

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Thailand

Rome, 2014

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Global Forest Resources Assessment (FRA). This country report is prepared as a contribution to the FAO publication, the Global Forest Resources Assessment 2015 (FRA 2015).

The content and the structure are in accordance with the recommendations and guidelines given by FAO in the document Guide for country reporting for FRA 2015 (<http://www.fao.org/3/a-au190e.pdf>). These reports were submitted to FAO as official government documents.

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Introductory Text

Place an introductory text on the content of this report

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Desk Study?

Check "yes" if this survey is a Desk Study, "no" otherwise	
Desk Study?	no

1. What is the area of forest and other wooded land and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

1.1 Categories and definitions

Category	Definition
Forest	Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.
Other wooded land	Land not classified as "Forest" spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of 5-10 percent or trees able to reach these thresholds ; or with a combined cover of shrubs bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use.
Other land	All land that is not classified as "Forest" or "Other wooded land".
...of which with tree cover (<i>sub-category</i>)	Land considered as "Other land", that is predominantly agricultural or urban lands use and has patches of tree cover that span more than 0.5 hectares with a canopy cover of more than 10 percent of trees able to reach a height of 5 meters at maturity. It includes bothe forest and non-forest tree species.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.
Forest expansion	Expansion of forest on land that, until then, was not defined as forest.
...of which afforestation (<i>sub-category</i>)	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not defined as forest.
...of which natural expansion of forest (<i>sub-category</i>)	Expansion of forests through natural succession on land that, until then, was under another land use (e.g. forest succession on land previously used for agriculture).
Deforestation	The conversion of forest to other land use or the longterm reduction of the tree canopy cover below the minimum 10 percent threshold.
...of which human induced (<i>sub-category</i>)	Human induced conversion of forest to other land use or the permanent reduction of the tree canopy cover below the minimum 10 percent threshold.
Reforestation	Natural regeneration or re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.
...of which artificial reforestation (<i>sub-category</i>)	Re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.

1.2 National data

1.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	PRB, 1998. Para Rubber Bulletin 2541 (1998). ISSN 0125- 4405.	Area	1996	N/A

2	RFD, 2007. Statistical Data 2007. Office of the Secretary. Royal Forest Department. Thailand. ISSN 0857-2711	Afforestation and Reforestation	1961 to 2006	N/A
3	DNP, 2007. Statistical Data 2007. Planning and Information Office. National Park, Wildlife and Plant Conservation. Thailand.	Area	2003 to 2007	N/A
4	RFD, 2006. Statistical Data 2007. Office of the Secretary. Royal Forest Department. Thailand. ISSN 0857-2711	Area	2000 to 2004	N/A
5	Rubber Plantation. Website of Rubber Research Institute of Thailand. Department of Agriculture. (http://www.rubberthai.com/statistic/stat_index.htm)	Area	2003, 2006 and 2007	N/A
6	NSO. 2008. Land Use Statistics 2003. Website of National Statistical office. Thailand. http://web.nso.go.th/eng/index.htm	Area	2003	N/A
7	RFD, 2007. Statistical Data 2007. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat50/TAB8.htm	Afforestation and Reforestation	2002-2007	N/A
8	RFD, 2007. Statistical Data 2007. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat44/TAB6.htm	Afforestation and Reforestation	1997-2001	N/A
9	RFD, 2007. Statistical Data 2007. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat39/TAB6.htm	Afforestation and Reforestation	1992-1994	N/A
10	RFD, 2008. Statistical Data 2008. Office of Planning and Information, Royal Forest Department. Thailand. http://forestinfo.forest.go.th/55/Content.aspx?id=72	Area	2008	N/A

1.2.2 Classification and definitions

National class	Definition
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Existing Forest Area	Forest of all types such as evergreen, pine, mangrove, mixed deciduous, dry dipterocarp, scrub, swamp, mangrove and beach forest etc., either in the national forest reserves, national parks, wildlife sanctuaries, forest working plan with an area of 5 hectares or more with tree taller than 5 meter or more and with canopy covering more than 10% of the ground area.
Non-forest Area	Land without any forest cover.
N/A	No national definitions or classifications relevant to this table are available
N/A	N/A

1.2.3 Original data

Forest area					
A. Forest Area					
Year	Forest Area (000ha)	Year	Forest Area (000ha)	Year	Forest Area (000ha)
1988	14380.3	1999	14928.4	2005	16100.1
1989 ^{*1}	14341.7	2000 ^{*3}	17011.1	2006	15865.3
1991 ^{*2}	13669.8	2001	16102.1	2007	-
1993 ^{*2}	13355.4	2002		2008	17158.6
1995 ^{*2}	13148.5	2003		2009	172184
1998 ^{*2}	12972.2	2004 ^{*3}	16759.1	2010	16249

*1 LANDSAT-TM *2 LANDSAT-5(TM) Scales (1:250,000) *3 LANDSAT-5(TM) Scales (1:50,000)

B. Rubber Plantation Area

The “Para Rubber Bulletin” (1998) indicated that surveyed area of rubber plantations in 1996 using Landsat 1996 imageries was 1959284.8 ha (12245530 rai).

The “Rubber Research Institute of Thailand” (2008) indicated that surveyed area of rubber plantations in 2007 using Landsat 2007 imageries was 2,455,923.7 ha (15349523 rai). The areas of rubber plantations in 2003 and 2006 are 2,019,007 ha (12,618,792rai) and 2,294,087ha (14,338,046rai) respectively.

Rubber Research Institute of Thailand reports that rubber plantations in 2009, 2010 and 2011 are 2,760,691 ha., 2,931,202 ha. and 2,953,797 ha. respectively.

C. Land Use

Area in 1000 ha.

Land Use	2007		2009	
	Area	Percentage	Area	Percentage
Urban area and Housing	2,373	0.05	2,418	4.71
Agriculture lands	27,021	52.66	27,454	53.51
Paddy field	12,715	24.78	12,793	24.94
Field crop	6,398	12.47	6,189	12.06
Tree	4,744	9.30	5,194	10.12
Fruit tree	2,042	3.98	2,004	3.91
Horticulture crops	105	0.20	2,004	3.91
Shifting cultivation	450	0.88	577	1.12
Pasture land ,Grass and Mix cultivation	104	0.2	264	0.52
water plant	2.5	0.00	-	-
Aquatic farm	4,287	0.84	431	0.84
Forest	18,800	36.64	18,107	35.29
Water body	1,270	2.47	1,409	2.75
Etc.	1,849	3.60	1,922	3.74
TOTAL Country Area	51,312	100%	51,312	100%

source: Land Development Department

Forest expansion, reforestation

(Unit: sq km)

	until 2013	2008	2009	2010	2011	2012	2013
Afforestation by Government Budget	916.67	171.07	167.52	154.08	63.28	33.55	38.65
By Forest Industry Organization (FIO)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
By Thai Plywood Co.,Ltd.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reforestation According to Ministry's Regulations	26.56	0	0	18.56	0	0	0
Private Plantation	242.92	6.08	7.2	37.36	142.04	23.13	20.65
Total	1,186.15	177.15	174.72	210.00	205.32	56.68	59.30

source : Forest Plantation and Extension Bureau, RFD. 2013

1.3 Analysis and processing of national data

1.3.1 Adjustment

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1.3.2 Estimation and forecasting

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1.3.3 Reclassification

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1.4 Data

Table 1a













Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	14005	17011	16100	16249	16399
	Other wooded land	0	0	0	0	0
	Other land	37084	34078	34989	34840	34690
	... of which with tree cover	N/A	N/A	N/A	N/A	N/A
	Inland water bodies	223	223	223	223	223
	TOTAL	51312.00	51312.00	51312.00	51312.00	51312.00

