



Food and Agriculture
Organization of the
United Nations

Global Forest Resources Assessment 2020

Report

Viet Nam

Rome, 2020



FAO has been monitoring the world's forests at 5 to 10 year intervals since 1946. The Global Forest Resources Assessments (FRA) are now produced every five years in an attempt to provide a consistent approach to describing the world's forests and how they are changing. The FRA is a country-driven process and the assessments are based on reports prepared by officially nominated National Correspondents. If a report is not available, the FRA Secretariat prepares a desk study using earlier reports, existing information and/or remote sensing based analysis.

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Introduction

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Introductory text

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 2020 (FRA 2020).

The content and the structure are in accordance with recommendations and guidelines given by FAO in the the Terms and Difinitions document and User Guide FRA 2020 (<http://www.fao.org/3/i8699EN/i8699en.pdf> and <http://fra-platform>). These reports were submitted to FAO as official government documents.

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1 Forest extent, characteristics and changes

1a Extent of forest and other wooded land

National data

Data sources

1990	References	The National inventory of natural forests and bare hills and mountains, period 1989 -1993 (FIPI)
	Methods used	National Forest Inventory, Sample-based remote sensing assessment
	Additional comments	The plantation is used FRA Report 2000
2000	References	National forest inventory; national forest change monitoring program (32 program)
	Methods used	Sample-based remote sensing assessment, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and aggregated from the smallest unit (commune) up to higher levels (district, province and nationwide)
2010	References	National forest inventory; National forest change monitoring (32 program)
	Methods used	National Forest Inventory, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and aggregated from the smallest administrative unit (commune) up to higher levels (district, province and nationwide)
2011	References	National forest change monitoring program
	Methods used	National Forest Inventory, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and aggregated from the smallest unit up to higher levels (district, province and nationwide)
2012	References	National forest inventory; National forest change monitoring program
	Methods used	National Forest Inventory, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and aggregated from the smallest unit (commune) up to higher levels (district, province and nationwide)
2013	References	National forest change monitoring program
	Methods used	Registers/questionnaires, Other (specify in comments), Sample-based remote sensing assessment

	Additional comments	Data were statistically aggregated from administrative unit (commune) up to the higher levels and country
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2014	References	National forest change monitoring program,
	Methods used	National Forest Inventory, Sample-based remote sensing assessment, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and statistically aggregated from the smallest unit (commune) up to higher levels (district, province and nationwide)

2015	References	National forest change monitoring program(according to Circle 26); National forest inventory and Statistic project 2013-2016 (NFI&S) and National forest inventory, 2016 -2020 (NFI)
	Methods used	Sample-based remote sensing assessment, Other (specify in comments)
	Additional comments	The forest areas and its changes were detected, aggregated from the smallest administrative unit (commune) up to higher units (district, province and nationwide)

2016	References	National forest change monitoring program (according to Circle 26/2017/TT-BNNPTNT dated on 15/11/2017
	Methods used	Registers/questionnaires, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and aggregated from the smallest administrative unit (commune) up to higher levels (district, province and nationwide)

2017	References	National forest change monitoring program
	Methods used	Other (specify in comments), Sample-based remote sensing assessment
	Additional comments	Forest area and its changes were detected and aggregated from the smallest administrative unit (commune) up to the higher levels (district, province and nationwide)

2018	References	National forest change monitoring program
	Methods used	Other (specify in comments), National Forest Inventory
	Additional comments	Forest area and its change were detected and aggregated from the smallest administrative unit(commune) up to the higher levels

Classifications and definitions

1990	National class	Definition
	1. Natural production forest	are used mainly for production and trading of timber and non-timber forest products in combination with protection, contributing to environmental protection.
	2. Natural	

	protection forests	are used mainly to protect water sources and land, prevent erosion and desertification, restrict natural calamities and regulate climate, thus contributing to environmental protection. Protection forest may include (1) headwater protection forests; (2) wind- and sand-shielding protection forests; (3) protection forests for tide shielding and sea encroachment prevention; and (4) protection forests for environmental protection.
	3.Natural special use forests (protected area)	are used mainly for conservation of nature, specimens of the national forest ecosystems and forest biological gene sources; for scientific research; protection of historical and cultural relics as well as landscapes; in service of recreation and tourism in combination with protection, contributing to environmental protection. Special-use forest may include (5) national parks; (6) nature conservation zones; (7) landscape protection areas; and (8) scientific research and experiment forests. Special-use forests are presumably planted on special-use forest land
	4. Plantation	Forest predominantly composed of trees established through planting and/or deliberate seeding.

2000	National class	Definition
	1. Wood forests	Are the forests consisting mainly of timber tree species
	2. Bamboo forest	Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloa, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the average high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m ² /ha.
	7. Unstocked plantation	

		Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloa,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper. cashew nut, fruit tree...
	10. Other land	All land that is not classified as "Forest" or "Other wooded land".

2010	National class	Definition
	1. Wood forests	Is the forest mainly consisting of the timber-trunk tree species
	2. Bamboo forest	Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloa,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so o
	3. Mixed Wood-Bamboo forest	Are the forests mixed timber an bamboo trees.
	4. Mangrove forests	Are the forest established along the coastal line or river mouths often flooded by salted water tides.
	5. Limestones forest	Are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Is closed canopy plantation, the tree density is in equally in entire the area, the average high more than 2 meters, the diameter at stump more than 2 cm
	7. Unstocked plantation	Is plantation does meet the thresholds above
	8. Bamboo plantation	Bamboo forests planted mainly species belonging to Bambusa family including; (Neohouzeaua dulloa,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so o
	9. Speciality planted trees	Are the land for growing perennial trees like coffee, pepper. cashew nut, fruit
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines or river-mouths often flooded by salty water tides and on the wares sulphate soil in the southwest of southern part.
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2011	National class	Definition
	1. Wood forests	

		Are the forests consisting mainly of timber tree species
	2. Bamboo forest	Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloa, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the average high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m ² /ha.
	7. Unstocked plantation	Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloa, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper, cashew nut, fruit tree...
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2012	National class	Definition
	1. Wood forests	Are the forests consisting mainly of timber tree species

	2. Bamboo forest	Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the average high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m ² /ha.
	7. Unstocked plantation	Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper, cashew nut, fruit tree...
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2013	National class	Definition
	1. Wood forests	Are the forests consisting mainly of timber tree species
	2. Bamboo forest	

		Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the average high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m ² /ha.
	7. Unstocked plantation	Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper, cashew nut, fruit tree...
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2014	National class	Definition
	1. Wood forests	Are the forests consisting mainly of timber tree species
	2. Bamboo forest	

		Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the average high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m ² /ha.
	7. Unstocked plantation	Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper, cashew nut, fruit tree...
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2015	National class	Definition
	1. Wood forests	Are the forests consisting mainly of timber tree species
	2. Bamboo forest	

		Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the avage high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m2/ha.
	7. Unstocked plantation	Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloo,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper. cashew nut, fruit tree...
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2016	National class	Definition
	1. Wood forests	Forests consisting mainly of timber tree species
	2. Bamboo forests	Forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on

	3. Mixed Wood-Bamboo forest	Forests mixed woody and bamboo trees
	4. Palm forests	Forests having main component as palm species
	5. Plantation	Forest predominantly composed of trees established through planting and/or deliberate seeding.
	6. Other land	All land that is not classified as "Forest" or "Other wooded land".

2017	National class	Definition
	1. Wood forests	Forests consisting mainly of timber tree species
	2. Bamboo forests	Forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Forests mixed woody and bamboo trees
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2018	National class	Definition
	1. Wood forests	Forests consisting mainly of timber tree species
	2. Bamboo forests	Forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Forests mixed woody and bamboo trees
	4. Palm forests	Forests having main component as palm species
	5. Plantation	

		Forest predominantly composed of treesestablished through planting and/or deliberate seeding.
	6. Other land	All land that is not classified as "Forest" or "Other wooded land".

