

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Samoa

Rome, 2014

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

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

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Introductory Text

Place an introductory text on the content of this report

This report is the result of a desk study prepared by the FRA 2010 secretariat in Rome, which summarizes existing available information using the established format for FRA 2010 country reports.

Desk Study?

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

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

Documents for this question:

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

1.1 Categories and definitions

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

1.2 National data

1.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	SamFRIS Database, Samoa Forestry Division, (2004)	N/A	2003	GIS based database, utilize 1999 aerial photos for forest mapping

2	The Forest Resources of Western Samoa (Inventory Report by P.F. Olsen & Company Ltd., Forest Consultants & Managers, 1978)	N/A	1976/77	Report focuses on merchantable
3	FAOSTAT	Total land area	2000	N/A
4	N/A	N/A	N/A	N/A

1.2.2 Classification and definitions

National class	Definition
FOREST	Land with a tree crown cover (or stocking level) of more than 10% and a minimum area size of 1 hectare. Includes man made plantation forests, mangrove forests and other natural forests of various canopy densities.
Natural Forest	Forests that have established naturally, ie not planted by man
Mangrove Forest M	Low-lying coastal areas inundated by saline or brackish water and containing mangrove vegetation, dominated by either <i>Bruguiera</i> or <i>Rhizophora</i> tree spp.
Closed Forest FC	Forest formations with various storeys and total crown coverage of more than 65 - 70%. Includes primary forests as well as forests in an advanced status of reconstitution after logging, farming or other natural causes (fire, cyclone, etc.) (apparently) undisturbed, logged over, formerly cultivated, windfall, other natural causes, swampy
Medium Dense Forest FM	Medium dense forest formations with discontinuous tree layer with one or more storeys and with a crown coverage of more than 40% and less than 65 - 70%. (apparently) undisturbed, logged over, formerly cultivated, windfall, other natural causes, swampy, <i>Merremia</i> vines, presence of secondary spp. (eg <i>Albizia</i>)
Open Forest FO	Forest formations with a discontinuous tree layer but with a crown coverage of at least 10% and less than 40%. Includes highly degraded and depleted forest due to recent logging, farming or natural disasters (storms, fire, etc.) (apparently) undisturbed, logged over, formerly cultivated, windfall, other natural causes, swampy, <i>Merremia</i> vines, presence of secondary spp. (eg <i>Albizia</i>)
Secondary Forest FS	Secondary forest formations after clearing by man (agriculture, logging), wind, fire or other. Tree remnants and juvenile regeneration may be covered by climbing/creeping vines (<i>Merremia</i> and <i>Mikania</i>). <i>Albizia</i> (<i>tamaligi</i>), logged over, formerly cultivated, windfall, burnt land, other natural causes, <i>Merremia</i> vines, presence of scattered coconut trees, presence of mixed crops (eg. bananas, taamu, taro, breadfruit etc), presence of remnant, vegetation of primary forest species
Forest Plantation FP	Man-made forest stands established by planting and/or seeding.

OTHER WOODED LAND	Land with a tree crown cover (or stocking level) of less than 10%. Includes scrub and woodland
Scrub SC	Areas with dominance of woody perennial shrubs of less than 5-7m height and without a definite crown. ground ferns, littoral scrub; native shrubby vegetation occurring on the seaward side of coastal forests; dominated by dwarf shrubs up to 2-3m height, hibiscus, tree ferns, volcanic lava flow, burnt land
OTHER LAND	Land not classified as forest or other wooded landmass defined above. Includes agricultural land, grass land, built-up areas and barren land etc
Agriculture	Land permanently, or temporarily used for agricultural production
Plantations P	Permanent agricultural installations, mostly tree crops or continued / repeated planting of e.g. coconuts or banana (agro-industrial). coconut, coconut with livestock production, coffee / cocoa, banana, coconut mixed with other crops , coconuts overgrown with secondary species
Mixed Crops MC	Land currently and recently cultivated with a mixture of herbaceous and tree crops such as root crops, taro, yam, cassava, breadfruit etc . This includes areas of current cropping and adjacent areas recently abandoned and now overgrown with secondary shrub and tree species. coconut coconuts overgrown with secondary species
Open Land	All land not covered by forest, woody vegetation, or used for agriculture
Grass land G	Open land dominated by herbaceous or grassy vegetation but often with scattered trees ground ferns, marsh wetland with predominantly herbaceous vegetation covering flat areas of soil saturated with freshwater (inland craters) or brackish water (coastal marshes). livestock production, presence of mixed crops (eg. bananas, taamu, taro, breadfruit etc), presence of secondary species, presence of tree ferns
Barren land B	All land lacking any vegetation cover; except for infrastructure and built-up areas. rocky, sandy (incl. beaches), quarry site, burnt land, volcanic lava flow
Built-Up area BU	All settlement areas, encompasses continuous developments, industrial or commercial built-up areas and scattered isolated houses including gardens and inner-city parks. residential, commercial development (eg new hotels), governmental, school, other
Infrastructure I	All roads (hard surfaced or loose) and infrastructure related facilities (e.g. airports / airstrips, ports, wharves, sports compounds etc.) wharf, Sports compound, airport, logging mill
Inland Water	Areas occupied by major rivers, lakes, reservoirs and swamps
Rivers R	Major rivers and creeks
Lakes L	Lakes and waterbodies water reservoirs lagoons
Wetland WL	An area of wetland with a mixture of trees and herbaceous plants marsh wetland (predominantly herbaceous vegetation rather than trees (coastal or montane))