Table 1b

Categories		Annual forest establishment / loss (000 hectares per year)				...of which of introduced species (000 hectares per year)			
		1990	2000	2005	2010	1990	2000	2005	2010
	Forest expansion	0	0	0	15.4	N/A	N/A	N/A	N/A
	... of which afforestation	N/A	N/A	N/A	15.4	0	0	0	N/A
	... of which natural expansion of forest	N/A	N/A	N/A	N/A	0	0	0	N/A
	Deforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which human induced	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reforestation	0	0	0	0	0	0	0	0
	... of which artificial	N/A	N/A	N/A	N/A	0	0	0	0

Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 2	Tier 2
Other wooded land	Tier 1	Tier 1
Forest expansion	Tier 2	Tier 2
Deforestation	Tier 2	Tier 2
Reforestation	Tier 2	Tier 2

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> • Forest • Other wooded land • Afforestation • Reforestation • Natural expansion of forest • Deforestation 	<p>Tier 3 : Data sources: Either recent (less than 10 years ago) National Forest Inventory or remote sensing, with ground truthing, or programme for repeated compatible NFIs Tier 2 : Data sources: Full cover mapping / remote sensing or old NFI (more than 10 years ago) Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>

1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	Further area of rubber plantations have been added with the area of forests in the final table.	Looking at the data between 1991 and 1998 and between 2000 and 2004, it's found that the forest area shows decreasing trend in the both periods. Therefore the forest area is likely to continue to decrease. The loss of forest area from 1991 to 1998 is 697,600ha (annual loss is 99,600 ha) and the loss of forest area from 2000 to 2004 is 252,000ha (annual loss is 63,000 ha). The increasing trend of forest reported in Table 1 is due to increase of rubber plantation.
Other wooded land	Available national data do not allow for estimating the area of other wooded land. Any such areas are included in the figures given for other land.	N/A
Other land	N/A	N/A
Other land with tree cover	N/A	N/A
Inland water bodies	N/A	N/A
Forest expansion	Afforestation by Government Budget	N/A
Deforestation	N/A	N/A
Reforestation	Other reforestation activities in original data.	N/A

Other general comments to the table

N/A

2. What is the area of natural and planted forest and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

2.1 Categories and definitions

Term	Definition
Naturally regenerated forest	Forest predominantly composed of trees established through natural regeneration.
Naturalized introduced species	Other naturally regenerated forest where the tree species are predominantly non-native and do not need human help to reproduce/maintain populations over time.
Introduced species	A species, subspecies or lower taxon occurring <i>outside</i> its natural range (past or present) and dispersal potential (i.e. outside the range it occupies naturally or could occupy without direct or indirect introduction or care by humans).
Category	Definition
Primary forest	Naturally regenerated forest of native species where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.
Other naturally regenerated forest	Naturally regenerated forest where there are clearly visible indications of human activities.
...of which of introduced species (<i>sub-category</i>)	Other naturally regenerated forest where the trees are predominantly of introduced species.
...of which naturalized (<i>sub-sub category</i>)	Other naturally regenerated forest where the trees are predominantly of naturalized introduced species.
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.
...of which of introduced species (<i>sub-category</i>)	Planted forest where the planted/seeded trees are predominantly of introduced species.
Mangroves	Area of forest and other wooded land with mangrove vegetation.
...of which planted (<i>sub-category</i>)	Mangroves predominantly composed of trees established through planting.

2.2 National data

2.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	RFD, 2007. Statistical Data 2007. Office of the Secretary. Royal Forest Department. Thailand. ISSN 0857-2711	Reforestation Area	2007	N/A
2	DNP, 2007. Statistical Data 2007. Planning and Information Office. National Park, Wildlife and Plant Conservation. Thailand.	Nature Conservation Area	2001 to 2007	N/A

3	NSO. 2008. The 2008 Environment Core Indicator. Website of National Statistical office. Thailand. http://web.nso.go.th/en/indicator/enviro/ind_env08.htm	Mangrove Area	1991-2004	N/A
4	N/A	N/A	N/A	N/A

2.2.2 Classification and definitions

National class	Definition
Primary	Areas of national parks and wildlife sanctuaries
Productive plantation	Reforestation by forest industry organization, Thai Plywood Co.Ltd.
Protective plantation	Afforestation by government budget, the reforestation campaign in commemoration of The Royal Golden Jubilee, reforestation according to ministry's regulations, reforestation by concessionaire budget
N/A	N/A

2.2.3 Original data

Forest area					
A. Forest Area					
Year	Forest Area (000ha)	Year	Forest Area (000ha)	Year	Forest Area (000ha)
1988	14380.3	1999	14928.4	2005	16100.1
1989 ^{*1}	14341.7	2000 ^{*3}	17011.1	2006	15865.3
1991 ^{*2}	13669.8	2001	16102.1	2007	-
1993 ^{*2}	13355.4	2002		2008	17158.6
1995 ^{*2}	13148.5	2003		2009	172184
1998 ^{*2}	12972.2	2004 ^{*3}	16759.1	2010	16249

*1 LANDSAT-TM *2 LANDSAT-5(TM) Scales (1:250,000) *3 LANDSAT-5(TM) Scales (1:50,000)

Some major forest conservation areas in Thailand			
Conservation type	Number	Total area (ha)	% of the country area
National park	123	6,032,011	11.75
Wildlife sanctuary	58	3,692,937	7.19
No hunting area	65	523,304	1.02
Forest park	113	123,671	0.24
Botanical garden	16	4,137	0.01
Arboretum	55	4,265	0.01

Source: National Park, Wildlife and Plant Conservation Department, 2013.

Planted Forest

(Unit: sq km)

	until 2013	2008	2009	2010	2011	2012	2013
Afforestation by Government Budget	916.67	171.07	167.52	154.08	63.28	33.55	38.65
By Forest Industry Organization (FIO)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
By Thai Plywood Co.,Ltd.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reforestation According to Ministry's Regulations	26.56	0	0	18.56	0	0	0
Private Plantation	242.92	6.08	7.2	37.36	142.04	23.13	20.65
Total	1,186.15	177.15	174.72	210.00	205.32	56.68	59.30

source : Forest Plantation and Extension Bureau, RFD. 2013

2.3 Analysis and processing of national data

2.3.1 Adjustment

2.3 Analysis and processing of national data

The areas of “National Park” and “Wildlife Conservation Area” in 1992 have been assumed as primary forests.

The areas of Production Areas (Productive reforestation and Rubber Plantation) in 4.3.2.A and Protective reforestation in 4.3.2.B are assumed as planted forest.

The remaining areas are assumed as other naturally regenerated area.

2.3.2 Estimation and forecasting

2.3.3 Reclassification

2.4 Data

Table 2a







Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	6726	6726	6726	6726	6726
	Other naturally regenerated forest	4611	7174	5930	5537	5687
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	2668	3111	3444	3986	3986
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
TOTAL		14005.00	17011.00	16100.00	16249.00	16399.00

Table 2b

Primary forest converted to (000 ha)								
1990-2000			2000-2010			2010-2015		
Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 2c

Categories	Area (000 hectares)				
	1990	2000	2005	2010	2015
Mangroves (forest and OWL)	174	245	265	244	240
... of which planted	2.7	2.7	9.8	3.8	3.8

Tiers

Category	Tier for status	Tier for reported trend
Primary forest	Tier 3	Tier 3
Other naturally regenerated forest	Tier 2	Tier 2
Planted forest	Tier 2	Tier 2
Mangroves	Tier 2	Tier 2

Tier Criteria

Category	Tier for status	Tier for reported trend
Primary forest/Other naturally regenerated forest/Planted forest	<p>Tier 3 : Data sources: Recent (less than 10 years) National Forest Inventory or remote sensing with ground truthing or data provided by official agencies or programme for repeated compatible NFIs</p> <p>Tier 2 : Data sources: Full cover mapping/ remote sensing or old NFI (more than 10 years) Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>

2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	N/A	N/A
Other naturally regenerating forest	N/A	N/A
Planted forest	N/A	N/A