Original data and reclassification

1990	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	1. Natural production forest	5 168.95	100.00 %	0.00 %	0.00 %
	2. Natural protection forests	2 798.81	100.00 %	0.00 %	0.00 %
	3.Natural special use forests (protected area)	663.20	100.00 %	0.00 %	0.00 %
	4. Plantation	745.00	100.00 %	0.00 %	0.00 %
	Total	9 375.96	9 375.96	0.00	0.00

2000	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	1. Wood forests	7 772.42	100.00 %	%	%
	2. Bamboo forest	788.71	100.00 %	%	%
	3. Mixed Wood-Bamboo forest	685.77	100.00 %	%	%
	4. Mangrove forests	70.21	100.00 %	%	%
	5. Limestones forest	547.42	100.00 %	%	%
	6. Stocked plantation	595.15	100.00 %	%	%
	7. Unstocked plantation	1 169.55	100.00 %	%	%
	8. Bamboo plantation	59.07	100.00 %	%	%
	9. Speciality planted trees	95.80	100.00 %	0.00 %	0.00 %
	10. Other land	19 223.41	0.00 %	0.00 %	100.00 %
	Total	31 007.51	11 784.10	0.00	19 223.41

2010	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	1. Wood forests	8 226.75	100.00 %	%	%
	2. Bamboo forest	571.88	100.00 %	%	%
	3. Mixed Wood-Bamboo forest	713.82	100.00 %	%	%
	4. Mangrove forests	60.02	100.00 %	%	%
	5. Limestones forest	732.33	100.00 %	%	%
	6. Stocked plantation	1 659.90	100.00 %	%	%
	7. Unstocked plantation	1 071.95	100.00 %	%	%
	8. Bamboo plantation	83.07	100.00 %	%	%
	9. Speciality planted trees	188.41	100.00 %	%	%
	10. Mangrove -Melaleuca plantation	79.93	100.00 %	0.00 %	0.00 %
	11. Other land	17 615.00	0.00 %	0.00 %	100.00 %
	Total	31 003.06	13 388.06	0.00	17 615.00

2011	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	1. Wood forests	8 222.08	100.00 %	%	%
	2. Bamboo forest	561.64	100.00 %	%	%
	3. Mixed Wood-Bamboo forest	708.83	100.00 %	%	%
	4. Mangrove forests	60.82	100.00 %	%	%
	5. Limestones forest	732.02	100.00 %	%	%
	6. Stocked plantation	1 705.46	100.00 %	%	%
	7. Unstocked plantation	1 158.33	100.00 %	%	%
	8. Bamboo plantation	82.57	100.00 %	%	%

	9. Speciality planted trees	205.12	100.00 %	0.00 %	0.00 %
	10. Mangrove -Melaleuca plantation	78.22	100.00 %	%	%
	11. Other land	17 492.91	0.00 %	0.00 %	100.00 %
	Total	31 008.00	13 515.09	0.00	17 492.91

2012	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	1. Wood forests	8 491.52	100.00 %	%	%
	2. Bamboo forest	521.30	100.00 %	%	%
	3. Mixed Wood-Bamboo forest	648.42	100.00 %	%	%
	4. Mangrove forests	58.23	100.00 %	%	%
	5. Limestones forest	704.44	100.00 %	%	%
	6. Stocked plantation	1 873.66	100.00 %	%	%
	7. Unstocked plantation	1 135.99	100.00 %	%	%
	8. Bamboo plantation	81.29	100.00 %	%	%
	9. Speciality planted trees	273.96	100.00 %	0.00 %	0.00 %
	10. Mangrove -Melaleuca plantation	73.29	100.00 %	%	%
	11. Other land	17 145.90	0.00 %	0.00 %	100.00 %
	Total	31 008.00	13 862.10	0.00	17 145.90

2013	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	1. Wood forests	8 429.47	100.00 %	%	%
	2. Bamboo forest	517.69	100.00 %	%	%
	3. Mixed Wood-Bamboo forest	672.97	100.00 %	%	%

	4. Mangrove forests	57.72	100.00 %	%	%
	5. Limestones forest	720.30	100.00 %	%	%
	6. Stocked plantation	1 915.08	100.00 %	%	%
	7. Unstocked plantation	1 076.07	100.00 %	%	%
	8. Bamboo plantation	86.65	100.00 %	%	%
	9. Speciality planted trees	416.53	100.00 %	0.00 %	0.00 %
	10. Mangrove -Melaleuca plantation	61.96	100.00 %	%	%
	11. Other land	17 053.55	0.00 %	0.00 %	100.00 %
	Total	31 007.99	13 954.44	0.00	17 053.55

2014	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	1. Wood forests	8 305.90	100.00 %	%	%
	2. Bamboo forest	397.20	100.00 %	%	%
	3. Mixed Wood-Bamboo forest	658.20	100.00 %	%	%
	4. Mangrove forests	33.40	100.00 %	%	%
	5. Limestones forest	705.40	100.00 %	%	%
	6. Stocked plantation	2 034.20	100.00 %	%	%
	7. Unstocked plantation	1 047.30	100.00 %	%	%
	8. Bamboo plantation	99.40	100.00 %	%	%
	9. Speciality planted trees	464.40	100.00 %	0.00 %	0.00 %
	10. Mangrove -Melaleuca plantation	51.10	100.00 %	%	%
	11. Other land	17 211.50	0.00 %	0.00 %	100.00 %
	Total	31 008.00	13 796.50	0.00	17 211.50

2015	Classifications and definitions	FRA classes			
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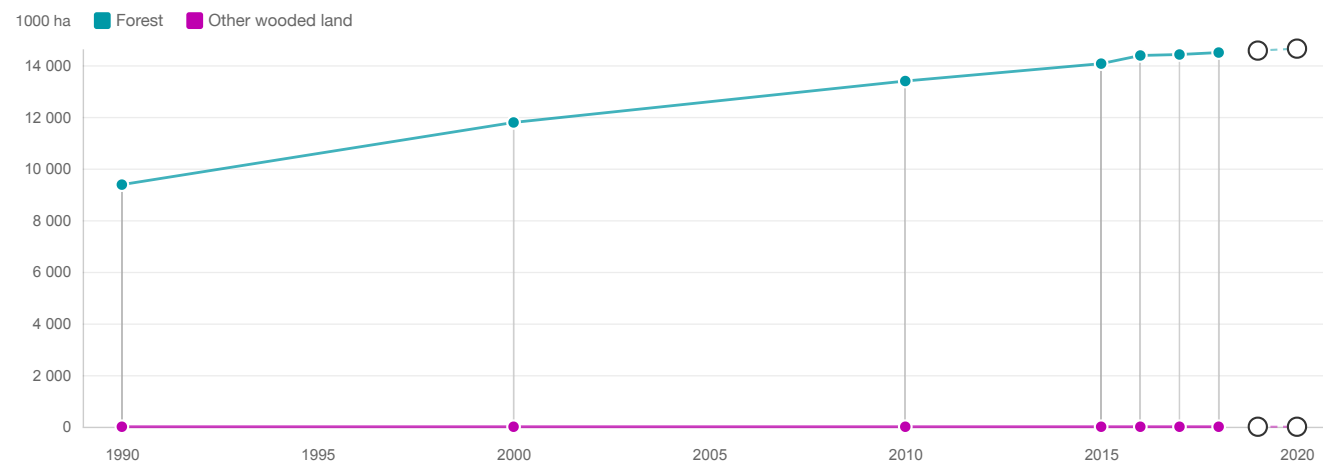
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	1. Wood forests	8 463.05	100.00 %	%	%
	2. Bamboo forest	299.77	100.00 %	%	%
	3. Mixed Wood-Bamboo forest	1 122.21	100.00 %	%	%
	4. Mangrove forests	19.56	100.00 %	%	%
	5. Limestones forest	270.94	100.00 %	%	%
	6. Stocked plantation	2 473.75	100.00 %	%	%
	7. Unstocked plantation	852.84	100.00 %	%	%
	8. Bamboo plantation	73.29	100.00 %	%	%
	9. Speciality planted trees	448.80	100.00 %	%	%
	10. Mangrove -Melaleuca plantation	37.65	100.00 %	%	%
	11. Other land	16 946.14	0.00 %	0.00 %	100.00 %
	Total	31 008.00	14 061.86	0.00	16 946.14

2016	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	1. Wood forests	8 839.15	100.00 %	%	%
	2. Bamboo forests	241.61	100.00 %	%	%
	3. Mixed Wood-Bamboo forest	1 156.59	100.00 %	%	%
	4. Palm forests	4.79	100.00 %	%	%
	5. Plantation	4 135.54	100.00 %	%	%
	6. Other land	16 630.32	0.00 %	0.00 %	100.00 %
	Total	31 008.00	14 377.68	0.00	16 630.32

2017	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land

	1. Wood forests	8 838.17	100.00 %	%	%
	2. Bamboo forests	240.93	100.00 %	%	%
	3. Mixed Wood-Bamboo forest	1 152.86	100.00 %	%	%
	4. Palm forests	4.46	100.00 %	%	%
	5. Plantation	4 178.97	100.00 %	%	%
	6. Other land	16 592.61	0.00 %	0.00 %	100.00 %
	Total	31 008.00	14 415.39	0.00	16 592.61