Shadow SH	Shadow areas on flanks of steep valleys or ridges. No information about actual ground cover (but may be the same as adjacent ground cover so CHECK)
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1.2.3 Original data

Forest area										
Most recent data: Based on the 1999 Aerial Photo Interpretation										
Main Land Cover Type	Islands									
	Apolima	Fanuatapu	Manono	Namua	Nuulua	Nuutele	Savaii	Upolu	Samoa	Percent of Samoa land area
arren land	0.12				0.82		1973.42	30.29	2004.65	0.71
Built up areas	3.51		31.25				1771.84	5291.39	7097.99	2.5
Closed Forest						82.48			82.48	0.03
Medium Forest				9.27			72150.98	402.45	72562.7	25.53
Open Forest					13.77	12.97	22271.93	33049.35	55348.02	19.48
Plantation Forest							3797.68	1304.86	5102.54	1.8
Secondary Forest	23.93		53.76				19799.6	17295.96	37173.25	13.08
Grassland	1.98						5192.97	12299.16	17494.11	6.16
Infrastructure							31.8	431.67	463.47	0.16
Lakes							16.08	202.73	218.81	0.08
Mangroves							16.4	353.15	369.55	0.13
Mixed Crops	5.89		52.98				2463.02	7706.29	10228.18	3.6
Plantation	30.19		150.16			5.69	26157.89	26770.24	53114.17	18.69
Rivers							22.47	41.95	64.42	0.02

Scrub	31.77	5.7		5.32	6.36		15065.58	7000.06	22114.79	7.78
Wetland							147.75	597.38	745.13	0.26
Grand Total	97.39	5.7	288.15	14.59	20.95	101.14	170879.4	112776.9	284184.3	100

Some Preliminary Findings:

1. Forest Cover of Samoa is 60%. This is slightly higher than recorded in 1987. 69% of Savaii and 46% of Upolu are covered with forest.
2. Forest is highly degraded and “open” with many invasive weeds. Twenty (20%) of land cover is secondary forest and scrub
3. 80% of coconut plantations are poorly managed and overgrown with weedy trees

Comparison of 1999 forest cover maps with previous forest cover maps

The table below shows the percentage (%) of land area under forests c1954, c1987, c1990 and c1999.

Comparison of historical land area under forest in Samoa

Year	Upolu	Savaii	Total Samoa
c. 1954	65	79	74
c. 1987	43	63	55
<i>c. 1990</i>	25	50	40
c. 1999	46	69	60

Note: the 1990 figures are italicised because they are not directly comparable with the other figures. Sources of data: 1954 (Fox and Cumberland 1962); 1987 (ANZDEC 1990); 1990 (SFD 1994); 1999 (SamFRIS 2004).

From the above supplied data it seem to imply that there has been a 5% increase in forest cover in the period 1987 to 1999 (from 55% national forest cover to 60% forest cover). This however must be carefully noted and caution applied when interpreting as each finding (time series) uses different methodologies and different

forest classifications. Only the 1954 and 1987 data are directly comparable with each other because they both used a similar definition of forest (Ward and Ashcroft) 1998). The 1990 SFD assessment defined the remaining area of primary mature forest so came up with a very low forest cover figure. The assessment of forest cover based on the 1999 aerial photographs was done at a higher mapping scale (1:5,000), mapped smaller forest units (down to 1ha) and identified more forest types (seven) than any other forest cover mapping previously done. Furthermore the assessment involved more detail and systematic ground truthing than ever done before for most of the historical forest cover maps.

Thus, the apparent increase in forest cover between 1987 and 1999 is probably an artifact. It is more likely that forest cover may have been slightly reduced since 1987. The fact that 32% of the total forest cover in 1999 was classified as open forest (less than 40% tree cover) and less than 0.05% was classified as closed forest indicates that the Samoan forest is now extremely open and patchy. Another 24% of the forest cover is classified as secondary regrowth forest. Although there is no data available for direct comparison, historical descriptions and personal observations prior to cyclones Ofa (1990) and Val (1993) suggested that Samoan forests were mostly closed canopy with a smaller element of secondary forest. The open nature of the Samoan forest in recent times and the spread of secondary forest species, many of which are non-native alien species, are cause for considerable concern.