Mangroves	The original data of 1991 is used for 1990, 2004 is used for 2005 and 2010.	The increase of mangrove area in 2000 might be due to change of the inventory. However, the original data source doesn't mention how to estimate area of mangrove.
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Other general comments to the table

N/A

3. What are the stocks and growth rates of the forests and how have they changed?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

3.1 Categories and definitions

Category	Definition
Growing stock	Volume over bark of all living trees with a minimum diameter of 10 cm at breast height (or above buttress if these are higher). Includes the stem from ground level up to a top diameter of 0 cm, excluding branches.
Net Annual Increment (NAI)	Average annual volume of gross increment over the given reference period less that of natural losses on all trees, measured to minimum diameters as defined for "Growing stock".
Above-ground biomass	All living biomass above the soil including stem stump branches bark seeds and foliage.
Below-ground biomass	All biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Dead wood	All non-living woody biomass not contained in the litter either standing lying on the ground or in the soil. Dead wood includes wood lying on the surface dead roots and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in above-ground biomass	Carbon in all living biomass above the soil including stem stump branches bark seeds and foliage.
Carbon in below-ground biomass	Carbon in all biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Carbon in dead wood	Carbon in all non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in litter	Carbon in all non-living biomass with a diameter less than the minimum diameter for dead wood (e.g. 10 cm) lying dead in various states of decomposition above the mineral or organic soil.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a soil depth of 30 cm.

3.2 National data

3.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Inventory data compiled from the provincial inventories between 1992 and 1996.	Growing stock	1992 to 1996	N/A
2	Brown, Sandra. 1997. Estimating Biomass Change in Topical Forests. A Primer. FAO Forestry Paper No. 134	Biomass Expansion Factor	All years	N/A
3	FRA 2010. Guidelines for country reporting to FRA 2010. FAO	Basic Densities Root: Shoot Ratio Carbon conversion factor	All	N/A

4	Report on National Forest Inventory 2009, National Park, Wildlife and Plant Conservation. Thailand.	trees, volume in cubic meter	2009	N/A
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3.2.2 Classification and definitions

National class	Definition
Seedling	Young trees with height less than 1.30 meters.
Sapling	Young trees with minimum height of 1.30 m. and GBH less than 15 cm.
Tree	Counted trees' GBH is 15 cm. or larger.
Growing stock	Volume over bark of all living trees with a minimum girth of 15 cm at breast height (1.30 m., or above buttress if these are higher). Includes the stem from ground level up to a top diameter of 0 cm, excluding branches.

3.2.3 Original data

Growing stock

The province -wise inventory of Thailand conducted in the provinces in different years between 1992 and 1996 indicate that average growing stock per ha of trees over 100 cm girth at breast height (gbh) is

Table 1

Region	Forest Type	Forest Area	Volume (m3)	Volume(m3)/ha
		(ha)	(gbh > 100 cm.)	(gbh > 100 cm.)
Northern	Evergreen Forest	1109715	37026891	33.37
	Pine Forest	27624	840415	30.42
	Mixed Deciduous Forest	2421500	38704563	15.98
	Dry Dipterocarp Forest	1758352	14110352	8.02
Northeastern	Evergreen Forest	162250	6882501	42.42
	Mixed Deciduous Forest	454145	8844312	19.47

	Dry Dipterocarp Forest	612132	7378139	12.05
Eastern	Evergreen Forest	341235	22469723	65.85
	Mixed Deciduous Forest	17198	775056	45.07
Central	Evergreen Forest	135772	10882593	80.15
	Mixed Deciduous Forest	223458	5499559	24.61
	Dry Dipterocarp Forest	143	3046	21.30
Southern	Evergreen Forest	635670	81035153	127.48
	Total	7899194	234452303	29.68

Further the diameter-wise breakdown of the inventory in each province when totalled together provided the following over all distribution of the growing stock.

Table 2

Category	Percent of total volume in girth at breast height classes			
	15-45	46-100	> 100	Total
Growing stock	7.7	20.3	72	100

It indicated that the growing stock of trees over 100 cm gbh was only 72% of the total volume. Therefore, it needed a Volume Expansion Factor of 1.39 to estimate the growing stock of trees over 15 cm gbh (about 5cm dbh).

It lead to the estimate of 41.26 m³ /ha. Since this is the only figure available hence this has been used for all the four years (1990, 2000 2005 and 2010).

Biomass stock

The biomass has been estimated based on growing stock data and using the following factors.

Carbon stock

The carbon stock, in the forest, has been estimated based on the biomass data and using the default conversion factor (0.47) provided by the FRA Guidelines.

Table 3 **Growing stock by forest type in 2009**

Forest Type	Total of trees		
	Number of trees	Tree volume in m ³	SE%
Tropical Evergreen Forest	882,297,024	262,800,609.64	22.85
Dry Evergreen Forest	1,555,483,586	335,582,652.21	13.98
Hill Evergreen Forest	316,467,826	68,951,206.41	12.97
Pine Forest	34,441,647	7,950,390.43	37.25
Mixed Deciduous Forest	2,569,999,182	549,377,897.90	9.11
Dry Dipterocarp Forest	2,349,232,335	272,359,032.39	8.94
Disturbed Forest	131,287,485	14,044,814.27	37.34
Peat Swamp Forest	12,554,911	425,217.69	159.12
Fresh Water Swamp Forest	23,150,492	1,726,174.79	808.62
Beach Forest	2,479,497	169,860.90	-
Forest Plantation	262,611,201	27,952,084.52	31.94
Total	8,140,005,186	1,541,339,941.16	

* Not including mangroves forest and forest areas of three southern provinces namely; Narativas, Pattani and Yala.

Table 4 **Density and Volume per Area by Forest Type**

Forest Type	Density of trees per ha.	Volume of trees per ha.
Tropical Evergreen Forest	679	202.32

Dry Evergreen Forest	574	123.91
Hill Evergreen Forest	559	121.84
Pine Forest	555	128.11
Mixed Deciduous Forest	338	72.25
Dry Dipterocarp Forest	718	83.26
Disturbed Forest	254	27.23
Peat Swamp Forest	456	15.43
Fresh Water Swamp Forest	616.7	45.91
Beach Forest	630	43.16
Forest Plantation	410	43.69
Average	486	92.10

* Not including mangroves forest and forest areas of three southern provinces namely; Narativas, Pattani and Yala.

3.3 Analysis and processing of national data

3.3.1 Adjustment

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3.3.2 Estimation and forecasting

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3.3.3 Reclassification

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3.4 Data

Table 3a

Category	Growing stock volume (million m ³ over bark)									
	Forest					Other wooded land				
	1990	2000	2005	2010	2015	1990	2000	2005	2010	2015




	Total growing stock	1291	1376	1352	1535	1506	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 3b

Category/Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010
1 st	N/A	N/A	N/A	N/A	N/A	N/A
2 nd	N/A	N/A	N/A	N/A	N/A	N/A
3 rd	N/A	N/A	N/A	N/A	N/A	N/A
4 th	N/A	N/A	N/A	N/A	N/A	N/A
5 th	N/A	N/A	N/A	N/A	N/A	N/A
6 th	N/A	N/A	N/A	N/A	N/A	N/A
7 th	N/A	N/A	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A	N/A	N/A
Remaining			N/A	N/A	N/A	N/A
TOTAL			.00	.00	.00	.00

THE PRE-FILLED VALUES FOR GROWING STOCK REFER TO THE FOLLOWING THRESHOLD VALUES (SEE TABLE BELOW)

Item	Value	Complementary information
Minimum diameter (cm) at breast height of trees included in growing stock (X)	5 cm	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	5 cm	N/A
Minimum diameter (cm) of branches included in growing stock (W)	N/A	N/A

Volume refers to above ground (AG) or above stump (AS)	AG	N/A
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PLEASE NOTE THAT THE DEFINITION OF GROWING STOCK HAS CHANGED AND SHOULD BE REPORTED AS GROWING STOCK DBH 10 CM INCLUDING THE STEM FROM GROUND LEVEL UP TO A DIAMETER OF 0 CM, EXCLUDING BRANCHES.