2018	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	1. Wood forests	8 858.17	100.00 %	0.00 %	0.00 %
	2. Bamboo forests	240.92	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo forest	1 152.01	100.00 %	0.00 %	0.00 %
	4. Palm forests	4.42	100.00 %	0.00 %	0.00 %
	5. Plantation	4 235.77	100.00 %	0.00 %	0.00 %
	6. Other land	16 514.68	0.00 %	0.00 %	100.00 %
	Total	31 005.97	14 491.29	0.00	16 514.68



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	9 375.96	11 784.10	13 388.06	14 061.86	14 377.68	14 415.39	14 491.29	14 567.19	14 643.09
Other wooded land (a)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other land (c-a-b)	21 631.04	19 222.90	17 618.94	16 945.14	16 629.32	16 591.61	16 515.71	16 439.81	16 363.91
Total land area (c)	31 007.00	31 007.00	31 007.00	31 007.00	31 007.00	31 007.00	31 007.00	31 007.00	31 007.00

The FAOSTAT land area figure for the year 2015 is used for all reference years

Climatic domain	% of forest area 2015	Override value
Boreal	0.00	
Temperate	0.00	
Sub-tropical	5.00	
Tropical	95.00	

Comments

As default in the FRA Platform, total land area of Viet Nam is inland area (around 31.007.000 ha) while forested area included areas in sea islands. It recomendated that the total land area should includes island areas so that the total land area of Viet Nam is 33.098.208 ha.

The data of other wooded land is not available and it belongs to other land in the figures

1b Forest characteristics

National data

Data sources

1990	References	The National inventory of natural forests and bare hills and mountains, period 1989 -1993 (FIPI)
	Methods used	National Forest Inventory, Sample-based remote sensing assessment
	Additional comments	The plantation is used FRA Report 2000
2000	References	National forest inventory; national forest change monitoring program (32 program)
	Methods used	Sample-based remote sensing assessment, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and aggregated from the smallest unit (commune) up to higher levels (district, province and nationwide)
2010	References	National forest inventory; National forest change monitoring (32 program)
	Methods used	National Forest Inventory, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and aggregated from the smallest administrative unit (commune) up to higher levels (district, province and nationwide)
2011	References	National forest change monitoring program
	Methods used	National Forest Inventory, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and aggregated from the smallest unit up to higher levels (district, province and nationwide)
2012	References	National forest inventory; National forest change monitoring program
	Methods used	National Forest Inventory, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and aggregated from the smallest unit (commune) up to higher levels (district, province and nationwide)
2013	References	National forest change monitoring program
	Methods used	Registers/questionnaires, Other (specify in comments), Sample-based remote sensing assessment
	Additional comments	Data were statistically aggregated from administrative unit (commune) up to the higher levels and country

2014	References	National forest change monitoring program,
	Methods used	National Forest Inventory, Sample-based remote sensing assessment, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and statistically aggregated from the smallest unit (commune) up to higher levels (district, province and nationwide)

2015	References	National forest change monitoring program(according to Circle 26); National forest inventory and Statistic project 2013-2016 (NFI&S) and National forest inventory, 2016 -2020 (NFI)
	Methods used	Sample-based remote sensing assessment, Other (specify in comments)
	Additional comments	The forest areas and its changes were detected, aggregated from the smallest administrative unit (commune) up to higher units (district, province and nationwide)

2016	References	National forest change monitoring program (according to Circle 26/2017/TT-BNNPTNT dated on 15/11/2017
	Methods used	Registers/questionnaires, Other (specify in comments)
	Additional comments	Forest area and its changes were detected and aggregated from the smallest administrative unit (commune) up to higher levels (district, province and nationwide)

2017	References	National forest change monitoring program
	Methods used	Other (specify in comments), Sample-based remote sensing assessment
	Additional comments	Forest area and its changes were detected and aggregated from the smallest administrative unit (commune) up to the higher levels (district, province and nationwide)

2018	References	National forest change monitoring program
	Methods used	Other (specify in comments), National Forest Inventory
	Additional comments	Forest area and its change were detected and aggregated from the smallest administrative unit(commune) up to the higher levels

Classifications and definitions

1990	National class	Definition
	1. Natural production forest	are used mainly for production and trading of timber and non-timber forest products in combination with protection, contributing to environmental protection.
	2. Natural protection forests	

		are used mainly to protect water sources and land, prevent erosion and desertification, restrict natural calamities and regulate climate, thus contributing to environmental protection. Protection forest may include (1) headwater protection forests; (2) wind- and sand-shielding protection forests; (3) protection forests for tide shielding and sea encroachment prevention; and (4) protection forests for environmental protection.
	3.Natural special use forests (protected area)	are used mainly for conservation of nature, specimens of the national forest ecosystems and forest biological gene sources; for scientific research; protection of historical and cultural relics as well as landscapes; in service of recreation and tourism in combination with protection, contributing to environmental protection. Special-use forest may include (5) national parks; (6) nature conservation zones; (7) landscape protection areas; and (8) scientific research and experiment forests. Special-use forests are presumably planted on special-use forest land
	4. Plantation	Forest predominantly composed of trees established through planting and/or deliberate seeding.

2000	National class	Definition
	1. Wood forests	Are the forests consisting mainly of timber tree species
	2. Bamboo forest	Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloa, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the avage high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m ² /ha.
	7. Unstocked plantation	

		Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloa,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper. cashew nut, fruit tree...
	10. Other land	All land that is not classified as "Forest" or "Other wooded land".

2010	National class	Definition
	1. Wood forests	Is the forest mainly consisting of the timber-trunk tree species
	2. Bamboo forest	Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloa,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so o
	3. Mixed Wood-Bamboo forest	Are the forests mixed timber an bamboo trees.
	4. Mangrove forests	Are the forest established along the coastal line or river mouths often flooded by salted water tides.
	5. Limestones forest	Are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Is closed canopy plantation, the tree density is in equally in entire the area, the average high more than 2 meters, the diameter at stump more than 2 cm
	7. Unstocked plantation	Is plantation does meet the thresholds above
	8. Bamboo plantation	Bamboo forests planted mainly species belonging to Bambusa family including; (Neohouzeaua dulloa,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so o
	9. Speciality planted trees	Are the land for growing perennial trees like coffee, pepper. cashew nut, fruit
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines or river-mouths often flooded by salty water tides and on the wares sulphate soil in the southwest of southern part.
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2011	National class	Definition
	1. Wood forests	

		Are the forests consisting mainly of timber tree species
	2. Bamboo forest	Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloa, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the average high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m ² /ha.
	7. Unstocked plantation	Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloa, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper, cashew nut, fruit tree...
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2012	National class	Definition
	1. Wood forests	Are the forests consisting mainly of timber tree species

	2. Bamboo forest	Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the average high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m ² /ha.
	7. Unstocked plantation	Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper, cashew nut, fruit tree...
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2013	National class	Definition
	1. Wood forests	Are the forests consisting mainly of timber tree species
	2. Bamboo forest	

		Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the average high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m ² /ha.
	7. Unstocked plantation	Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper, cashew nut, fruit tree...
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2014	National class	Definition
	1. Wood forests	Are the forests consisting mainly of timber tree species
	2. Bamboo forest	

		Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the average high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m ² /ha.
	7. Unstocked plantation	Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper, cashew nut, fruit tree...
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2015	National class	Definition
	1. Wood forests	Are the forests consisting mainly of timber tree species
	2. Bamboo forest	

		Are the forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
	4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
	5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
	6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the avage high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m2/ha.
	7. Unstocked plantation	Are the plantations do not met the thresholds above
	8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (Neohouzeaua dulloo,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	9. Speciality planted trees	Are lands for growing perennial trees like coffee, pepper. cashew nut, fruit tree...
	10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
	11. Other land	All land that is not classified as "Forest" or "Other wooded land".

2016	National class	Definition
	1. Wood forests	Forests consisting mainly of timber tree species
	2. Bamboo forests	Forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo,Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on

	3. Mixed Wood-Bamboo forest	Forests mixed woody and bamboo trees
	4. Palm forests	Forests having main component as palm species
	5. Plantation	Forest predominantly composed of trees established through planting and/or deliberate seeding.
	6. Other land	All land that is not classified as "Forest" or "Other wooded land".

2017	National class	Definition
	1. Wood forests	Forests consisting mainly of timber tree species
	2. Bamboo forests	Forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Forests mixed woody and bamboo trees
	4. Palm forests	Forests having main component as palm species
	5. Plantation	Forest predominantly composed of trees established through planting and/or deliberate seeding.
	6. Other land	All land that is not classified as "Forest" or "Other wooded land".