1.3 Analysis and processing of national data

1.3.1 Adjustment

1.3.2 Estimation and forecasting

Forest area

As explained in sections above, estimation and forecasting of trend data can not be done given lack of original and genuine data for the different time series, incomparability of the data given the different methodologies used to collect the data, different objectives and the different map scales used to map the forests. It is now agreed that the reclassification of forests and mapping work done with assistance of FAO (starting 2003) will now provide reference point for future work was done thoroughly and for the whole country.

Coming across these difficulties in analysing and calculating trend data, and experiencing lack of appropriate data, has forced Samoa Forestry Division to think hard and consider likely future options to improve on data and information collected and to make reporting easier. The Division now has complete satellite image coverage of the whole country taken in mid 2004. This will be used to update and improve current data and information held.



1.3.3 Reclassification

Forest area

National classes	FRA categories				
	Forest	OWL	Other land	Inland water	OLWTC
Barren land			100%		
Built up areas			100%		
Closed forest	100%				
Medium forest	100%				
Open forest	100%				
Plantation forests	100%				
Secondary forests	100%				
Grassland			100%		
Infrastructure			100%		
Lakes				100%	
Mangroves	100%				
Mixed Crops					100%
Plantation (coconut)					100%
Rivers				100%	
Scrub		100%			
Wetlands				100%	

1.4 Data

Table 1a

Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	130	171	171	171	171
	Other wooded land	0	22	22	22	22











	Other land	153	90	90	90	90
	... of which with tree cover	N/A	63	63	63	63
	Inland water bodies	1	1	1	1	1
	TOTAL	284.00	284.00	284.00	284.00	284.00

Table 1b

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

Tiers

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

Tier criteria

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

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	N/A	For the year 1990, the data on forest area is as reported in the 1990 FRA Report. It should be noted that though some figures for 1990 and previous years were presented in section 1.2.3 (original data), assessments and inventories yielding those data and information used different map scales and different forest classification systems thus are not comparable if trend data is to be calculated. For the year 2000, 2005 and, both years have same figures. This is so because, and as evident from current field survey findings, it is found that there is little or insignificant change in area of forests and other wooded land since 1999, when current aerial photos now used to do updates was flown.
Other wooded land	N/A	N/A
Other land	For 1990 data, other wooded land is included in the other land category.	N/A
Other land with tree cover	N/A	N/A
Inland water bodies	N/A	N/A
Forest expansion	N/A	N/A
Deforestation	N/A	N/A
Reforestation	N/A	N/A

Other general comments to the table

Given the lack of genuine original data of previous years especially in the 1980s, and incomparability of existing data, the data for the year 2000 are being used as forecasts for FRA 2010 (also see note T1). Based on expert knowledge, it is strongly predicted that the change to forest cover will be insignificant hence area of forests and other wooded land will remain roughly the same. Indeed results from the latest forest mapping exercise undertaken by the Samoa Forestry Division in 2003 and 2004 confirm this fact. This is by comparing forest areas as recorded in the 1999 aerial photos against ground truthing exercises and field checks in 2003 and 2004. It was found that changes to area of forests and other wood lands have not changed much, or if there was, it was insignificant. However, in reality, it is anticipated that there will be some slight reduction in the overall forest area of the whole country in 2010 if on going level of logging activities and agriculture clearings continues unchecked or increases. The Division has total confidence in the 2000 data and findings as they have recently been produced and extracted from the SamFRIS database, a mapping and GIS based information system funded by FAO under the project #Strengthening the Institutional Capacity of the Samoa Forestry Division to Effectively Manage the country's forest resource#. As discussed in section 1.2.4, the work associated with the 2000 data and information is done more thoroughly and with greater level of detail and accuracy. It will now be the reference point when doing future forest assessment or inventories and for reporting to FAO FRA work.

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

Documents for this question:

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

2.1 Categories and definitions

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

2.2 National data

2.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Samoa Forestry Division, SamFRIS Database, (2004)	N/A	1999, 2003	N/A
2	Atherton, J. GIS Design & Development, TCP/SAM/2901(A). Third Mission Final Report.	N/A	1999, 2003	N/A
3	N/A	N/A	N/A	N/A

4	N/A	N/A	N/A	N/A
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2.2.2 Classification and definitions

National class	Definition
Close Forests (FC)	Forest formations with various storeys and total crown coverage of more than 65 - 70%. Includes primary forests as well as forests in an advanced status of reconstitution after logging, farming or other natural causes (fire, cyclone, etc.)
Medium Dense Forests (FM)	Medium dense forest formations with discontinuous tree layer with one or more storeys and with a crown coverage of more than 40% and less than 65 - 70%.
Open Forests (FO)	Forest formations with a discontinuous tree layer but with a crown coverage of at least 10% and less than 40%. Includes highly degraded and depleted forest due to recent logging, farming or natural disasters (storms, fire, etc.)
Secondary Forests (FS)	Secondary forest formations after clearing by man (agriculture, logging), wind, fire or other. Tree remnants and juvenile regeneration may be covered by climbing/creeping vines (Merremia and Mikania).
Forest Plantation (FP)	Man-made forest stands established by planting and/or seeding.
Mangrove Forests (M)	Low-lying coastal areas inundated by saline or brackish water and containing mangrove vegetation, dominated by either Bruguiera or Rhizophora tree spp
Wetland (WL)	An area of wetland with a mixture of trees and herbaceous plants