Table 3c




Category		Net annual increment (m ³ per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
	Net annual increment	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A

Table 3d











Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Above ground biomass	1520	1477	1470	1475	1447	N/A	N/A	N/A	N/A	N/A
	Below ground biomass	411	399	397	398	390	N/A	N/A	N/A	N/A	N/A
	Dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		1931.00	1876.00	1867.00	1873.00	1837.00	.00	.00	.00	.00	.00

Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Carbon in above ground biomass	715	694	691	693	680	N/A	N/A	N/A	N/A	N/A

	Carbon in below ground biomass	193	187	186	187	183	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Living biomass</i>	908	882	877	881	863	N/A	N/A	N/A	N/A	N/A
	Carbon in dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Carbon in litter	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Dead wood and litter</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Soil carbon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		908.00	881.00	877.00	880.00	863.00	.00	.00	.00	.00	.00

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 2	Tier 2
Net annual increment	Tier 1	Tier 1
Above ground biomass	Tier 1	Tier 1
Below ground biomass	Tier 1	Tier 1
Dead wood	Tier 1	Tier 1
Carbon in above-ground biomass	Tier 1	Tier 1
Carbon in below ground biomass	Tier 1	Tier 1
Carbon in dead wood and litter	Tier 1	Tier 1
Soil carbon	Tier 1	Tier 1

Tier criteria

Category	Tier for status	Tier for reported trend
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Total growing stock	Tier 3: Data sources Recent 10 years National Forest Inventory or remote sensing with ground truthing or programme for repeated compatible NFI 10 years Domestic volume functions Tier 2: Data sources/registers and statistics modelling or old NFI 10 years or partial field inventory Tier 1: Other data sources	Tier 3: Estimate based on repeated compatible tiers 3 (tier for status) Domestic growth functions Tier 2: Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 tier for status Tier 1: Other
Net annual increment	Tier 3: Scientifically tested national volume and growth functions Tier 2: Selection of volume and growth functions as relevant as possible Tier 1: Other	Tier 3: Confirmation/adjustment of functions used through scientific work Tier 2: Review work done to seek alternative functions Tier: 1 Other
Biomass	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied or other domestic or otherwise nationally relevant biomass studies Tier 2: Application of country specific national or sub-national biomass conversion factors from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Carbon in above ground biomass • Carbon in below ground biomass • Carbon in dead wood and litter • Soil carbon 	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied Tier 2: Application of country specific national or sub-national biomass conversion factors form from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	N/A	N/A
Growing stock of broadleaved coniferous	N/A	N/A
Growing stock composition	N/A	N/A
Net annual increment	N/A	N/A
Above-ground biomass	N/A	N/A
Below-ground biomass	N/A	N/A
Dead wood	N/A	N/A
Carbon in above-ground biomass	N/A	N/A
Carbon in below-ground biomass	N/A	N/A

Carbon in dead wood	N/A	N/A
Carbon in litter	N/A	N/A
Soil carbon	Soil depth for soil carbon estimates not available	N/A

Other general comments to the table

N/A

4. What is the status of forest production and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

4.1 Categories and definitions

Term	Definition
Primary designated function	The primary function or management objective assigned to a management unit either by legal prescription documented decision of the landowner/manager or evidence provided by documented studies of forest management practices and customary use.
Non wood forest product (NWFP)	Goods derived from forests that are tangible and physical objects of biological origin other than wood.
Commercial value of NWFP	For the purpose of this table, value is defined as the commercial market value at the forest gate.
Category	Definition
Production forest	Forest area designated primarily for production of wood, fibre, bio-energy and/or non-wood forest products.
Multiple use forest	Forest area designated for more than one purpose and where none of these alone is considered as the predominant designated function.
Total wood removals	The total of industrial round wood removals and woodfuel removals.
...of which woodfuel	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

4.2 National data

4.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	RFD, 2007. Statistical Data 2007. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat39/TAB6.htm	area in square kilometers.	2007	N/A
2	RFD, 2008. Statistical Data 2008. Office of Planning and Information, Royal Forest Department. Thailand. http://forestinfo.forest.go.th/55/Content.aspx?id=72	area	2008	N/A
3	Forest Plantation and Extension Bureau, RFD. 2013	area	2013	N/A
4	N/A	N/A	N/A	N/A

4.2.2 Classification and definitions

National class	Definition
Government Plantation	Afforestation by Government Budget
Private Plantation	Plantation in private-own area
N/A	N/A
N/A	N/A

4.2.3 Original data

Planted Forest (Unit: sq km)							
	until 2013	2008	2009	2010	2011	2012	2013
Afforestation by Government Budget	916.67	171.07	167.52	154.08	63.28	33.55	38.65
By Forest Industry Organization (FIO)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
By Thai Plywood Co.,Ltd.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reforestation According to Ministry's Regulations	26.56	0	0	18.56	0	0	0
Private Plantation	242.92	6.08	7.2	37.36	142.04	23.13	20.65
Total	1,186.15	177.15	174.72	210.00	205.32	56.68	59.30

source : Forest Plantation and Extension Bureau, RFD. 2013

4.3 Analysis and processing of national data

4.3.1 Adjustment

Forest Production Area.

According to the National Forest Policy issued in 1985, 25% of the country area (513,120 sq.km.) designed for protective forests and 15% of the country area designed for productive forests.

Protective forests are forests areas in national parks, wildlife sanctuaries, forest parks, botanical gardens etc. The other, productive forests, in the past these areas were concession forests which were banned in 1989. Nowsaday, productive forests are private plantation which cover the area of 242.92 sq.km. till 2013.

4.3.2 Estimation and forecasting

4.3.3 Reclassification

4.4 Data

Table 4a



Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	1941	2030	2244	2653	3265
	Multiple use forest	0	0	0	0	0

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	N/A	N/A	N/A	N/A
2 nd	N/A	N/A	N/A	N/A
3 rd	N/A	N/A	N/A	N/A
4 th	N/A	N/A	N/A	N/A
5 th	N/A	N/A	N/A	N/A
6 th	N/A	N/A	N/A	N/A
7 th	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A

TOTAL		.00	
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2010	
Name of local currency	N/A

Category
Plant products / raw material
1 Food
2 Fodder
3 Raw material for medicine and aromatic products
4 Raw material for colorants and dyes
5 Raw material for utensils handicrafts construction
6 Ornamental plants
7 Exudates
8 Other plant products
Animal products / raw material
9 Living animals
10 Hides skins and trophies
11 Wild honey and beeswax
12 Wild meat
13 Raw material for medicine
14 Raw material for colorants
15 Other edible animal products
16 Other non-edible animal products

Table 4c Pre-filled data from FAOSTAT

Year	FRA 2015 category (1000 m ³ u.b.)	
	Total wood removals	...of which woodfuel
1990	N/A	N/A

1991	N/A	N/A
1992	N/A	N/A
1993	N/A	N/A
1994	N/A	N/A
1995	N/A	N/A
1996	N/A	N/A
1997	N/A	N/A
1998	N/A	N/A
1999	N/A	N/A
2000	N/A	N/A
2001	N/A	N/A
2002	N/A	N/A
2003	N/A	N/A
2004	N/A	N/A
2005	N/A	N/A
2006	N/A	N/A
2007	N/A	N/A
2008	N/A	N/A
2009	N/A	N/A
2010	N/A	N/A
2011	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 2	Tier 2
Multiple use forest	Tier 1	Tier 1

Tier Criteria

Category	Tier for status	Tier for reported trend
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Production forest Multiple use forest	Tier 3: Updated including field verifications national forest maps including functions Tier 2: Forest maps older than 6 years including forest functions Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
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4.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	N/A	N/A
Multiple use forest	N/A	N/A
Total wood removals	N/A	N/A
Commercial value of NWFP	N/A	N/A

