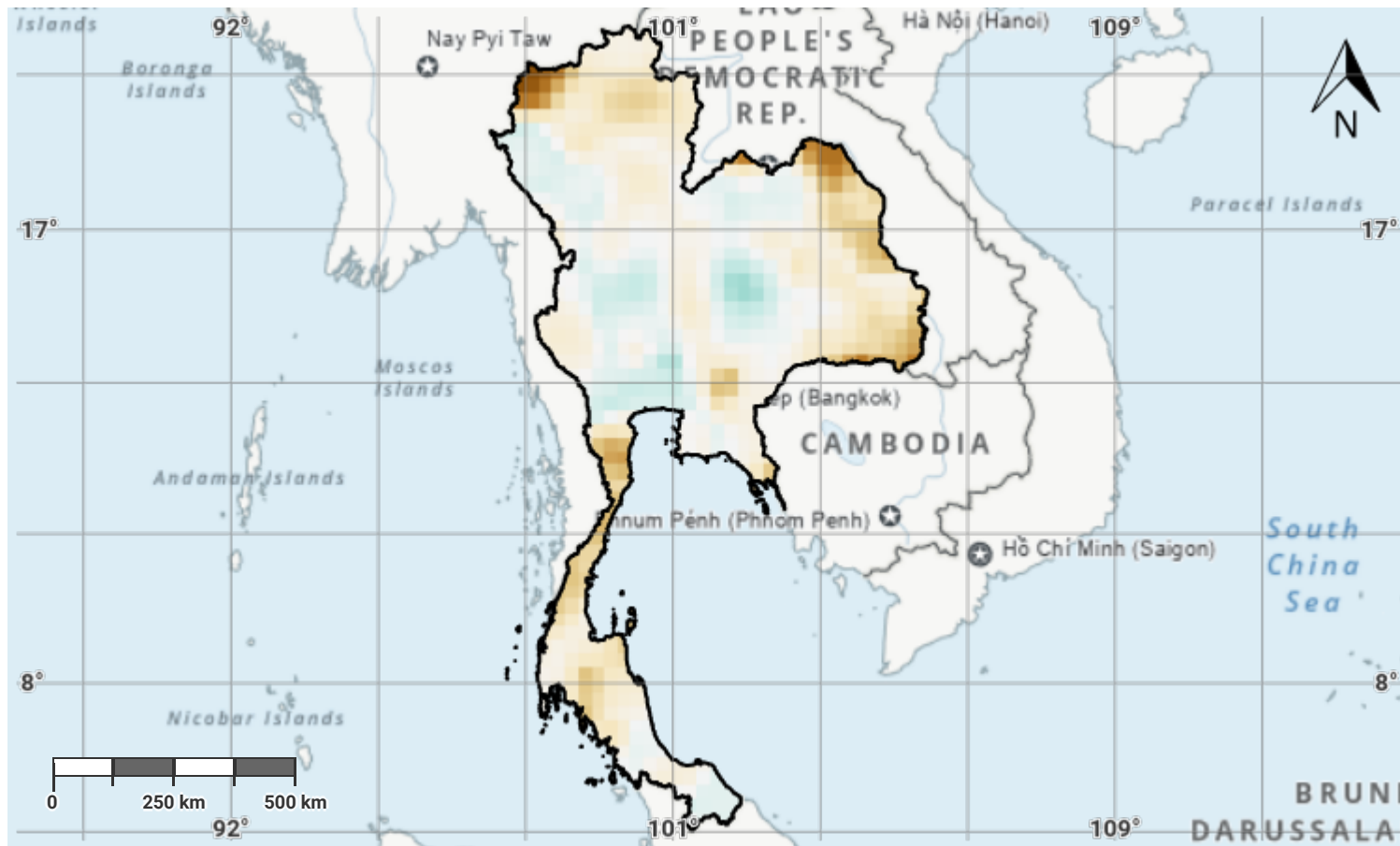
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Thailand – S03-1.M3