2018	National class	Definition
	1. Wood forests	Forests consisting mainly of timber tree species
	2. Bamboo forests	Forests mainly composing of the species belonging to Bambusa family including; (Neohouzeaua dulloo, Dendrocalamus barbatus, Schizostachyum funghomii, Indosasa angustata, Oxynanthera migrocolliata, Maclurochloa sp, and so on
	3. Mixed Wood-Bamboo forest	Forests mixed woody and bamboo trees
	4. Palm forests	Forests having main component as palm species
	5. Plantation	

		Forest predominantly composed of treesestablished through planting and/or deliberate seeding.
	6. Other land	All land that is not classified as "Forest" or "Other wooded land".

Original data and reclassification

1990	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Natural production forest	5 168.95	100.00 %	0.00 %	0.00 %
	2. Natural protection forests	2 798.81	100.00 %	0.00 %	0.00 %
	3.Natural special use forests (protected area)	663.20	100.00 %	0.00 %	0.00 %
	4. Plantation	745.00	0.00 %	100.00 %	0.00 %
	Total	9 375.96	8 630.96	745.00	0.00

Plantation forest	Area (1000 ha)	...of which introduced
4. Plantation	745.00	%
Total	745.00	—

2000	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Wood forests	7 772.42	100.00 %	0.00 %	0.00 %
	2. Bamboo forest	788.71	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo forest	685.77	100.00 %	0.00 %	0.00 %
	4. Mangrove forests	70.21	100.00 %	0.00 %	0.00 %
	5. Limestones forest	547.42	100.00 %	0.00 %	0.00 %
	6. Stocked plantation	595.15	0.00 %	100.00 %	0.00 %
	7. Unstocked plantation	1 169.55	0.00 %	100.00 %	0.00 %
	8. Bamboo plantation	59.07	0.00 %	100.00 %	0.00 %

	9. Speciality planted trees	95.80	0.00 %	100.00 %	0.00 %
	Total	11 784.10	9 864.53	1 919.57	0.00

Plantation forest	Area (1000 ha)	...of which introduced
6. Stocked plantation	595.15	%
7. Unstocked plantation	1 169.55	%
8. Bamboo plantation	59.07	%
9. Speciality planted trees	95.80	%
Total	1 919.57	—

2010	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Wood forests	8 226.75	100.00 %	0.00 %	0.00 %
	2. Bamboo forest	571.88	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo forest	713.82	100.00 %	0.00 %	0.00 %
	4. Mangrove forests	60.02	100.00 %	0.00 %	0.00 %
	5. Limestones forest	732.33	100.00 %	0.00 %	0.00 %
	6. Stocked plantation	1 659.90	0.00 %	100.00 %	0.00 %
	7. Unstocked plantation	1 071.95	0.00 %	100.00 %	0.00 %
	8. Bamboo plantation	83.07	0.00 %	100.00 %	0.00 %
	9. Speciality planted trees	188.41	0.00 %	100.00 %	0.00 %
	10. Mangrove -Melaleuca plantation	79.93	0.00 %	100.00 %	0.00 %
	Total	13 388.06	10 304.80	3 083.26	0.00

Plantation forest	Area (1000 ha)	...of which introduced
6. Stocked plantation	1 659.90	%
Total	3 083.26	—

Plantation forest	Area (1000 ha)	...of which introduced
7. Unstocked plantation	1 071.95	%
8. Bamboo plantation	83.07	%
9. Speciality planted trees	188.41	%
10. Mangrove -Melaleuca plantation	79.93	%
Total	3 083.26	—

2011	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Wood forests	8 222.08	100.00 %	0.00 %	0.00 %
	2. Bamboo forest	561.64	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo forest	708.83	100.00 %	0.00 %	0.00 %
	4. Mangrove forests	60.82	100.00 %	0.00 %	0.00 %
	5. Limestones forest	732.02	100.00 %	0.00 %	0.00 %
	6. Stocked plantation	1 705.46	0.00 %	100.00 %	0.00 %
	7. Unstocked plantation	1 158.33	0.00 %	100.00 %	0.00 %
	8. Bamboo plantation	82.57	0.00 %	100.00 %	0.00 %
	9. Speciality planted trees	205.12	0.00 %	100.00 %	0.00 %
	10. Mangrove -Melaleuca plantation	78.22	0.00 %	100.00 %	0.00 %
	Total	13 515.09	10 285.39	3 229.70	0.00

Plantation forest	Area (1000 ha)	...of which introduced
6. Stocked plantation	1 705.46	%
7. Unstocked plantation	1 158.33	%
8. Bamboo plantation	82.57	%
9. Speciality planted trees	205.12	%
Total	3 229.70	—

Plantation forest	Area (1000 ha)	...of which introduced
10. Mangrove -Melaleuca plantation	78.22	%
Total	3 229.70	—

2012	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Wood forests	8 491.52	100.00 %	0.00 %	0.00 %
	2. Bamboo forest	521.30	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo forest	648.42	100.00 %	0.00 %	0.00 %
	4. Mangrove forests	58.23	100.00 %	0.00 %	0.00 %
	5. Limestones forest	704.44	100.00 %	0.00 %	0.00 %
	6. Stocked plantation	1 873.66	0.00 %	100.00 %	0.00 %
	7. Unstocked plantation	1 135.99	0.00 %	100.00 %	0.00 %
	8. Bamboo plantation	81.29	0.00 %	100.00 %	0.00 %
	9. Speciality planted trees	273.96	0.00 %	100.00 %	0.00 %
	10. Mangrove -Melaleuca plantation	73.29	0.00 %	100.00 %	0.00 %
	Total	13 862.10	10 423.91	3 438.19	0.00

Plantation forest	Area (1000 ha)	...of which introduced
6. Stocked plantation	1 873.66	%
7. Unstocked plantation	1 135.99	%
8. Bamboo plantation	81.29	%
9. Speciality planted trees	273.96	%
10. Mangrove -Melaleuca plantation	73.29	%
Total	3 438.19	—

2013	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Wood forests	8 429.47	100.00 %	0.00 %	0.00 %
	2. Bamboo forest	517.69	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo forest	672.97	100.00 %	0.00 %	0.00 %
	4. Mangrove forests	57.72	100.00 %	0.00 %	0.00 %
	5. Limestones forest	720.30	100.00 %	0.00 %	0.00 %
	6. Stocked plantation	1 915.08	0.00 %	100.00 %	0.00 %
	7. Unstocked plantation	1 076.07	0.00 %	100.00 %	0.00 %
	8. Bamboo plantation	86.65	0.00 %	100.00 %	0.00 %
	9. Speciality planted trees	416.53	0.00 %	100.00 %	0.00 %
	10. Mangrove -Melaleuca plantation	61.96	0.00 %	100.00 %	0.00 %
	Total	13 954.44	10 398.15	3 556.29	0.00

Plantation forest	Area (1000 ha)	...of which introduced
6. Stocked plantation	1 915.08	%
7. Unstocked plantation	1 076.07	%
8. Bamboo plantation	86.65	%
9. Speciality planted trees	416.53	%
10. Mangrove -Melaleuca plantation	61.96	%
Total	3 556.29	—

2014	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Wood forests	8 305.90	100.00 %	0.00 %	0.00 %
	2. Bamboo forest	397.20	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo	658.20			

	forest		100.00 %	0.00 %	0.00 %
	4. Mangrove forests	33.40	100.00 %	0.00 %	0.00 %
	5. Limestones forest	705.40	100.00 %	0.00 %	0.00 %
	6. Stocked plantation	2 034.20	0.00 %	100.00 %	0.00 %
	7. Unstocked plantation	1 047.30	0.00 %	100.00 %	0.00 %
	8. Bamboo plantation	99.40	0.00 %	100.00 %	0.00 %
	9. Speciality planted trees	464.40	0.00 %	100.00 %	0.00 %
	10. Mangrove -Melaleuca plantation	51.10	0.00 %	100.00 %	0.00 %
	Total	13 796.50	10 100.10	3 696.40	0.00

Plantation forest	Area (1000 ha)	...of which introduced
6. Stocked plantation	2 034.20	%
7. Unstocked plantation	1 047.30	%
8. Bamboo plantation	99.40	%
9. Speciality planted trees	464.40	%
10. Mangrove -Melaleuca plantation	51.10	%
Total	3 696.40	—

2015	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Wood forests	8 463.05	100.00 %	0.00 %	0.00 %
	2. Bamboo forest	299.77	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo forest	1 122.21	100.00 %	0.00 %	0.00 %
	4. Mangrove forests	19.56	100.00 %	0.00 %	0.00 %
	5. Limestones forest	270.94	100.00 %	0.00 %	0.00 %
	6. Stocked plantation	2 473.75	0.00 %	100.00 %	0.00 %
	7. Unstocked plantation	852.84	0.00 %	100.00 %	0.00 %