Other general comments to the table

N/A

5. How much forest area is managed for protection of soil and water and ecosystem services?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

5.1 Categories and definitions

Category	Definition
Protection of soil and water	Forest area designated or managed for protection of soil and water
...of which production of clean water (<i>sub-category</i>)	Forest area primarily designated or managed for water production, where most human uses are excluded or heavily modified to protect water quality.
...of which coastal stabilization (<i>sub-category</i>)	Forest area primarily designated or managed for coastal stabilization.
...of which desertification control (<i>sub-category</i>)	Forest area primarily designated or managed for desertification control.
...of which avalanche control (<i>sub-category</i>)	Forest area primarily designated or managed to prevent the development or impact of avalanches on human life assets or infrastructure.
...of which erosion, flood protection or reducing flood risk (<i>sub-category</i>)	Forest area primarily designated or managed for protecting communities or assets from the impacts of erosion riparian floods and landslides or for providing flood plain services.
...of which other (<i>sub-category</i>)	Forest area primarily designated or managed for other protective functions.
Ecosystem services, cultural or spiritual values	Forest area primarily designated or managed for selected ecosystem services or cultural or spiritual values.
...of which public recreation (<i>sub-category</i>)	Forest area designated or managed for public recreation.
...of which carbon storage or sequestration (<i>sub-category</i>)	Forest area designated or managed for carbon storage or sequestration.
...of which spiritual or cultural services (<i>sub-category</i>)	Forest area designated or managed for spiritual or cultural services.
...of which other (<i>sub-category</i>)	Forest area designated or managed for other ecosystem services.

5.2 National data

5.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments

1	RFD, 2007. Statistical Data 2007. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat39/TAB6.htm	area	2007	N/A
2	Department of Marine and Coastal Resources http://www.dmcg.go.th/marinecenter/mangrove/mangrove_report.html	area	2009	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

5.2.2 Classification and definitions

National class	Definition
Protected Area	Existing forests designated or managed for protection of soil and water
N/A	N/A
N/A	N/A
N/A	N/A

5.2.3 Original data

Forests designed for protected areas in Thailand			
Conservation type	Number	Total area (ha)	% of the country area
National park	123	6,032,011	11.75
Wildlife sanctuary	58	3,692,937	7.19
No hunting area	65	523,304	1.02
Forest park	113	123,671	0.24
Botanical garden	16	4,137	0.01
Arboretum	55	4,265	0.01

Source: National Park, Wildlife and Plant Conservation Department, 2013.

Mangrove Forest Area in 1961-2009.		in 000 ha.
year	area	%
1961	367.9	0.72
1975	312.7	0.61
1979	287.3	0.56
1986	196.4	0.38
1991	173.6	0.34
1993	168.7	0.33
1996	167.6	0.33
1998	167.6	0.33
2000	245.2	0.48
2004	265.8	0.52
2009	244.0	0.48

Source: department of marine and coastal resources 2010.

5.3 Analysis and processing of national data

5.3.1 Adjustment

In 1985, Thai government declared a National Forest Policy which indicated that

1. 25% of the country area should be under protected area.
2. 15% of the country area should be forests for socio-economic purposes.

On January 10, 1989 Thailand banned harvesting of timber in the country following the worst flooding. All the natural existing forests are under government control which designed to protected land, animals, plants and bio-diversity.








Private plantation becomes sources of timber and other uses of forest products.

5.3.2 Estimation and forecasting

5.3.3 Reclassification

5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
	Protection of soil and water	14005	17011	16100	16774	15815
	... of which production of clean water	N/A	N/A	N/A	N/A	N/A
	... of which coastal stabilization	N/A	N/A	N/A	N/A	N/A
	... of which desertification control	N/A	N/A	N/A	N/A	N/A
	... of which avalanche control	N/A	N/A	N/A	N/A	N/A
	... of which erosion, flood protection or reducing flood risk	N/A	N/A	N/A	N/A	N/A
	... of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015

Ecosystem services, cultural or spiritual values	0	0	0	0	0
...of which public recreation	N/A	N/A	N/A	N/A	N/A
...of which carbon storage or sequestration	N/A	N/A	N/A	N/A	N/A
...of which spiritual or cultural services	N/A	N/A	N/A	N/A	N/A
...of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for reported trend	Tier for status
Protection of soil and water	Tier 3	Tier 3
Ecosystem services, cultural or spiritual values	Tier 1	Tier 1

Tier criteria

Category	Tier for status	Tier for reported trend
Protection of soil and water	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations or legislation relating to soil and water protection. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> Cultural or spiritual values Public recreation Spiritual or cultural services Other 	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

5.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Protection of soil and water	N/A	N/A

Production of clean water	N/A	N/A
Coastal stabilization	N/A	N/A
Desertification control	N/A	N/A
Avalanche control	N/A	N/A
Erosion, flood protection or reducing flood risk	N/A	N/A
Other protective functions	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A
Public recreation	N/A	N/A
Carbon storage or sequestration	N/A	N/A
Spiritual or cultural services	N/A	N/A
Other ecosystem services	N/A	N/A

Other general comments to the table
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N/A

6. How much forest area is protected and designated for the conservation of biodiversity and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

6.1 Categories and definitions

Category	Definition
Conservation of biodiversity	Forest area designated primarily for conservation of biological diversity. Includes but is not limited to areas designated for biodiversity conservation within the protected areas.
Forest area within protected areas	Forest area within formally established protected areas independently of the purpose for which the protected areas were established.

6.2 National data

6.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	RFD, 2007. Statistical Data 2007. Office of the Secretary. Royal Forest Department. Thailand. ISSN 0857-2711 http://www.forest.go.th/stat/stat50/stat2550.htm	Reforestation, Afforestation,	2001-2007	N/A
2	RFD, 2001. Statistical Data 2001. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat44/stat2544.htm	Reforestation, Afforestation,	1997-2001	N/A
3	RFD, 1996 and 1997. Statistical Data 1996. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat39/stat2539.htm http://www.forest.go.th/stat/stat40/stat2540.htm	Reforestation, Afforestation, Protected area	1991-1996	N/A
4	NSO. 2008. The 2008 Environment Core Indicator. Website of National Statistical office. Thailand. http://web.nso.go.th/en/indicator/enviro/ind_env08.htm	Protected area	2000-2006	N/A

5	Rubber Plantation. Website of Rubber Research Institute of Thailand. Department of Agriculture. (http://www.rubberthai.com/statistic/stat_index.htm)	Rubber Plantation Area	2000 to 2007	N/A
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6.2.2 Classification and definitions

National class	Definition
Conservation of Biodiversity	Areas of national parks, wildlife sanctuaries, watershed areas, non-hunting areas, botanical gardens and arboretum.
N/A	N/A
N/A	N/A
N/A	N/A

6.2.3 Original data

See 4.2.3.

6.3 Analysis and processing of national data

6.3.1 Adjustment

See 4.3.1.

6.3.2 Estimation and forecasting

See 4.3.2.

Conservation of Biodiversity Areas



National Park and Wildlife Conservation Area are considered as Conservation of Biodiversity Areas. National Park may include Marine Parks however original data source doesn't mention the information of Marine Parks. The data in 1992 and 2006 is used for 1990 and 2010 respectively.

6.3.3 Reclassification

See 4.3.3.

6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	6726	8707	8853	8853	10500
	Forest area within protected areas	7134	9133	9394	9426	10624

Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	Tier 2	Tier 2
Forest area within protected areas	Tier 3	Tier 3

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> Conservation of biodiversity Forests within protected areas 	Tier 3: Data obtained from national or state agencies responsible for conservation and protected area or legislation relating to area protection. Tier 2: Studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates Tier 1 Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	N/A	N/A
Forest area within protected areas	N/A	N/A

Other general comments to the table

N/A

7. What is the area of forest affected by woody invasive species?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

7.1 Categories and definitions

Category	Definition
Invasive species	Species that are non-native to a particular ecosystem and whose introduction and spread cause, or are likely to cause, socio-cultural, economic or environmental harm or harm to human health.