Drought hazard in third epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

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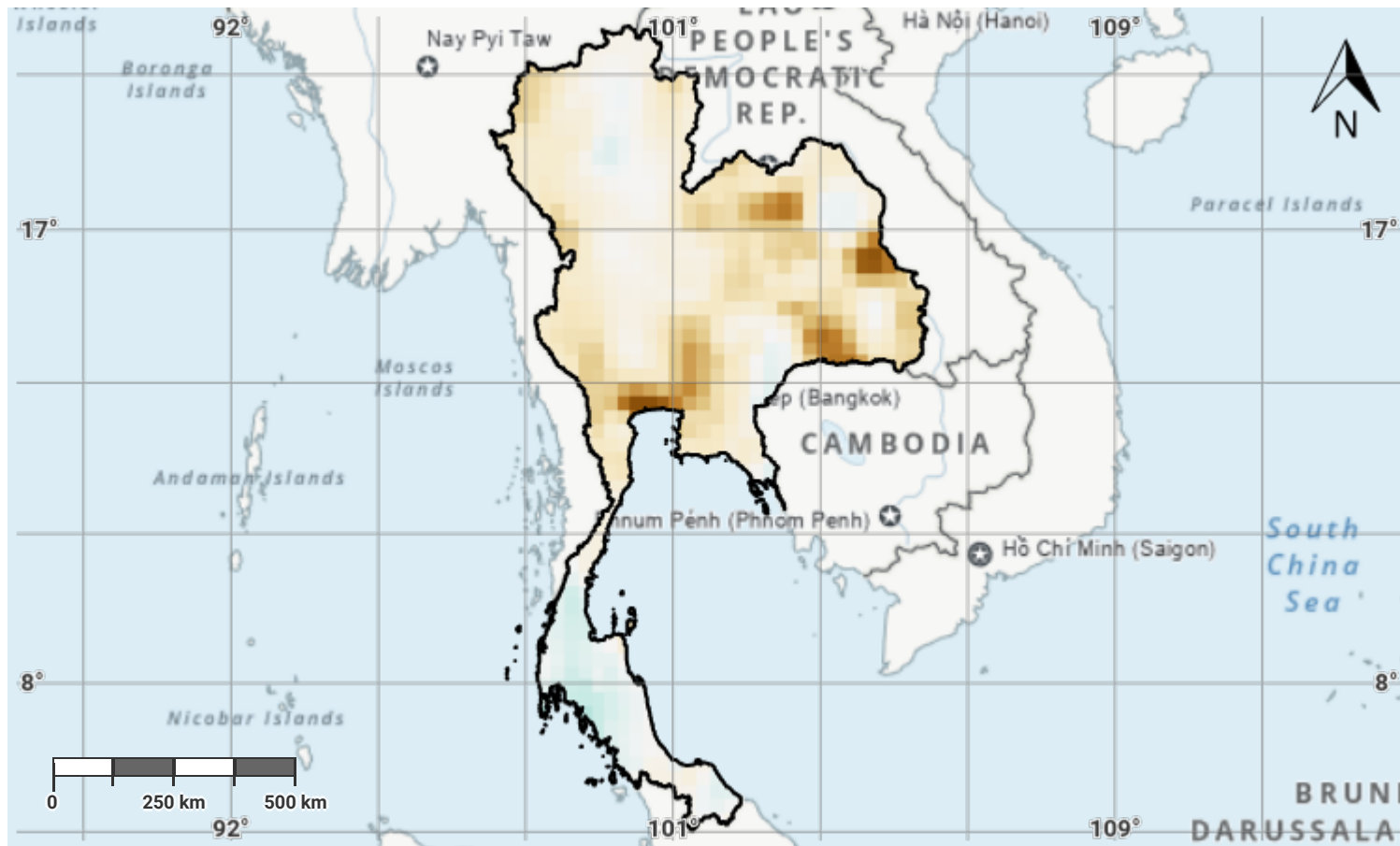
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Thailand – S03-1.M4