2.2.3 Original data

National class	Area (1000 ha)
Close Forests (FC)	0.1
Medium Dense Forests (FM)	72.3
Open Forests (FO)	55.3
Secondary Forests (FS)	37.2
Forest Plantation (FP)	5.0
Mangrove Forests (M)	0.4
Wetland (WL)	0.7
Total	171

2.3 Analysis and processing of national data

2.3.1 Adjustment

The reported data on forest characteristics for FRA 2005 has been used for input. It is assumed that the reported area on “Modified natural forest” and “Semi-natural forest” in FRA 2005 corresponds to the FRA 2010 reporting category of “Other natural regenerated forest”. It is further assumed that the sum of the FRA 2005 categories “Productive plantation” and “Protective plantation” correspond to the FRA 2010 reporting category “Planted forest”.

Adjustment not needed.

2.3.2 Estimation and forecasting

The estimation and forecasting is made using the SamFRIS database. SamFRIS is queried to map all forest that correspond closely to the definition of the characteristics of forest that is given in the categories above, namely primary forests, modified natural, semi natural, productive plantation and protective plantation.

2.3.3 Reclassification

National classes	FRA 2005 Category
	Forests
FC	100%
FM	100%
FO	100%
FS	100%
FP	100%
M	100%
WL	100%

National classes	FRA 2005 Categories				
	Forests				
	Primary	Modified natural	Semi-natural	Productive plantation	Protective plantation
FC	20%	50%	30%		
FM		60%	20%	20%	
FO		80%	10%		10%
FS		60%	20%	10%	10%
FP			20%	60%	20%
M			30%	20%	50%
WL		20%	20%		60%

1) Percentage of area under different characteristic is made based on expert knowledge

National classes	FRA 2005 Categories				
	Forests				
	Primary	Modified natural	Semi-natural	Productive plantation	Protective plantation
FC	0.02	0.05	0.03		
FM		43.4	14.5	14.5	
FO		44.2	5.5		5.5
FS		22.3	7.4	3.7	3.7
FP			1.0	3.0	1.0
M			0.1	0.08	0.2
WL		0.1	0.1		0.4
Total	0.02	110.0	28.6	21.3	10.8

2.4 Data

Table 2a







Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	N/A	0.02	0.02	0.02	0.02
	Other naturally regenerated forest	N/A	138.6	138.6	138.6	138.6
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	N/A	32.1	32.1	32.1	32.1
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
TOTAL		.00	170.72	170.72	170.72	170.72

Table 2b

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

Table 2c

Categories	Area (000 hectares)				
	1990	2000	2005	2010	2015
Mangroves (forest and OWL)	N/A	N/A	N/A	N/A	N/A
... of which planted	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Primary forest	Tier 1	Tier 1
Other naturally regenerated forest	Tier 1	Tier 1
Planted forest	Tier 1	Tier 1
Mangroves	Tier 1	Tier 1

Tier Criteria

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

2.5 Comments

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

Other general comments to the table

N/A

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

Documents for this question:

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

3.1 Categories and definitions

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

3.2 National data

3.2.1 Data sources

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

3.2.2 Classification and definitions

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

3.2.3 Original data

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3.3 Analysis and processing of national data

3.3.1 Adjustment

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3.3.2 Estimation and forecasting

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3.3.3 Reclassification

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3.4 Data

Table 3a




Category		Growing stock volume (million m ³ over bark)											
		Forest					Other wooded land						
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015		
	Total growing stock	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 3b

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

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

Item	Value	Complementary information
Minimum diameter (cm) at breast height of trees included in growing stock (X)	N/A	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	N/A	N/A
Minimum diameter (cm) of branches included in growing stock (W)	N/A	N/A
Volume refers to above ground (AG) or above stump (AS)	N/A	N/A

PLEASE NOTE THAT THE DEFINITION OF GROWING STOCK HAS CHANGED AND SHOULD BE REPORTED AS GROWING STOCK DBH 10 CM INCLUDING THE STEM FROM GROUND LEVEL UP TO A DIAMETER OF 0 CM, EXCLUDING BRANCHES.