7.2 National data

7.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

7.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

7.2.3 Original data

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7.3 Analysis and processing of national data

7.3.1 Adjustment

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7.3.2 Estimation and forecasting

7.3.3 Reclassification

7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
Total	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Invasive species	Tier 2	Tier 2

Tier Criteria

Category	Tier for status	Tier for reported trend
----------	-----------------	-------------------------

Invasive species	Tier 3: Systematic assessment in forest inventory or other survey (e.g. by conservation department) within the last 5 years) Tier 2: Systematic assessment in forest inventory or other survey (e.g. by conservation department conducted more than 5 years ago) Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
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7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	N/A	N/A

Other general comments to the table
N/A

8. How much forest area is damaged each year?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

8.1 Categories and definitions

Category	Definition
Number of fires	Number of fires per year
Burned area	Area burned per year
Outbreaks of insects	A detectable reduction in forest health caused by a sudden increase in numbers of harmful insects.
Outbreaks of diseases	A detectable reduction in forest health caused by a sudden increase in numbers of harmful pathogens, such as bacteria, fungi, phytoplasma or virus.
Severe weather events	Damage caused severe weather events, such as snow, storm, drought, etc.

8.2 National data

8.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Forest Fire Control Division, National Park, Wildlife and Plant Conservation Department, 2013.	area	2013	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

8.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

8.2.3 Original data

Forest area burned per year in Thailand.	
Year	Area in 1000 Hectares
1992	1,940.87
1993	1,459.62
1994	763.65
1995	643.81
1996	490.30
1997	660.21
1998	1,145.45
1999	294.90
2000	93.32
2001	76.19
2002	139.39
2003	15.76
2004	32.28
2005	30.28
2006	8.62
2007	18.78
2008	11.33
2009	9.77
2010	13.31
2011	4.08
2012	7.66
2013	9.28

Source : Forest Fire Control Division, National Park, Wildlife and Plant Conservation Department, 2013.

8.3 Analysis and processing of national data

8.3.1 Adjustment

8.3.2 Estimation and forecasting

8.3.3 Reclassification

8.4 Data

Table 8a

Category		000 ha, number of fires									
		2003		2004		2005		2006		2007	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
CFRQ	Total land area burned	716.4	N/A	1558.11	N/A	1460.93	N/A	584.67	N/A	976.43	N/A
CFRQ	... of which forest area burned	24.96	N/A	126.13	N/A	156.74	N/A	57.75	N/A	278.8	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
CFRQ	Total land area burned	305.93	N/A	419.36	N/A	468.83	N/A	189.49	N/A	261.42	N/A
CFRQ	... of which forest area burned	30.01	N/A	102	N/A	104.59	N/A	8.31	N/A	33.71	N/A

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Outbreak category

1 Insects
2 Diseases
3 Severe weather events

Tiers

Category	Tier for status	Tier for trend
Area affected by fire	Tier 2	Tier 2
<ul style="list-style-type: none"> • Insects • Diseases • Severe weather events 	Tier 1	Tier 1

Tier criteria

Category	Tier for status	Tier for reported trend
Burned area	Tier 3 : National fire monitoring routines Tier 2 : Remote sensing surveys Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Insects • Diseases • Severe weather events 	Tier 3 : Systematic survey (e.g. via inventory or aerial damage assessment) Tier 2 : Management records Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Burned area	Data detected through MODIS and provided by FAO	N/A
Insects	N/A	N/A
Diseases	N/A	N/A
Severe weather events	N/A	N/A

Other general comments to the table

N/A

9. What is the forest area with reduced canopy cover?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

Category	Definition
Reduction in canopy cover	Forest that has undergone a reduction of canopy cover of more than 20% between the years 2000 and 2010 within the forest canopy cover range of 30-80% as detected by the MODIS VCF sensor.

Table 9

Category	Area of forest with reduced canopy cover (000 ha)
Reduction in canopy cover	6137.18

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 2

Tier criteria

Category	Tier for reported trend
Reduction in canopy cover	Tier 3 : Remote sensing with ground truthing and/or Landsat imagery Tier 2 : Remote sensing using Modis (using pre-filled data provided by FAO) Tier 1 : Expert opinion

Comments

Category	Comments related to data definitions etc
Reduction in canopy cover	N/A

Other general comments

--

10. What forest policy and regulatory framework exists to support implementation of sustainable forest management SFM?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

10.1 Categories and definitions

Category	Definition
Policies supporting sustainable forest management	Policies or strategies that explicitly encourage sustainable forest management.
Legislation and regulations supporting sustainable forest management	Legislation and regulations that govern and guide sustainable forest management, operations and use.

10.2 National data

10.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Office of the National Economic and Social Development Board	plan	5 years period plan	N/A
2	www.thaigov.go.th	government declaration	on 22 Aug. 2011.	N/A
3	Royal Forest Department, Forest Planning and Information Office.	Report	Annually	N/A
4	N/A	N/A	N/A	N/A

10.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

10.2.3 Original data

10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management	yes	yes	yes	yes
... of which, in <u>publicly</u> owned forests	yes	yes	yes	yes
... of which, in <u>privately</u> owned forests	no	no	no	no
Legislation and regulations supporting sustainable forest management	yes	yes	yes	yes
... of which, in <u>publicly</u> owned forests	yes	yes	yes	yes
... of which, in <u>privately</u> owned forests	no	no	no	no

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	During 1961-1976, National Economic and Social Development plans (NESDP) focused on establishing national Infrastructure and booming economics. Till National Economic and Social Development plan 5 that put the awareness of forest and natural resources into account. Through NESDP 5-11 (1977-2016), many measurements of rehabilitation of forest and natural resources have been established and implemented. In 1985, Thailand has declared the national forest policy B.E. 2528 (1985) indicating that 25% of the country area should be conserved to be protected forest area and 15% of which to be productive forest area. Nowadays, the government has declared to the parliament on 22 August 2011 that it will put hard effort to rehabilitate forest and natural resources.
Legislation and regulations supporting sustainable forest management	At present, Thailand has 6 laws dealing with forest namely: 1. Forest Law B.E.2484 2. National Parks Law B.E.2504 3. National Reserved Forest Law B.E.2507 4. Wildlife Conservation Law B.E. 2535 5. Forest Plantation Law B.E. 2535 6. Chain Saw Law B.E.2545 According to these laws, rules and regulations have been issued which been launched to protect, to conserve and rehabilitate forest areas.

Other general comments

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11. Is there a national platform that promotes stakeholder participation in forest policy development?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

11.1 Categories and definitions

Category	Definition
National stakeholder platform	A recognized procedure that a broad range of stakeholders can use to provide opinions, suggestions, analysis, recommendations and other input into the development of national forest policy.

11.2 National data

11.2.1 Data sources

	References to sources of information	Years	Additional comments
1	Constitution of The Kingdom of Thailand	2550	In Constitutional 2550 code 85 indicated that government plans on natural resources and forest management should base on local and community participation.
2	Declaration of Thai government on 23 Aug.2011	2551	Declaration of Thai government on 23 Aug.2011 emphasized to conserve and rehabilitate wildlife and forest based participation management approach. People and forest should be harmonically living together and local people should be supported with substantial living.
3	N/A	N/A	N/A
4	N/A	N/A	N/A

Table 11

Is there a national platform that promotes or allows for stakeholder participation in forest policy development?	yes
---	-----

11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	Local administration offices, Institutions, universities, NGOs and any stakeholders can accumulate the needs of people using seminars, discussions, workshops or any social meeting to pass the results of which to the government agencies or directly to the government for policy or planning process for natural resources and forest management.

Other general comments

--

12. What is the forest area intended to be in permanent forest land use and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

12.1 Categories and definitions

Category	Definition
Forest area intended to be in permanent forest land use	Forest area that is designated or expected to be retained as forest and is highly unlikely to be converted to other land use.
...of which permanent forest estate (<i>sub-category</i>)	Forest area that is designated by law or regulation to be retained as forest and may not be converted to other land use.