Drought hazard in fourth epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

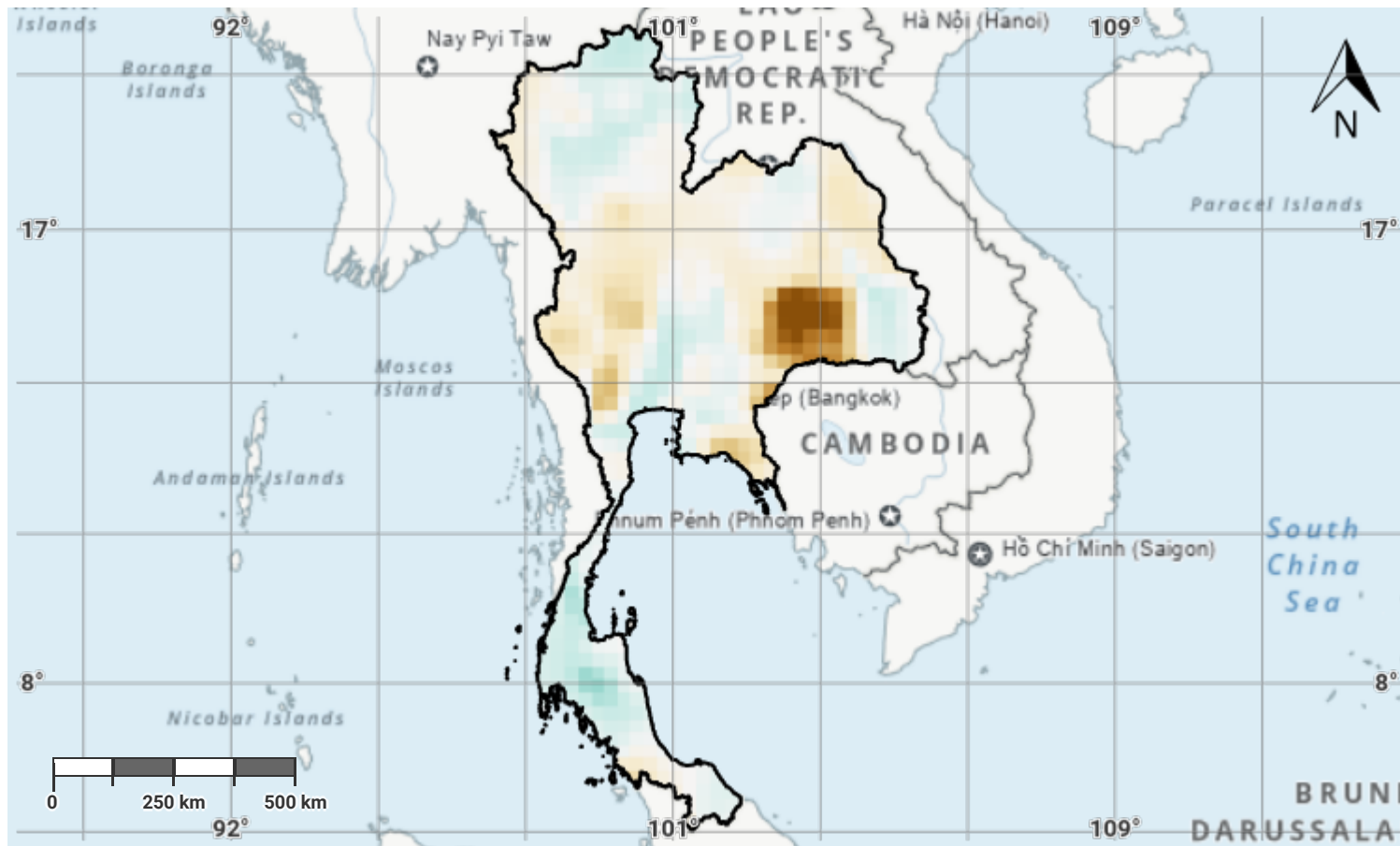
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Thailand – S03-1.M5

Drought hazard in the reporting period



Projection: EPSG:3857 (Web Mercator)

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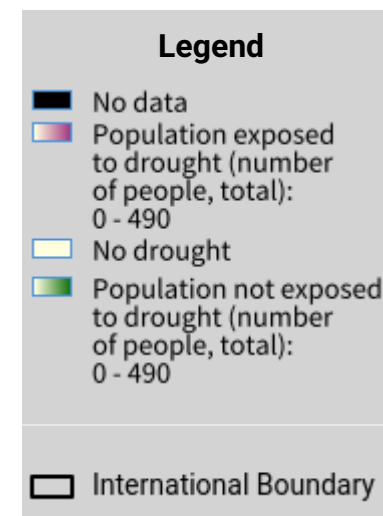
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Thailand – S03-2.M1

Drought exposure in first epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

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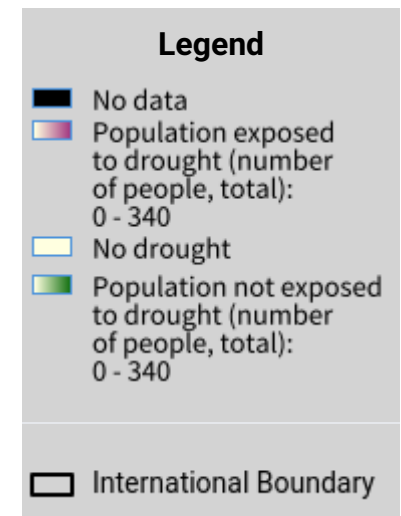
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Thailand – S03-2.M2