Table 3c

Category	Net annual increment (m ³ per hectare and year)
	Forest




		1990	2000	2005	2010	2015
	Net annual increment	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A

Table 3d











Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Above ground biomass	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Below ground biomass	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Carbon in above ground biomass	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Carbon in below ground biomass	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Living biomass</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Carbon in dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Carbon in litter	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	<i>Subtotal Dead wood and litter</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Soil carbon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Tiers

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

Tier criteria

Category	Tier for status	Tier for reported trend
Total growing stock	Tier 3: Data sources Recent 10 years National Forest Inventory or remote sensing with ground truthing or programme for repeated compatible NFI 10 years Domestic volume functions Tier 2: Data sources/registers and statistics modelling or old NFI 10 years or partial field inventory Tier 1: Other data sources	Tier 3: Estimate based on repeated compatible tiers 3 (tier for status) Domestic growth functions Tier 2: Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 tier for status Tier 1: Other
Net annual increment	Tier 3: Scientifically tested national volume and growth functions Tier 2: Selection of volume and growth functions as relevant as possible Tier 1: Other	Tier 3: Confirmation/adjustment of functions used through scientific work Tier 2: Review work done to seek alternative functions Tier: 1 Other

Biomass	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied or other domestic or otherwise nationally relevant biomass studies Tier 2: Application of country specific national or sub-national biomass conversion factors from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Carbon in above ground biomass • Carbon in below ground biomass • Carbon in dead wood and litter • Soil carbon 	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied Tier 2: Application of country specific national or sub-national biomass conversion factors form from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

3.5 Comments on growing stock biomass and carbon

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

Other general comments to the table

N/A

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

Documents for this question:

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

4.1 Categories and definitions

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

4.2 National data

4.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Samoa Forestry Division, SamFRIS Database, (2004)	N/A	1999, 2003	N/A
2	Atherton, J. GIS Design & Development, TCP/SAM/2901(A). Third Mission Final Report.	N/A	1999, 2003	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

4.2.2 Classification and definitions

National class	Definition
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Production forest	Forest that is not protected and available for production. Areas for production must comply with a number of requirements such as slope, volume per hectare and approval to log by customary land owners and village communities.
N/A	1) Merchantable or harvestable forests in Samoa must at least have 29m ³ per hectare. While this figure was stated as policy in the early 1980s, it is now not strictly adhered to given the existing poor quality of forests as a result of repeated cyclone damage and human interferences.
N/A	N/A
N/A	N/A

4.2.3 Original data

Samoa Protection and Production Forest Areas (ha)					
(Based on 1999 aerial photo interpretation with 2004 ground truthing. Source: SamFRIS 2004)					
Sum of AREA		ISLAND_NAME			
FOREST STATUS	MAIN_VEG_TYPE	Apolima	Manono	Namua	Nuulua
production forest	FM				
	FO				
	FP				
	FS	23.93	53.76		
	M				
	WL				
production forest Total		23.93	53.76		
protection forest	FC				
	FM			9.27	
	FO				13.77
	FP				
	FS				

	M				
	WL				
protection forest Total				9.27	13.77
Grand Total		23.93	53.76	9.27	13.77
<p>Notes: 1. Protection forest consists of the following land uses: existing and proposed national parks and reserves, community conservation areas, areas above 30% slope (proposed forest conservation areas) and critical catchment areas. Many of these areas may not be actively protected except on paper.</p> <p>2. "Production" forest does not imply that the area is suitable for production, merely that it is forest land that is not protected and is theoretically available for production. Areas actually suitable for production must satisfy a number of other criteria such as have a suitable timber volume of merchantable timber species, be accessible and have community support for logging,</p>					
			Percent of Samoa		
Non Forest		113111.2	39.80		
Forest	<i>ProtectionForest</i>	<i>83804.09</i>	<i>29.49</i>		
	<i>ProductionForest</i>	<i>87268.87</i>	<i>30.71</i>		
	Total Forest	171073.06	60.20		
Land Area Samoa		284184.26	100.00		

4.3 Analysis and processing of national data

4.3.1 Adjustment

Not needed.

4.3.2 Estimation and forecasting

The estimation and forecasting of production and protected forests are based on information supplied by the Samoa Forestry Division (SFD) and the Department of Lands, Survey and Environment (DLSE). For

production forests, the SamFRIS database is used to identify and pick out all forest areas that satisfied the criteria for harvesting. These forests are then labelled as merchantable forests. For the protection forests, the information supplied by DLSE is used. This includes maps and boundaries of all national parks, reserves, community conservation areas, watershed catchment areas and areas identified as having potential or unique values that required protecting for national interests.

4.3.3 Reclassification

Analysis of areas with functions designated by legal or administrative prescriptions:

Total production area	87.2 thousand ha.		
... of which forest	90%	or	78.5 thousand ha
... of which OWL	10%	or	8.7 thousand ha
 Total protection area	 83.8 thousand ha.		
... of which forest	85%	or	71.2 thousand ha
... of which OWL	15%	or	12.6 thousand ha

Reclassification to FRA 2005 categories for “primary function”

	Production areas		Protected areas	
	Forests	OWL	Forests	OWL
Area (1000 ha)	78.5	8.7	71.2	12.6
Production	100%	100%		
Protection of soil and water			40%	50%
Conservation of biodiversity			40%	10%
Social Services			10%	10%
Multiple purposes				10%
No or unknown designation			10%	20%

Total	100%	100%	100%	100%
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The reclassification percentages assigned here are based on expert knowledge

	Production areas		Protected areas	
	Forests	OWL	Forests	OWL
Area (1000 ha)	78.5	8.7	71.2	12.6
Production	78.5	8.7		
Protection of soil and water			28.5	6.3
Conservation of biodiversity			28.5	1.3
Social Services			7.1	1.3
Multiple purposes				1.3
No or unknown designation			7.1	2.4
Total	78.5	8.7	71.2	12.6

Analysis of forest areas without a prescribed designated function

Total designated forest is 149.7 thousand ha (78.5 + 71.2)

Forest area without prescribed designated area is 21.3 thousand ha. (171 thousand ha total forest area minus 149.7 thousand ha.)