12.2 National data

12.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	RFD, 2007. Statistical Data 2007. Office of the Secretary. Royal Forest Department. Thailand. ISSN 0857-2711 http://www.forest.go.th/stat/stat50/stat2550.htm	Reforestation, Afforestation,	2001-2007	N/A
2	RFD, 2001. Statistical Data 2001. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat44/stat2544.htm	Reforestation, Afforestation,	1997-2001	N/A
3	RFD, 1996 and 1997. Statistical Data 1996. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat39/stat2539.htm http://www.forest.go.th/stat/stat40/stat2540.htm	Reforestation, Afforestation, Protected area	1991-1996	N/A
4	NSO. 2008. The 2008 Environment Core Indicator. Website of National Statistical office. Thailand. http://web.nso.go.th/en/indicator/enviro/ind_env08.htm	Protected area	2000-2006	N/A

5	Rubber Plantation. Website of Rubber Research Institute of Thailand. Department of Agriculture. (http://www.rubberthai.com/statistic/stat_index.htm)	Rubber Plantation Area	2000 to 2007	N/A
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12.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

12.2.3 Original data

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12.3 Analysis and processing of national data

12.3.1 Adjustment

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12.3.2 Estimation and forecasting



--

12.3.3 Reclassification

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12.4 Data

Table 12

Categories	Forest area 2010 (000 ha)
 Forest area intended to be in permanent forest land use	16249
 ... of which permanent forest estate	13450

Tiers

Category	Tier for status
----------	-----------------

Forest area intended to be in permanent forest land use	Tier 3
Permanent forest estate	Tier 2

Tier Criteria

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other
Permanent forest estate	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other

12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	N/A
Permanent forest estate	N/A

Other general comments

--

13. How does your country measure and report progress towards SFM at the national level?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

13.1 Categories and definitions

Category	Definition
Forest area monitored under a national forest monitoring framework	Forest area monitored by a national monitoring framework or systems that provide measurement based periodic monitoring of forest extent and quality.
Forest reporting at national scale	National reporting of forest extent and characteristics that includes some measure of progress toward sustainable forest management.

13.2 National data

13.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Annual reports of RFD, DNP, DMCR (gov.agencies responsible for forest management.	report	annually	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

13.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

13.3 Data

Table 13a

Category	% of total forest area	Most recent year	Check all boxes that apply					
			Continuous	Periodic	Permanent ground plots	Temporary ground plots	Aerial/remote sensing sample based	Aerial/remote sensing full coverage
Forest inventory	100	2009	yes	yes	yes	yes	yes	yes
Other field assessments	N/A	N/A	yes	yes	yes	yes	yes	yes
Updates to other sources	N/A	N/A	yes	yes	yes	yes	yes	yes
Expert estimate	N/A	N/A						

Table 13b

Type of forest reporting used at national scale	Check boxes that apply
1 Criteria and Indicators reporting	yes
2 Periodic national state of the forest report	yes
3 Other (please document)	yes
4 None	

Other type of forest reporting
N/A

13.4 Comments

Category	Comments
N/A	N/A
N/A	N/A
N/A	N/A

Other general comments

--

14. What is the area of forest under a forest management plan and how is this monitored?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

14.1 Categories and definitions

Category	Definition
Forest area with management plan	Forest area that has a long-term documented management plan, aiming at defined management goals which is periodically revised
...of which for production (<i>sub-category</i>)	Forest management plan mainly focused on production
...of which for conservation (<i>sub-category</i>)	Forest management plan mainly focused on conservation
Monitoring of forest management plans	Government monitoring of forest management plan implementation conducted through field visits or audits of forest management plan performance

14.2 National data

14.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	13311.52
... of which for production	2931.2
... of which for conservation	10380.32

Table 14b

Indicate which (if any) of the following are required in forest management plans in your country	
1 Soil and water management	yes

2 High conservation value forest delineation	yes
3 Social considerations community involvement	yes

Table 14c

Percent of area under forest management plan that is monitored annually	78
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Tiers

Category	Tier for status
Forest area with management plan	Tier 3
Percent of area under forest management plan that is monitored annually	Tier 2

Tier criteria

Category	Tier for status
Forest area with management plan	Tier 3 : Reports that describe national records 5 years old or less that contain long-term forest monitoring plans Tier 2 : Industry or other records indicating the presence of a long-term forest management plan Tier 1 : Other
Percent of area under forest management plan that is monitored annually	Tier 3 : Government documentation of monitoring extent Tier 2 : Reports from forest managers or other documental sources Tier 1 : Other

14.4 Comments

Category	Comments
Forest area with management plan	All the forest areas in Thailand are under the government control under the forest laws as mentioned before in Topic VI number 10. Each forest area especially national park or wildlife sanctuary has its own office to take responsible for management plan.
N/A	N/A
N/A	N/A

Other general comments

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15. How are stakeholders involved in the management decision making for publicly owned forests?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

15.1 Categories and definitions

Category	Definition
Stakeholder involvement	Stakeholder involvement is defined as significant inputs into at least one aspect of forest management at the operational scale

Table 15

Please indicate the type of stakeholder involvement in forest management decision making required in your country	
1. Planning phase	yes
2. Operations phase	yes
3. Review of operations	yes

Tiers

Category	Tier for status
Type of stakeholder inputs	Tier 2

Tier criteria

Category	Tier for status
Type of stakeholder inputs	Tier 3 : Government (national or sub-national) documentation of stakeholder inputs Tier 2 : Government (national or subnational) requirement but stakeholder inputs not documented Tier 1 : Other

15.2 Comments

Category	Comments
N/A	N/A
N/A	N/A
N/A	N/A

Other general comments

Please see the answers in item number 11.

16. What is the area of forest under an independently verified forest certification scheme?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

16.1 Categories and definitions

Category	Definition
FSC certification	Forest area certified under the Forest Stewardship Council certification scheme
PEFC certification	Forest area certified under the Programme for the Endorsement of Forest Certification scheme
Other international forest management certification	Forest area certified under an international forest management certification scheme with published standards and is independently verified by a third-party, excluding FSC and PEFC certification.
Certified forest area using a domestic forest management certification scheme	Area certified under a forest management certification scheme with published standards that are nationally recognized and independently verified by a thirdparty

16.2 Data

Table 16a













International forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	FSC	0	0	8.37	8.37	2.94	2.94	2.94
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	1.81	6.22	18.92	19	18.57	23.42	
	PEFC	0	0	0	0	0	0	
	Other	0	0	0	0	0	0	

Table 16b

Domestic forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	N/A	0	0	0	0	0	0	0
	N/A	0	0	0	0	0	0	0
	N/A	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
		0	0	0	0	0	0	
		0	0	0	0	0	0	
		0	0	0	0	0	0	

Tier criteria

Category	Tier for status
International forest management certification	Tier 3: International forest management scheme records maintained by the certifying organization for the reporting year Tier 2: International forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other
Domestic forest management certification	Tier 3: National registry reports for domestic forest management certification maintained by the certifying organization for the reporting year Tier 2: Domestic forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other

Tiers

Category	Tier for status
International forest management certification	Tier 3
Domestic forest management certification	N/A

16.3 Comments

Category	Comments related to data definitions etc
Certified forest area using an international forest management certification scheme	N/A
Domestic forest management certification	N/A

Other general comments

	FSC certified forest area (1000 ha)	
	Date	1000Ha
THAILAND	1/7/2002	8.37

THAILAND	1/7/2003	8.37
THAILAND	1/7/2004	2.94
THAILAND	1/7/2005	2.94
THAILAND	1/7/2006	2.94
THAILAND	1/7/2007	1.81
THAILAND	1/7/2008	6.22
THAILAND	1/7/2009	18.92
THAILAND	1/7/2010	19.00
THAILAND	1/7/2011	18.57
THAILAND	1/7/2012	23.4

17. How much money do governments collect from and spend on forests?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

17.1 Categories and definitions

Category	Definition
Forest revenue	All government revenue collected from the domestic production and trade of forest products and services. For this purpose revenue include: <ul style="list-style-type: none"> • Goods : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products. • Services : including concession fees and royalties, stumpage payments, public timber sales revenue taxes and charges based on forest area or yield, taxes on domestic trade and export of forest products, special levies on forestry activities and payments into forest related funds, other miscellaneous inspection, licence and administrative fees levied by forest administrations, permit and licence fees for recreation and other forest related activities.
Public expenditure on forestry	All government expenditure on forest related activities.