	8. Bamboo plantation	73.29	0.00 %	100.00 %	0.00 %
	9. Speciality planted trees	448.80	0.00 %	100.00 %	0.00 %
	10. Mangrove -Melaleuca plantation	37.65	0.00 %	100.00 %	0.00 %
	Total	14 061.86	10 175.53	3 886.33	0.00

Plantation forest	Area (1000 ha)	...of which introduced
6. Stocked plantation	2 473.75	%
7. Unstocked plantation	852.84	%
8. Bamboo plantation	73.29	%
9. Speciality planted trees	448.80	%
10. Mangrove -Melaleuca plantation	37.65	%
Total	3 886.33	—

2016	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Wood forests	8 839.15	100.00 %	0.00 %	0.00 %
	2. Bamboo forests	241.61	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo forest	1 156.59	100.00 %	0.00 %	0.00 %
	4. Palm forests	4.79	100.00 %	0.00 %	0.00 %
	5. Plantation	4 135.54	0.00 %	100.00 %	0.00 %
	Total	14 377.68	10 242.14	4 135.54	0.00

Plantation forest	Area (1000 ha)	...of which introduced
5. Plantation	4 135.54	%
Total	4 135.54	—

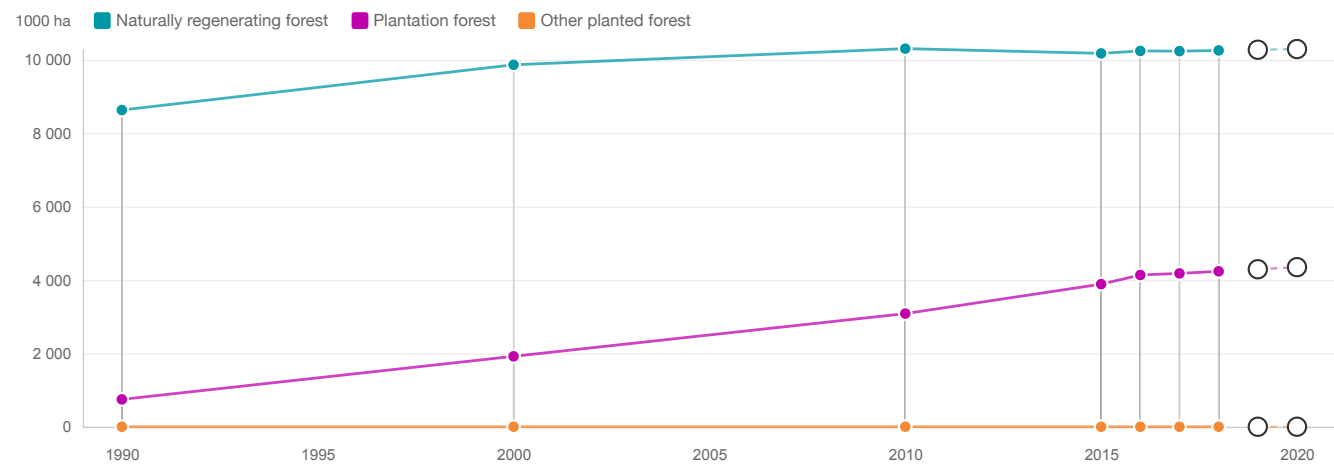
2017	Classifications and definitions		FRA classes		

	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Wood forests	8 838.17	100.00 %	0.00 %	0.00 %
	2. Bamboo forests	240.93	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo forest	1 152.86	100.00 %	0.00 %	0.00 %
	4. Palm forests	4.46	100.00 %	0.00 %	0.00 %
	5. Plantation	4 178.97	0.00 %	100.00 %	0.00 %
	Total	14 415.39	10 236.42	4 178.97	0.00

Plantation forest	Area (1000 ha)	...of which introduced
5. Plantation	4 178.97	%
Total	4 178.97	—

2018	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	1. Wood forests	8 858.17	100.00 %	0.00 %	0.00 %
	2. Bamboo forests	240.92	100.00 %	0.00 %	0.00 %
	3. Mixed Wood-Bamboo forest	1 152.01	100.00 %	0.00 %	0.00 %
	4. Palm forests	4.42	100.00 %	0.00 %	0.00 %
	5. Plantation	4 235.77	%	100.00 %	0.00 %
	Total	14 491.29	10 255.52	4 235.77	0.00

Plantation forest	Area (1000 ha)	...of which introduced
5. Plantation	4 235.77	%
Total	4 235.77	—



FRA categories	Forest area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest (a)	8 630.96	9 864.53	10 304.80	10 175.53	10 242.14	10 236.42	10 255.52	10 274.62	10 293.72
Planted forest (b)	745.00	1 919.57	3 083.26	3 886.33	4 135.54	4 178.97	4 235.77	4 292.57	4 349.37
Plantation forest	745.00	1 919.57	3 083.26	3 886.33	4 135.54	4 178.97	4 235.77	4 292.57	4 349.37
...of which introduced species									
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (a+b)	9 375.96	11 784.10	13 388.06	14 061.86	14 377.68	14 415.39	14 491.29	14 567.19	14 643.09
Total forest area	9 375.96	11 784.10	13 388.06	14 061.86	14 377.68	14 415.39	14 491.29	14 567.19	14 643.09

Comments

Data on area of forest plantations of introduced species not available.

The forest plantations od introduced species, but specific data on their extent is not available.

The introduced species are listed in table below:

No	Vietnamese name	Scientific name
1.	Bạch đàn carnal	<i>Eucalyptus camaldulensis</i>
2.	Bạch đàn lai	<i>Eucalyptus hybrid</i>
3.	Bạch đàn urô	<i>Eucalyptus urophylla</i> S.T.Blake
4.	Keo tai tượng	<i>Acacia mangium</i> Willd
5.	Keo lá tràm	<i>Acacia auriculiformis</i> A.Cunn. ex Benth
6.	Keo lai	<i>Acacia hybrid</i>

1c Primary forest and special forest categories

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017)

The data are secondary data/information which were announced/published annually

National classification and definitions

Almost terms related forests are similar to FAO definitions.

From 2000 -2014 the classification of the forest information tabulars consists of 11 classes (wood forests; bamboo forests; mixed wood-bamboo forests; mangrove; limestone forests; stocked plantation; unstocked plantation; speciality planted trees; mangrove, melaleuca plantation and other land). Since 2016, it consists of 6 classes (wood forests; bamboo forests; mixed wood-bamboo forests; palm forests; plantation and other land);

Original data

Data of forest characteristics from 2010 backward was from the National Forest Inventory (5- year cycle program)

From 2011 up to now is from the National forest inventory and statistic project 2013 -2016 and the National forest change monitoring program

Analysis and processing of national data

Estimation and forecasting

NA

Reclassification into FRA 2020 categories

Almost terms related forests are similar to FAO definitions.

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Primary forest	384.00	187.00	80.00	80.00	80.00
Temporarily unstocked and/or recently regenerated		1 169.55	1 124.90	852.80	900.00
Bamboos		788.71	654.90	373.10	240.93
Mangroves		70.21	69.02	57.20	57.20
Rubber wood	220.00	95.80	188.41	448.80	500.00

Comments

Primary forests are very rare,

Area of mangrove and unstocked plantation in 1990 is not available

Rubber wood area includes other orchards

1d Annual forest expansion, deforestation and net change

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017)

The data are secondary data/information which were announced/published annually

National classification and definitions

1. Wood forests	Are the forests consisting mainly of timber tree species
2. Bamboo forest	Are the forests mainly composing of the species belonging to Bambusa family including; (<i>Neohouzeaua dulloa</i> , <i>Dendrocalamus barbatus</i> , <i>Schizostachyum funghomii</i> , <i>Indosasa angustata</i> , <i>Oxynanthera migrocolliata</i> , <i>Maclurochloa sp</i> , and so on
3. Mixed Wood-Bamboo forest	Are the forests mixed woody and bamboo trees
4. Mangrove forests	Are the forests developed along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded
5. Limestones forest	are the forests developed on the rocky mountains or on the outcrop areas without or with very little land on the surface
6. Stocked plantation	Are the closed canopy plantations, tree density is equally entire the areas, the avage high of trees more than 2m, stump more than 2 cm; total the gap areas without tree less than 1000m2/ha.
7. Unstocked plantation	Are the plantations do not met the thresholds above
8. Bamboo plantation	Are the forests planted species belonging to Bambusa family including; (<i>Neohouzeaua dulloa</i> , <i>Dendrocalamus barbatus</i> , <i>Schizostachyum funghomii</i> , <i>Indosasa angustata</i> , <i>Oxynanthera migrocolliata</i> , <i>Maclurochloa sp</i> , and so on
9. Speciality painted trees	Are lands for growing perennial trees like coffee, pepper. cashew nut, fruit tree...
10. Mangrove -Melaleuca plantation	Are the forests planted along the coastal lines and large estuaries with salinity tides, regularly or periodically flooded and on the acid-sulphate soils: are the forests developed on the acid-sulphate soils, characterized by Melaleuca forests in the South
11. Other land	All land that is not classified as "Forest" or "Other wooded land".