Assessment/classification of forest areas without any prescribed designated function

Primary designated function	Assessed percentage ¹	Area (1000 ha)
Production	10	2.1
Protection of soil & water	30	6.4
Conservation of biodiversity	0	0
Social services	0	0

Multiple purpose	40	8.5
No or unknown designation	20	4.3
Total	100%	21.3

1) Assessed percentage of the total area without any prescribed designated function is based on expert knowledge.

4.4 Data

Table 4a



Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	N/A	80.6	80.6	80.6	80.6
	Multiple use forest	N/A	8.5	8.5	8.5	8.5

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	N/A	N/A	N/A	N/A
2 nd	N/A	N/A	N/A	N/A
3 rd	N/A	N/A	N/A	N/A
4 th	N/A	N/A	N/A	N/A
5 th	N/A	N/A	N/A	N/A
6 th	N/A	N/A	N/A	N/A
7 th	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A
TOTAL			.00	

2010

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

Table 4c Pre-filled data from FAOSTAT

Year	FRA 2015 category (1000 m ³ u.b.)	
	Total wood removals	...of which woodfuel
1990	131	70
1991	131	70
1992	131	70

1993	131	70
1994	131	70
1995	131	70
1996	131	70
1997	131	70
1998	131	70
1999	131	70
2000	87.9	70
2001	90.7	70
2002	91.2	70
2003	84.7	70
2004	83.2	70
2005	85.7	70
2006	85.7	70
2007	75.7	70
2008	75.7	70
2009	75.7	70
2010	75.7	70
2011	75.7	70

Tiers

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

Tier Criteria

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

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

Other general comments to the table

The national data or original data covers both production and protected forests (see definition provided above). Expert knowledge is used to reclassify and allocate areas under the FRA categories. Again as for Table 1 (T1) above, expert knowledge and ground checks by Samoa Forestry Division anticipates little or insignificant changes in the area figures for the different categories, hence the 2005 and 2010 figures will be similar to 2000 figures. In Samoa areas categorize as protection forests are closely controlled and monitored by the Environment Division to minimise encroachments and unauthorized developments such as clearing of forests for cultivation of agricultural crops.

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

Documents for this question:

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

5.1 Categories and definitions

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

5.2 National data

5.2.1 Data sources

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

3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

5.2.2 Classification and definitions

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

5.2.3 Original data

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5.3 Analysis and processing of national data

5.3.1 Adjustment

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5.3.2 Estimation and forecasting




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5.3.3 Reclassification

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5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
	Protection of soil and water	N/A	N/A	N/A	N/A	N/A
	... of which production of clean water	N/A	N/A	N/A	N/A	N/A
	... of which coastal stabilization	N/A	N/A	N/A	N/A	N/A

	... of which desertification control	N/A	N/A	N/A	N/A	N/A
	... of which avalanche control	N/A	N/A	N/A	N/A	N/A
	... of which erosion, flood protection or reducing flood risk	N/A	N/A	N/A	N/A	N/A
	... of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	N/A	N/A	N/A	N/A	N/A
...of which public recreation	N/A	N/A	N/A	N/A	N/A
...of which carbon storage or sequestration	N/A	N/A	N/A	N/A	N/A
...of which spiritual or cultural services	N/A	N/A	N/A	N/A	N/A
...of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for reported trend	Tier for status
Protection of soil and water	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A

Tier criteria

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

5.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Protection of soil and water	N/A	N/A
Production of clean water	N/A	N/A
Coastal stabilization	N/A	N/A
Desertification control	N/A	N/A
Avalanche control	N/A	N/A
Erosion, flood protection or reducing flood risk	N/A	N/A
Other protective functions	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A
Public recreation	N/A	N/A
Carbon storage or sequestration	N/A	N/A
Spiritual or cultural services	N/A	N/A
Other ecosystem services	N/A	N/A

Other general comments to the table

N/A

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

Documents for this question:

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

6.1 Categories and definitions

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

6.2 National data

6.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Samoa Forestry Division, SamFRIS Database, (2004)	N/A	1999, 2003	N/A
2	Atherton, J. GIS Design & Development, TCP/SAM/2901(A). Third Mission Final Report.	N/A	1999, 2003	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

6.2.2 Classification and definitions

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

6.2.3 Original data

See 4.2.3.