Drought exposure in second epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

Disclaimer

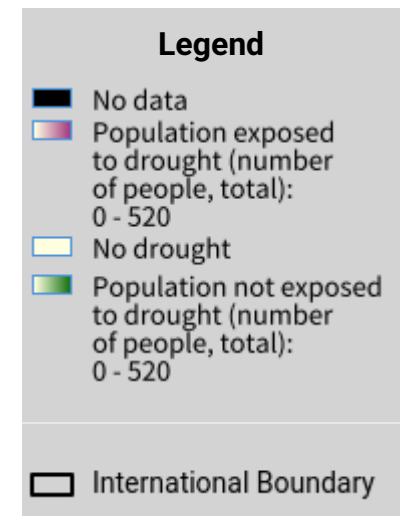
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Thailand – S03-2.M3

Drought exposure in third epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

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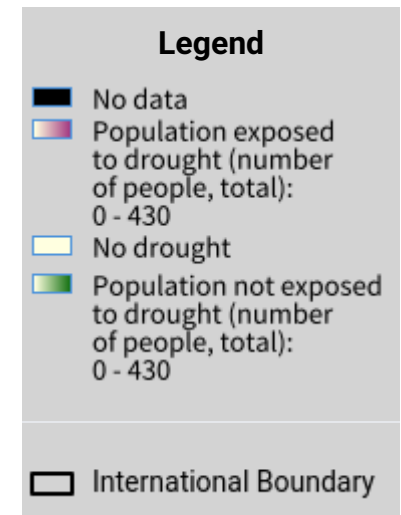
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Thailand – S03-2.M4

Drought exposure in fourth epoch of baseline period



Projection: EPSG:3857 (Web Mercator)

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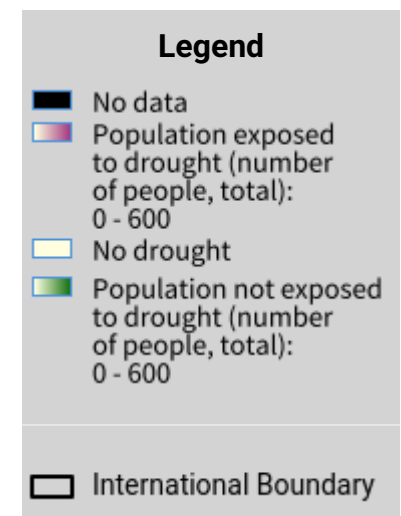
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Thailand – S03-2.M5

Drought exposure in the reporting period



Projection: EPSG:3857 (Web Mercator)

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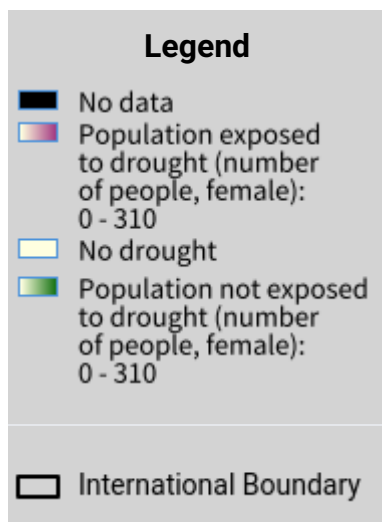
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Thailand – S03-2.M6

Female drought exposure in the reporting period



Projection: EPSG:3857 (Web Mercator)

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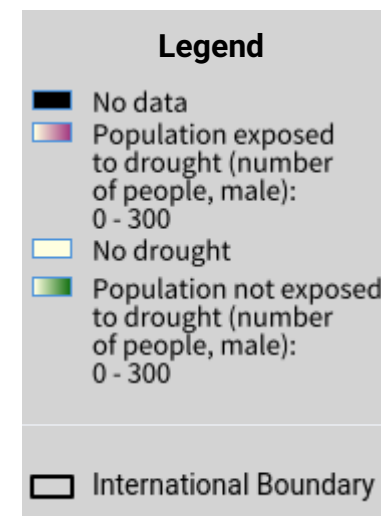
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Thailand – S03-2.M7

Male drought exposure in the reporting period



Projection: EPSG:3857 (Web Mercator)

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