Original data

From the National forest change monitoring program;

All the data on afforestation from the smallest administartion unit is collected and reported to the cetral in charge institution.

Analysis and processing of national data

Estimation and forecasting

Annual forest expansion in a period is estimated by comapared values of the first year and the end year.

The value of period 2015-2020 is estimated based on data of years 2015 and 2018

Reclassification into FRA 2020 categories

The total inland area of country in this report, includes forests and other land. Forest consists of 10 classes (wood forest; bamboo forets mixed wood-bamboo forests; mangrove forests; limestone forest; stocked plantation; unstocked plantation; speciality planted trees; mangrove and mecaleuca plantation.

Since 2014 the forests are reclassified reordered into 5 classes (wood forest; bamboo forets; mixed wood-bamboo forests;; palm forests; plantation)

FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Forest expansion (a)	240.81	160.40	160.62	117.84
...of which afforestation	117.46	116.37	160.62	97.54
...of which natural expansion	123.40	43.98	0.00	20.30
Deforestation (b)	0.00	0.00	25.86	1.59
Forest area net change (a-b)	240.81	160.40	134.76	116.25

Comments

1e Annual reforestation

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017)

The data are secondary data/information which were announced/published annually

National classification and definitions

Almost terms related forests are silmilar to FAO difinitions.

The total inland area of the country consists of forests and other land.

The orders of types and classes of forests are not very consistent overtimes:

From 2000 -2014 the classification of the forest information tabulars consists of 11 classes (wood forests; bamboo forests; mixed wood-bamboo forests; mangrove; limestone forests; stocked plantation; unstocked plantation; speciality planted trees; mangrove, melaleuca plantation and other land). Since 2016, it consists of 6 classes (wood forests; bamboo forests; mixed wood-bamboo forests; palm forests; plantation nd other land);

Original data

The forest areas and forest changed were collected and aggregated from smallest administration unit (commune) up to highger and highger unit (distric, provinve and nation)

Analysis and processing of national data

Estimation and forecasting

The annual reforestation is average estimation of years in the periods

Reclassification into FRA 2020 categories

Almost terms related forests are silmilar to FAO definitions.

FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Reforestation	89.20	211.62	232.97	241.30

Comments

1f Other land with tree cover

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017)

The data are secondary data/information which were announced/published annually

National classification and definitions

Almost terms related forests are silmilar to FAO difinitions.

Original data

-

Analysis and processing of national data

Estimation and forecasting

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017)

The data are secondary data/information which were announced/published annually

Reclassification into FRA 2020 categories

All land that is not classified as "Forest" or "Other wooded land".

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Palms (a)					
Tree orchards (b)					
Agroforestry (c)					
Trees in urban settings (d)					
Other (specify in comments) (e)					
Total (a+b+c+d+e)	–	–	–	–	–
Other land area	21 631.04	19 222.90	17 618.94	16 945.14	16 363.91

Comments

The information is not available.

2 Forest growing stock, biomass and carbon

2a Growing stock

National Data

Data sources + type of data source eg NFI, etc

Data from results of NFI (4 cycles, 1990 -2010);

- The forest area was estimated based on standartization of NFI's forest maps.

- Forest classification was harmonized into 17 classes of which 12 forest classes.

- Since 2011, the forest area have been mainly collected from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017). The data are secondary data/information which were announced/published annually

- The data for stock, biomass and carbon were used from the NFI Cycle IV (2006 -2010); the National forest inventory and statistic (NFI%S) 2013-2016 and the NFI 2016 -2020.

National classification and definitions

Almost terms related forests are silmilar to FAO difinitions.

The total inland area of the country consists of forests and other land.

The orders of types and classes of forests are not very consistent overtimes:

For growing stock estimation, prior to 2010, the forest classification was harmonized into 17 classes of which 12 forest classes

From 2011 -2014 the classification of the forest information tabulars consists of 11 classes (wood forests; bamboo forests; mixed wood-bamboo forests; mangrove; limestone forests; stocked plantation; unstocked plantation; speciality planted trees; mangrove, melaleuca plantation and other land). Since 2016, it consists of 6 classes (wood forests; bamboo forests; mixed wood-bamboo forests; palm forests; plantation nd other land);

Original data

The data for stock, biomass and carbon were used from the NFI Cycle IV (2006 -2010); the National forest inventory and statistic (NFI%S) 2013-2016 and the NFI 2016 -2020.

Analysis and processing of national data

Estimation and forecasting

- The growing stocks were estimated based on the sum of standing volume of all forest types. The average growing stock is quotient of total growing stock and forest area.

- The growing stock of 1990 was taken from the results of the national natural forest and bare land inventory project according to Decision 165-CT dated 18/05/1990 of the Government Council (now is Prime Minister)

- The growing stock of years 2019, 2020 is forcasted based forest trends and average stock of 2016, 2017.

Reclassification into FRA 2020 categories

-

FRA categories	Growing stock m³/ha (over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	76.17	109.72	95.13	96.93	96.93	97.74	97.74	97.74	97.74
Planted forest	38.30	38.30	32.13	45.95	45.95	48.69	48.69	48.69	48.69
...of which plantation forest	38.30	38.30	32.13	45.95	45.95	48.69	48.69	48.69	48.69
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	73.16	98.08	80.62	82.84	82.27	83.52	83.40	83.29	83.17
Other wooded land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FRA categories	Total growing stock (million m³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	657.38	1 082.31	980.30	986.31	992.77	1 000.51	1 002.37	1 004.24	1 006.13
Planted forest	28.53	73.52	99.07	178.58	190.03	203.47	206.24	209.01	211.77
...of which plantation forest	28.53	73.52	99.07	178.58	190.03	203.47	206.24	209.01	211.77
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	685.95	1 155.83	1 079.35	1 164.88	1 182.85	1 203.97	1 208.57	1 213.27	1 217.90
Other wooded land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Comments

- The average stocks (m³/ha) in for years 2015; 2016 were used the data/results of the National forest inventory and statistic project 2013 -2016.
- The average for years 2017, 2018 were upadated by using data from the National forest inventory 2016 -2020.
- Growing stock of plantation in 1900 is not available

2b Growing stock composition

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017). The data are secondary data/information which were announced/published annually

The data for stock, biomass and carbon were used from the NFI Cycle IV (2006 -2010); the National forest inventory and statistic (NFI%S) 2013-2016 and the NFI 2016 -2020.

National classification and definitions

-

Original data

-

Analysis and processing of national data

Estimation and forecasting

The growing stock is estimated based on sum of standing volume of forest type (forest condition)

Reclassification into FRA 2020 categories

-

FRA categories	Scientific name	Common name	Growing stock in forest (million m³ over bark)				
			1990	2000	2010	2015	2020
Native tree species							
#1 Ranked in terms of volume	Phoebe cuneata Bl	Kháo					
#2 Ranked in terms of volume	Nephelium chryseum BL..	Trường chua					
#3 Ranked in terms of volume	Polyalthia nemoralis A. DC..	Nhọc đen					
#4 Ranked in terms of volume	Terminalia myriocarpa Heurk et Muell.- Arg.	Chò xanh					
#5 Ranked in terms of volume	Vatica tonkinensis A. Chev..	Táo mật					
#6 Ranked in terms of volume	Xerospermum noronhianum (BL.) BL..	Trường					
#7 Ranked in terms of volume	Aglaia gigantea Pell..	Gội nếp					
#8 Ranked in terms of volume	Quercus platycalyx (Hick. & Cam.)	Dẻ cau					

FRA categories	Scientific name	Common name	Growing stock in forest (million m³ over bark)				
			1990	2000	2010	2015	2020
Native tree species							
#9 Ranked in terms of volume	Quercus blakei Skan	Rè vàng					
#10 Ranked in terms of volume	Schima wallichii Choisy./ S. khasyana Dyer ex Hook.	Vối thuốc					
Remaining native tree species							
Total volume of native tree species			–	–	–	–	–
Introduced tree species							
#1 Ranked in terms of volume							
#2 Ranked in terms of volume							
#3 Ranked in terms of volume							
#4 Ranked in terms of volume							
#5 Ranked in terms of volume							
Remaining introduced tree species							
Total volume of introduced tree species			–	–	–	–	–
Total growing stock			–	–	–	–	–

Comments

Information on growing stock composition is not yet estimated and analysed.