6.3 Analysis and processing of national data

6.3.1 Adjustment

Not needed.

6.3.2 Estimation and forecasting



See 4.3.2.

6.3.3 Reclassification

See 4.3.3.

6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	N/A	28.5	28.5	28.5	28.5
	Forest area within protected areas	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	Tier 1	Tier 1
Forest area within protected areas	Tier 1	Tier 1

Tier criteria

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

6.5 Comments

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

Other general comments to the table

The national data or original data covers both production and protected forests (see definition provided above). Expert knowledge is used to reclassify and allocate areas under the FRA categories. Again as for Table 1 (T1) above, expert knowledge and ground checks by Samoa Forestry Division anticipates little or insignificant changes in the area figures for the different categories, hence the 2005 and 2010 figures will be similar to 2000 figures. In Samoa areas categorize as protection forests are closely controlled and monitored by the Environment Division to minimise encroachments and unauthorized developments such as clearing of forests for cultivation of agricultural crops.

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

Documents for this question:

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

7.1 Categories and definitions

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

7.2 National data

7.2.1 Data sources

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

7.2.2 Classification and definitions

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

7.2.3 Original data

--

7.3 Analysis and processing of national data

7.3.1 Adjustment

--

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

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

Other general comments to the table
N/A

8. How much forest area is damaged each year?

Documents for this question:

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

8.1 Categories and definitions

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

8.2 National data

8.2.1 Data sources

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

8.2.2 Classification and definitions

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

8.2.3 Original data

--

8.3 Analysis and processing of national data

8.3.1 Adjustment

8.3.2 Estimation and forecasting

8.3.3 Reclassification

8.4 Data

Table 8a

Category		000 ha, number of fires									
		2003		2004		2005		2006		2007	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which forest area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which forest area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 8b

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

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

Outbreak category

1 Insects

2 Diseases

3 Severe weather events

Tiers

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

Tier criteria

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

8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
----------	--	--------------------------------

Burned area	N/A	N/A
Insects	N/A	N/A
Diseases	N/A	N/A
Severe weather events	N/A	N/A

Other general comments to the table		
N/A		

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

Documents for this question:

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

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

Table 9

Category	Area of forest with reduced canopy cover (000 ha)
Reduction in canopy cover	35.18

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 2

Tier criteria

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

Comments

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

Other general comments

--

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

Documents for this question:

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

10.1 Categories and definitions

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

10.2 National data

10.2.1 Data sources

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

10.2.2 Classification and definitions

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

10.2.3 Original data

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10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management				
... of which, in <u>publicly</u> owned forests				
... of which, in <u>privately</u> owned forests				
Legislation and regulations supporting sustainable forest management				
... of which, in <u>publicly</u> owned forests				
... of which, in <u>privately</u> owned forests				

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	N/A
Legislation and regulations supporting sustainable forest management	N/A

Other general comments

--

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

Documents for this question:

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

11.1 Categories and definitions

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

11.2 National data

11.2.1 Data sources

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

Table 11

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

11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	N/A

Other general comments

--

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

Documents for this question:

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

12.1 Categories and definitions

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

12.2 National data

12.2.1 Data sources

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

12.2.2 Classification and definitions

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

12.2.3 Original data

--

12.3 Analysis and processing of national data



12.3.1 Adjustment

12.3.2 Estimation and forecasting

12.3.3 Reclassification

12.4 Data

Table 12

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

Tiers

Category	Tier for status
Forest area intended to be in permanent forest land use	N/A
Permanent forest estate	N/A

Tier Criteria

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

12.5 Comments

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

Other general comments

--

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

Documents for this question:

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

13.1 Categories and definitions

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

13.2 National data

13.2.1 Data sources

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

13.2.2 Classification and definitions

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

13.3 Data

Table 13a

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

Table 13b

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

Other type of forest reporting
N/A

13.4 Comments

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

Other general comments

--

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

Documents for this question:

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

14.1 Categories and definitions

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

14.2 National data

14.2.1 Data sources

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

14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	N/A
... of which for production	N/A
... of which for conservation	N/A

Table 14b

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

2 High conservation value forest delineation	
3 Social considerations community involvement	

Table 14c

Percent of area under forest management plan that is monitored annually	N/A
--	------------

Tiers

Category	Tier for status
Forest area with management plan	N/A
Percent of area under forest management plan that is monitored annually	N/A

Tier criteria

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

14.4 Comments

Category	Comments
Forest area with management plan	N/A
N/A	N/A
N/A	N/A

Other general comments

--

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

Documents for this question:

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

15.1 Categories and definitions

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

Table 15

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

Tiers

Category	Tier for status
Type of stakeholder inputs	N/A

Tier criteria

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

15.2 Comments

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

Other general comments

--

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

Documents for this question:

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

16.1 Categories and definitions

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

16.2 Data

Table 16a













International forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	FSC	0	0	0	0	0	0	0
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	0	0	0	0	0	0	
	PEFC	0	0	0	0	0	0	
	Other	0	0	0	0	0	0	