17.2 National data

17.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	RFD, 2011. Statistical Data 2011 and 2012. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat49/TAB55.htm	Report	2011,2012	N/A
2	Statistical Data of National Park, Wildlife and Plant Conservation) 2011, 2012. http://www.dnp.go.th/statistics/dnpstatmain.asp	Report	2011,2012	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	130840	45742	567805

Public expenditure on forestry	N/A	N/A	N/A
	2000	2005	2010
Name of Local Currency	Baht	baht	baht

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	N/A
Public expenditure on forestry	N/A
Other general comments	N/A

Other general comments

in US dollar at 1 dollar= 33 baht	2011	2012
Forest revenue	17,206,199	33,279,397
Public expenditure on forestry	340,252,636	355,232,133

Data collected from Royal Forest Department (RFD) and Department of National Park, wildlife and Plant Conservation (DNP).

18. Who owns and manages the forests and how has this changed?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

18.1 Categories and definitions

Category	Definition
Public ownership	Forest owned by the State or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at national scale (<i>sub-category</i>)	Forest owned by the State at the national scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at the sub-national government scale (<i>sub-category</i>)	Forest owned by the State at the sub-national government scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
Private ownership	Forest owned by individuals, families, communities, private cooperatives corporations and other business entities, private, religious and educational institutions, pension or investment funds, NGOs, nature conservation associations and other private institutions.
...of which individuals (<i>sub-category</i>)	Forest owned by individuals and families.
...of which private business entities and institutions (<i>sub-category</i>)	Forest owned by private corporations cooperatives companies and other business entities as well as private nonprofit organizations such as NGOs nature conservation associations, and private religious and educational institutions etc.
...of which local tribal and indigenous communities (<i>sub-category</i>)	Forest owned by a group of individuals belonging to the same community residing within or in the vicinity of a forest area or forest owned by communities of indigenous or tribal people The community members are coowners that share exclusive rights and duties and benefits contribute to the community development.
Unknown ownership	Forest area where ownership is unknown includes areas where ownership is unclear or disputed.
Categories related to management rights of public forests	Definition
Public Administration	The Public Administration (or institutions or corporations owned by the Public Administration) retains management rights and responsibilities within the limits specified by the legislation.
Individuals households	Forest management rights and responsibilities are transferred from the Public Administration to individuals or households through long-term leases or management agreements.
Private companies	Forest management rights and responsibilities are transferred from the Public Administration to corporations, other business entities private cooperatives, private nonprofit institutions and associations, etc., through long-term leases or management agreements.
Communities	Forest management rights and responsibilities are transferred from the Public Administration to local communities (including indigenous and tribal communities) through long-term leases or management agreements.
Other form of management rights	Forests for which the transfer of management rights does not belong to any of the categories mentioned above.

18.2 National data

18.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Global Forest Resources Assessment, Country Report of Thailand (FRA 2005/217, Rome 2005)	Ownership	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

18.2.2 Classification and definitions

National class	Definition
N/A	There are no national classifications and definitions relevant to this table.
N/A	N/A
N/A	N/A
N/A	N/A

18.2.3 Original data

All forest area in Thailand belongs to the state. Therefore, there is no private ownership. As regards rubber plantations it has been assumed that all the rubber plantations are under private ownership.

18.3 Analysis and processing of national data

18.3.1 Adjustment

Analysis and processing of national data









The figures in Question 18 are estimated based on the assumption in 18.2.3 and figures in Question 1.

18.3.2 Estimation and forecasting

18.3.3 Reclassification

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	14005	17011	16100	16249
	... of which owned by the state at national scale	N/A	N/A	N/A	N/A
	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	N/A
	Private ownership	0	0	0	0
	... of which owned by individuals	0	0	0	0
	... of which owned by private business entities and institutions	0	0	0	0
	... of which owned by local, tribal and indigenous communities	0	0	0	0
	Unknown ownership	0	0	0	0
TOTAL		14005.00	17011.00	16100.00	16249.00

Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 3	Tier 3
Private ownership	Tier 2	Tier 2
Unknown ownership	Tier 1	Tier 1

Tier criteria

Category	Tier for status	Tier for reported trend
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Ownership	Tier 3: National forestry statistics registers of land titles or maps on land ownership or all forest area under one ownership category that is five years old or less. Tier 2: National forestry statistics registers of land titles or maps on land ownership or questionnaires that are more than five years old. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
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Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	17641	17011	16100	17145
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	17641.00	17011.00	16100.00	17145.00

Category	Tier for reported trend	Tier for status
Public Administration	Tier 3	Tier 3
Individuals	Tier 1	Tier 1
Private companies	Tier 1	Tier 1
Communities	Tier 1	Tier 1
Other	Tier 1	Tier 1

18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	N/A	N/A
Private ownership	N/A	N/A
Unknown ownership	N/A	N/A
Management rights	N/A	N/A

Other general comments to the table

All the natural forests belong to the government thus forest management is conducted by government agencies.

19. How many people are directly employed in forestry?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

19.1 Categories and definitions

Category	Definition
Full-time equivalents (FTE)	A measurement equal to one person working full-time during a specified reference period.
Employment in forestry	Employment in activities related to production of goods derived from forests. This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

19.2 National data

19.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	RFD, 2011. Statistical Data 2011 and 2012. Office of the Secretary. Royal Forest Department. Thailand. http://www.forest.go.th/stat/stat49/TAB55.htm	report	2011,2012	N/A
2	Statistical Data of National Park, Wildlife and Plant Conservation) 2011, 2012. http://www.dnp.go.th/statistics/dnpstatmain.asp	report	2011,2012	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

19.2.2 Classification and definitions



National class	Definition
Permanent staff	Permanent employee including official, permanent employee and periodical employee.
Temporary employee	Temporary employee refers to field employee who work in the forest area or in projects.
N/A	N/A
N/A	N/A

19.2.3 Original data

	2011	2012
Permanent staff	30,544	30,421
Temporary employee	n/a	n/a

19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	N/A	30.544	N/A	30.421
	... of which female	N/A	N/A	N/A	N/A

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	N/A	N/A

Other general comments to the table
N/A

20. What is the contribution of forestry to Gross Domestic Product (GDP)?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

20.1 Categories and definitions

Category	Definition
Gross value added from forestry (at basic prices)	This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

20.2 Data

Table 20 (Pre-filled data from UNdata/EUROSTAT)

Category	Million	Currency	Year for latest available information
Gross value added from forestry (at basic prices)	8144	baht	2010

20.3 Comments

Category	Comments
Gross value added from forestry (at basic prices)	N/A

Other general comments

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21. What is forest area likely to be in the future

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

21.1 Categories and definitions

Category	Definition
Government target/aspiration for forest area	Government target/aspiration for forest area for a specific year.
Forests earmarked for conversion	Forest area that is allocated/classified or scheduled to be converted into non-forest uses.

21.2 National data

21.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	20524	20524

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	N/A

21.4 Comments

Category	Comments
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Government target/aspiration for forest area	According to National Forest Policy in 1985, expected forest area for conservation or protected area should be 25% of the country area. It means that the area of 20,524,000 ha. should covered with forest.
Forests earmarked for conversion	N/A

Other general comments

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