2c Biomass stock

National Data

Data sources + type of data source eg NFI, etc

Data from results of NFI (4 cycles, 1990 -2010);

- The forest area was estimated based on standartization of NFI's forest maps.

- Forest classification was harmonized into 17 classes of which 12 forest classes.

- Since 2011, the forest area have been mainly collected from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017). The data are secondary data/information which were announced/published annually

- The data for stock, biomass and carbon were used from the NFI Cycle IV (2006 -2010); the National forest inventory and statistic (NFI%S) 2013-2016 and the NFI 2016 -2020.

National classification and definitions

Almost terms related forests are silmilar to FAO difinitions.

Original data

The data for stock, biomass and carbon were used from the NFI Cycle IV (2006 -2010); the National forest inventory and statistic (NFI&S) 2013-2016 and the NFI 2016 -2020.

Analysis and processing of national data

Estimation and forecasting

Based on data collected from sample plots of NFI, the average biomass was estimated for every forest classed (12 classes/conditions) for each eco-region. Biomass etimatition formulas from diameters, tree heights developed by Viet Nam UNREDD phase I.

The biomass of each forest type of a region is average bioomass x area of the forest type; sum of forest types is regional biomass

Sum of all regional biomass is total country biomass; average biomass is estimated based the total biomass and forest area.

Biomass from year 2015 forward are estimated based on the growing stocks according to the formula below:

$$B/ha = M/ha * BEF * WD$$

of which BEF is biomass expansion factor (the default value is1.3); WD is volume weighted -average wood density (the default value is 0.58).

Reclassification into FRA 2020 categories

For estimate biomass, carbon stocks and developing FREL/FRL, the Forest classification was reclassified (harmonized) as below:

1. Forested land

1. Evergreen broadleaves forests - Rich
2. Evergreen broadleaves forests - Medium
3. Evergreen broadleaves forests - Poor
4. Evergreen broadleaves forests - Regrowth
5. Deciduous Forests
6. Bamboo Forests
7. Mixed Wood-Bamboo Forests
8. Coniferous forests

- 9. Mixed Broadleaves and Coniferous Forests
- 10. Mangrove Forests
- 11. Limestone Forests
- 12. Plantation

II. Non Forested Land

- 1. Limestone
- 2. Bare land
- 3. Water Body
- 4. Residential Area
- 5. Other land

FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	55.16	73.95	60.79	62.46	62.06	62.97	62.88	62.63	62.71
Below-ground biomass	14.66	19.89	16.23	16.60	16.49	26.74	16.72	16.65	16.67
Dead wood									

Comments

Biomass stock of dead wood is not available

2d Carbon stock

National Data

Data sources + type of data source eg NFI, etc

Data from results of NFI (4 cycles, 1990 -2010);

- The forest area was estimated based on standartization of NFI's forest maps.
- Forest classification was harmonized into 17 classes of which 12 forest classes.
- Since 2011, the forest area have been mainly collected from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017). The data are secondary data/information which were announced/published annually
- The data for stock, biomass and carbon were used from the NFI Cycle IV (2006 -2010); the National forest inventory and statistic (NFI%S) 2013-2016 and the NFI 2016 -2020.

National classification and definitions

For estimate biomass, carbon stocks and developping FREL/FRL, the Forest classification was reclassified (harmonized) as below:

I. Forested land

1. Evergreen broadleaves forests - Rich
2. Evergreen broadleaves forests - Medium
3. Evergreen broadleaves forests - Poor
4. Evergreen broadleaves forests - Regrowth
5. Deciduous Forests
6. Bamboo Forests
7. Mixed Wood-Bamboo Forests
8. Coniferous forests
9. Mixed Broadleaves and Coniferous Forests
10. Mangrove Forests
11. Limestone Forests
12. Plantation

II. Non Forested Land

1. Limestone
2. Bare land
3. Water Body
4. Residential Area
5. Other land

Original data

Data from results of NFI (4 cycles, 1990 -2010)

Analysis and processing of national data

Estimation and forecasting

The average carbon stock per ha is estimated based on the average biomass according to formula below:

$$C/ha = B/ha * CF$$

of which, B is the average biomass; CF is carbon fraction in biomass. the default value is 0.47 (IPCC 2006)

Reclassification into FRA 2020 categories

For estimate biomass, carbon stocks and developing FREL/FRL, the Forest classification was reclassified (harmonized) as below:

I. Forested land

1. Evergreen broadleaves forests - Rich
2. Evergreen broadleaves forests - Medium
3. Evergreen broadleaves forests - Poor
4. Evergreen broadleaves forests - Regrowth
5. Deciduous Forests
6. Bamboo Forests
7. Mixed Wood-Bamboo Forests
8. Coniferous forests
9. Mixed Broadleaves and Coniferous Forests
10. Mangrove Forests
11. Limestone Forests
12. Plantation

II. Non Forested Land

1. Limestone
2. Bare land
3. Water Body
4. Residential Area
5. Other land

FRA categories	Forest carbon (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Carbon in above-ground biomass	25.93	34.76	28.57	29.36	29.15	29.60	29.56	29.44	29.47
Carbon in below-ground biomass	6.89	9.35	7.63	7.80	7.75	7.78	7.86	7.83	7.83
Carbon in dead wood									
Carbon in litter									
Soil carbon									

Soil depth (cm) used for soil carbon estimates	
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Comments

Carbon stock in 1990

Forest carbon of years 2015, 2016, 2017, 2018, 2019 and 2020 will be calculated and updated next year.

Carbon in dead wood, litter ad soil carbon are not etimated

3 Forest designation and management

3a Designated management objective

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017). The data are secondary data/information which were announced/published annually

National classification and definitions

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Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

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Primary designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production (a)	5 100.00	4 442.73	6 373.49	6 668.20	7 939.84
Protection of soil and water (b)	2 800.00	5 614.07	4 846.19	4 462.64	4 588.06
Conservation of biodiversity (c)	600.00	1 727.30	2 002.28	2 106.05	2 115.19
Social Services (d)		0.00			0.00
Multiple use (e)	0.00	0.00	0.00	0.00	0.00
Other (specify in comments) (f)		0.00			0.00
None/unknown (g)	875.96	0.00	166.10	824.97	0.00
Total forest area	9 375.96	11 784.10	13 388.06	14 061.86	14 643.09

Total area with designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production					
Protection of soil and water					
Conservation of biodiversity					
Social Services					
Other (specify in comments)					

Comments

3b Forest area within protected areas and forest area with long-term management plans

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017). The data are secondary data/information which were announced/published annually

National classification and definitions

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Original data

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Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest area within protected areas	600.00	1 727.38	2 002.28	2 106.51	2 137.33	2 141.32	2 155.18	2 166.47	2 177.75
Forest area with long-term forest management plan	4 568.41	5 826.23	6 616.61	6 592.06	6 920.85	6 915.51	5 936.94	6 973.28	7 009.62
...of which in protected areas		1 337.96	2 002.28	2 106.51	2 043.02	2 047.50	2 056.50	2 056.50	2 056.50

Comments

4 Forest ownership and management rights

4a Forest ownership

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017). The data are secondary data/information which were announced/published annually

National classification and definitions

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Original data

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Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

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FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Private ownership (a)	13.89	2 738.92	3 800.35	4 497.91
...of which owned by individuals	13.89	2 738.92	3 431.56	3 145.47
...of which owned by private business entities and institutions	0.00		110.53	241.63
...of which owned by local, tribal and indigenous communities	0.00		258.27	1 110.41
Public ownership (b)	5 313.41	6 151.04	8 861.32	9 221.50
Unknown/other (specify in comments) (c)	4 048.66	2 894.14	726.39	342.45
Total forest area	9 375.96	11 784.10	13 388.06	14 061.86

Comments

Individuals = Households

Public ownership includes 4.568,41 ha natural forest + 745 ha plantation

4b Holder of management rights of public forests

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017). The data are secondary data/information which were announced/published annually

National classification and definitions

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Original data

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Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

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FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Public Administration (a)	5 313.41	6 151.04	8 861.32	9 221.50
Individuals (b)	0.00	0.00	0.00	0.00
Private business entities and institutions (c)	0.00	0.00	0.00	0.00
Local, tribal and indigenous communities (d)	0.00	0.00	0.00	0.00
Unknown/other (specify in comments) (e)	0.00	0.00	0.00	0.00
Total public ownership	5 313.41	6 151.04	8 861.32	9 221.50

Comments

Individuals = Households

5 Forest disturbances

5a Disturbances

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017). The data are secondary data/information which were announced/published annually

National classification and definitions

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Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

FRA categories	Area (1000 ha)																	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Insects (a)	0.30		0.36	0.07		0.35	0.14	0.34	0.02	0.04	0.04	0.29	0.09					
Diseases (b)																		
Severe weather events (c)																		
Other (specify in comments) (d)	0.40		0.39	1.78	16.60	19.51	23.30	27.23	33.71	41.23	49.60	78.53	67.57	125.20				
Total (a+b+c+d)	0.70	–	0.75	1.85	16.60	19.86	23.44	27.57	33.73	41.27	49.64	78.82	67.66	125.20	–	–	–	–
Total forest area	11 784.10	–	–	–	–	–	–	–	–	–	13 388.06	13 515.09	13 862.10	13 954.44	13 796.50	14 061.86	14 377.68	14 415.39

Comments

Other includes logging (includes illegal logging) and conversion to other classes (rubbre plantation)

5b Area affected by fire

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017)

The data are secondary data/information which were announced/published annually

National classification and definitions

Almost terms related forests are similar to FAO definitions.