Table 16b

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

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

Tier criteria

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

Tiers

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

16.3 Comments

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

Other general comments

--

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

Documents for this question:

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

17.1 Categories and definitions

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

17.2 National data

17.2.1 Data sources

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

17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	N/A	N/A	N/A
Public expenditure on forestry	N/A	N/A	N/A
	2000	2005	2010
Name of Local Currency	N/A	N/A	N/A

17.4 Comments

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

Other general comments

--

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

Documents for this question:

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

18.1 Categories and definitions

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

18.2 National data

18.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	SamFRIS Database, Samoa Forestry Division, (2004)	N/A	1999, 2003	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

18.2.2 Classification and definitions

National class	Definition
Customary Land	Land owned, controlled and managed by indigenous Samoan people, village and communes
State Land	Land owned and managed by the Independent State of Samoa (the National Government)
Private Freehold Land	Land owned and controlled by private individuals
Western Samoa Estate Corporation (WESTEC) Land	Land owned and managed now by independent Government Statutory Body, Samoa Land Corporation (SLC).

18.2.3 Original data

Samoa forests under different land tenure		
Land tenure type	Forestarea (1000 hectares)	Percentage of total land area
Customary Land	131.2	46.2
State Land	22.0	7.7
Private Freehold Land	3.2	1.1
Ex-Government Forestry Plantation Leases ¹	4.8	1.7
WESTEC Land	6.7	2.3
State Forest ²	2.6	1.0

Non-forest land ³	113.5	40
Total	284	100%

1. Land leased by the Government of Samoa for forest plantation development. As of 2003, all such land have now been returned to customary landowners including ownership and management of the forest plantations.
2. Government land, owned and managed by the Samoa Forestry Division with natural forests and forest plantations
3. Land not having any forest (includes build-up areas, agriculture lands and other non-forest land use etc)

18.3 Analysis and processing of national data

18.3.1 Adjustment

Not needed.

18.3.2 Estimation and forecasting

The data for Samoa forests by land tenure is derived from SamFRIS database. SamFRIS has separate data layers depicting boundaries and areas of state land, freehold land, WESTEC land, ex-Government forest plantation leases and state forests. Using the forest cover map as a base map, different layers representing the different land tenures particularly the state land, freehold land and the WESTEC land are superimposed over the base map. The composite map produced showed areas of Samoa forests under the different land tenure categories and the area. Forest plantation leases and state forests are mapped and included in the forest cover map. Forests outside the above mentioned land tenure categories are automatically classified as those under customary land tenure.









18.3.3 Reclassification

National classes	FRA 2005 Categories		
	Forestareas		
	Private ownership	Public ownership	Other ownership
Customary Land	100%		
State Land		100%	
Private Freehold Land	100%		
WESTEC ¹ Land		100%	

	Public land	Privateland	Other ownership
Other wooded land	90%	10%	

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	N/A	36.1	36.1	36.1
	... of which owned by the state at national scale	N/A	N/A	N/A	N/A
	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	N/A
	Private ownership	N/A	134.4	134.4	134.4
	... of which owned by individuals	N/A	N/A	N/A	N/A
	... of which owned by private business entities and institutions	N/A	N/A	N/A	N/A
	... of which owned by local, tribal and indigenous communities	N/A	N/A	N/A	N/A
	Unknown ownership	N/A	0	0	0
TOTAL		.00	170.50	170.50	170.50

Tiers

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

Tier criteria

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

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	N/A	N/A	N/A	N/A
Individuals	N/A	N/A	N/A	N/A
Private companies	N/A	N/A	N/A	N/A
Communities	N/A	N/A	N/A	N/A
Other	N/A	N/A	N/A	N/A
TOTAL	.00	.00	.00	.00

Category	Tier for reported trend	Tier for status
Public Administration	N/A	N/A
Individuals	N/A	N/A
Private companies	N/A	N/A
Communities	N/A	N/A
Other	N/A	N/A

18.5 Comments

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

Other general comments to the table
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N/A

19. How many people are directly employed in forestry?

Documents for this question:

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

19.1 Categories and definitions

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

19.2 National data

19.2.1 Data sources

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

19.2.2 Classification and definitions

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



19.2.3 Original data

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19.3 Data

Table 19

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

19.4 Comments

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

Other general comments to the table
N/A

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

Documents for this question:

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

20.1 Categories and definitions

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

20.2 Data

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

Category	Million	Currency	Year for latest available information
Gross value added from forestry (at basic prices)	N/A	N/A	N/A

20.3 Comments

Category	Comments
N/A	N/A

Other general comments

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

Documents for this question:

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

21.1 Categories and definitions

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

21.2 National data

21.2.1 Data sources

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

21.3 Data

Table 21a

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

Table 21b

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

21.4 Comments

Category	Comments
Government target/aspiration for forest area	N/A

Forests earmarked for conversion	N/A
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Other general comments

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