Original data

The forest areas and forest changed were collected and aggregated from smallest administration unit (commune) up to higher and higher unit (district, province and nation)

The data of volume/stocks of forest were calculated based data collected from sample plots and remote sensing through National forest inventory and statistic project 2013 -2016 and updated by National forest assessment and monitoring project 2016 -2020

Analysis and processing of national data

Estimation and forecasting

Reclassification into FRA 2020 categories

-

FRA categories	Area (1000 ha)																	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total land area affected by fire																		
...of which on forest	1.84		6.60	1.78	5.56	5.11	1.53	2.32	0.78	0.97	4.55	1.19	1.39	0.50				

Comments

5c Degraded forest

Does your country monitor area of degraded forest		No
If "yes"	What is the national definition of "Degraded forest"?	
	Describe the monitoring process and results	

Comments

6 Forest policy and legislation

6a Policies, Legislation and national platform for stakeholder participation in forest policy

National Data

Data sources + type of data source eg NFI, etc

Information from Ministry of Agriculture and Rural Development

National classification and definitions

NA

Original data

From MARD

Indicate the existence of	Boolean (Yes/No)	
	National	Sub-national
Policies supporting SFM	Yes	Yes
Legislations and regulations supporting SFM	Yes	No
Platform that promotes or allows for stakeholder participation in forest policy development	Yes	Yes
Traceability system(s) for wood products	Yes	Yes

Comments

6b Area of permanent forest estate

National Data

Data sources + type of data source eg NFI, etc

Data collected mainly from Forest Protection Department (Viet Nam Forest administration) through the National forest change monitoring program (Circular No 26/TT-BNPTLN dated 15/11/2017)

The data are secondary data/information which were announced/published annually

National classification and definitions

Almost terms related forests are silmilar to FAO difinitions.

Original data

The forest areas and forest changed were collected and aggregated from smallest administration unit (commune) up to highger and highger unit (distric, provinve and nation)

FRA 2020 categories	Forest area (1000 ha)					
	Applicable?	1990	2000	2010	2015	2020
Area of permanent forest estate	Yes		11 784.58	13 211.96	13 236.89	

Comments

7 Employment, education and NWFP

7a Employment in forestry and logging

National Data

Data sources + type of data source eg NFI, etc

Report of forestry sector-2005

National classification and definitions

-

Original data

Employment through forest with public ownership:

According to report of forestry sector, there are about 20,000 staff working for forest companies, forest protection and special-use forest (about 6 million ha).

Employment through rubber plantations:

An estimate of labour time to take care of plantations, to protect it from fire and collect resin etc. was developed and applied over the areas of rubber plantation in 1.3.2 to provide data on annual employment. It is assumed that one employment takes care of 4 ha plantation.

	1990	2000	2005
Rubber Plantation	222 000	412000	460000
Employment per ha	0.25	0.25	0.25
Employment (FTE)	56 000	103 000	115 000

Employment through forest with private ownership:

There are 3.12 million ha which is allocated in 2005 to households and communities. One person may manage 30 ha of forest on average. Therefore, there are about 104,000 people working on this allocated land.

	1990	2000	2005
Forest with Private Ownership	109,000	2,255,000	3,120,000
Employment per ha	0.033	0.033	0.033
Employment (FTE)	4 000	75 000	104 000

Rangers: about 7,000 staff.

2010

Rubber plantation 2010: 749000 ha

Employment in Rubber: 749000*0.25 = 187250

Employment in fosest with private ownership: 104000

Ranger: 7000

Total : 298000

FRA 2020 categories	Full-time equivalents (1000 FTE)											
	1990			2000			2010			2015		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
Employment in forestry and logging	80.00			198.00			298.00					
...of which silviculture and other forestry activities												
...of which logging												
...of which gathering of non wood forest products												
...of which support services to forestry												

Comments

The employment, the number of labor of forestry sector has increased much in current years, but update data for 2015 are not yet available at the time of reporting.

7b Graduation of students in forest-related education

National Data

Data sources + type of data source eg NFI, etc

Data collected from the National forestry university of Viet Nam and the Information Center of Ministry of Agriculture and Rural Development

National classification and definitions

Equavaent to FAO/internation systems

Original data

Data collected from the National forestry university of Viet Nam and the Information Center of Ministry of Agriculture and Rural Development

FRA 2020 categories	Number of graduated students											
	1990			2000			2010			2015		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
Doctoral degree	0.00	0.00	0.00	5.00	0.00	5.00	12.00	0.00	12.00	30.00	4.00	26.00
Master's degree	72.00	14.00	58.00	218.00	40.00	178.00	1 438.00	412.00	1 026.00	1 096.00	343.00	753.00
Bachelor's degree	96.00	25.00	71.00	706.00	405.00	301.00	2 000.00	1 190.00	810.00	2 199.00	1 552.00	647.00
Technician certificate / diploma	736.00	256.00	480.00	2 139.00	939.00	1 200.00	1 975.00	965.00	1 010.00	4 057.00	1 882.00	2 175.00
Total	904.00	295.00	609.00	3 068.00	1 384.00	1 684.00	5 425.00	2 567.00	2 858.00	7 382.00	3 781.00	3 601.00

Comments

Data on the graduation is only from the National Forestry University of Viet Nam, data from the other institutions will be completed next year

7c Non wood forest products removals and value 2015

National Data

Data sources + type of data source eg NFI, etc

NA

National classification and definitions

NA

Original data

NA

	Name of NWFP product	Key species	Quantity	Unit	Value (1000 local currency)	NWFP category
#1						
#2						
#3						
#4						
#5						
#6						
#7						
#8						
#9						
#10						
All other plant products						
All other animal products						
Total					-	

Name of currency	
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Comments

8 Sustainable Development Goal 15

8a Sustainable Development Goal 15

SDG Indicator 15.1.1 Forest area as proportion of total land area 2015

Indicator	Percent							
	2000	2010	2015	2016	2017	2018	2019	2020
Forest area as proportion of total land area 2015	38.00	43.18	45.35	46.37	46.49	46.74	46.98	47.23

Name of agency responsible	General Statistics Office of Viet Nam
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SDG Indicator 15.2.1 Progress towards sustainable forest management

Sub-Indicator 1	Percent						
	2000-2010	2010-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Forest area annual net change rate	1.28	0.99	2.20	0.26	0.52	0.52	0.52

Name of agency responsible	General Statistics Office of Viet Nam
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Sub-Indicator 2	Forest biomass (tonnes/ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass stock in forest	73.95	60.79	62.46	62.06	62.97	62.88	62.63	62.71

Name of agency responsible	General Statistics Office of Viet Nam
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Sub-Indicator 3	Percent (2015 forest area baseline)							
	2000	2010	2015	2016	2017	2018	2019	2020
Proportion of forest area located within legally established protected areas	12.28	14.24	14.98	15.20	15.23	15.33	15.41	15.49

Name of agency responsible	General Statistics Office of Viet Nam
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Sub-Indicator 4	Percent (2015 forest area baseline)							
	2000	2010	2015	2016	2017	2018	2019	2020
Proportion of forest area under long-term forest management plan	41.43	47.05	46.88	49.22	49.18	42.22	49.59	49.85

Name of agency responsible	General Statistics Office of Viet Nam
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Sub-Indicator 5	Forest area (1000 ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Forest area under independently verified forest management certification schemes	0.00	9.78	133.61	157.32	230.53	227.39	—	—