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The Forest Resources Assessment Programme

Sustainably managed forests have multiple environmental and socio-economic functions important at the global, national and local scales, and play a vital part in sustainable development. Reliable and up-to-date information on the state of forest resources - not only on area and area change, but also on such variables as growing stock, wood and non-wood products, carbon, protected areas, use of forests for recreation and other services, biological diversity and forests' contribution to national economies - is crucial to support decision-making for policies and programmes in forestry and sustainable development at all levels.

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Forest Resources Assessment Programme. This country report forms part of the Global Forest Resources Assessment 2005 (FRA 2005), which is the most comprehensive assessment to date. More than 800 people have been involved, including 172 national correspondents and their colleagues, an Advisory Group, international experts, FAO staff, consultants and volunteers. Information has been collated from 229 countries and territories for three points in time: 1990, 2000 and 2005.

The reporting framework for FRA 2005 is based on the thematic elements of sustainable forest management acknowledged in intergovernmental forest-related fora and includes more than 40 variables related to the extent, condition, uses and values of forest resources. More information on the FRA 2005 process and the results - including all the country reports - is available on the FRA 2005 Web site (www.fao.org/forestry/fra2005).

The Global Forest Resources Assessment process is coordinated by the Forestry Department at FAO headquarters in Rome. The contact person for matters related to FRA 2005 is:

Mette Løyche Wilkie
Senior Forestry Officer
FAO Forestry Department
Viale delle Terme di Caracalla
Rome 00100, Italy

E-mail: Mette.LoycheWilkie@fao.org

Readers can also use the following e-mail address: fra@fao.org

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The Global Forest Resources Assessment 2005 Country Report Series is designed to document and make available the information forming the basis for the FRA 2005 reports. The Country Reports have been compiled by officially nominated country correspondents in collaboration with FAO staff. Prior to finalisation, these reports were subject to validation by forestry authorities in the respective countries.

Report preparation and contact person

This report has been prepared by:

Gordon Konairamo
Principal Forestry Officer
Forestry division
E-mail: gordonkona@hotmail.com
Telephone: 677 28 802
Fax: 677 22 824
Address: P.O. Box G24, Honiara
Solomon Islands

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1 Table T1 – Extent of Forest and Other wooded land

1.1 FRA 2005 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 <i>in situ</i> . 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 <i>in situ</i> ; 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”.
Other land with tree cover (Subordinated to “Other land”)	Land classified as “Other land”, spanning 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.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.

1.2 National data

1.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Solomon Islands Forestry Management Project (SIMP), 2003. National Forest Resources Assessment.	H	Natural forests, plantations, community forest plantings, logged forests	2003	Data & information on log volume harvested, areas of logged over forests.
Australian International Development Assistant Bureau, Ministry of Natural Resources, 1994. Solomon Islands National Forest Resources Inventory, Volume One, National overview & Methods	H	Natural forests	1992	Gives an overview of forests and environments of Solomon Islands.
Global Forest Resources Assessment 2000 (FRA 2000), 2001. FAO Forestry Paper 140.	H	Plantations	2000	
FAOSTAT. http://apps.fao.org/faostat/form?collection=LandUse&Domain=Land&servlet=1&hasbulk=0&version=ext&language=EN	H	Total land area, Inland water bodies	1990, 2000	

1.2.2 Classification and definitions

National classes	Definitions
Freshwater Swamp and Riveraine Forest	This forest type is common where there is little micro relief and drainage is impeded. There are extensive areas of freshwater swamp in the Solomons, especially in the New Georgia group of islands, and several distinctive types can be delineated. In different areas, the swamp is dominated by a closed canopy of the trees <i>Camnosperma brevipetiolata</i> or <i>Terminalia brassii</i> , or by a mix of species; <i>Inocarpus fagifer</i> and <i>Syzygium tierneyana</i> are generally restricted to these poorly drained sites, but other species, such as <i>Barringtonia racemosa</i> , <i>Calophyllum vexans</i> , <i>Camnosperma brevipetiolata</i> , <i>Intsia bijuga</i> , <i>Pterocarpus indicus</i> and <i>Terminalia brassii</i> can also be found on well-drained soils.
Freshwater Swamp and River. F., Logged or Degraded	This category seems to include: degraded forests, cleared to sparse remnant forests, very open canopy, with isolated trees. Forests classified as "logged forest type" are not included in the merchantable area if the logging has been done recently. This is because there are grave doubts that the forest will recover within the foreseeable future from the severe logging. Degraded forests seem also to include those areas cleared less recently where regrowth is not enough to permit to define these areas as forest land.
Hill Forests, Mixed Species	Occurs on well-drained sites. It is complex in composition and structure. Hill forest forms the great bulk of forests with commercial potential in the Solomons. A variant of this class of forest is dominated by <i>Casuarina papuana</i> which typically occurs on very alkaline ultra mafic soils.
Hill Forests, Mixed Species, Logged or Degraded	This category seems to include: degraded forests, cleared to sparse remnant forests, very open canopy, with isolated trees. Forests classified as "logged forest type" are not included in the merchantable area if the logging has been done recently. This is because there are grave doubts that the forest will recover within the foreseeable future from the severe logging. Degraded forests seem to include those areas cleared less recently where regrowth is not enough to permit to define these areas as forest land.
Lowland Forests, Mixed Species	On level or nearly level land, has a complex structure and composition and is a variation of the better drained lowland that occurs on hills. Localised elements of freshwater swamp forests may be present. This is the most widespread vegetation type, in Solomon Islands and it contains about 60 common tree species, of which these are very common: <i>Calophyllum kajewskii</i> , <i>C. vitiense</i> , <i>Camnosperma brevipetiolata</i> , <i>Dillenia salomonensis</i> , <i>Elaeocarpus sphaericus</i> . The understory of the lowland rain forest contains a variety of short, thick-stemmed, low statured trees such as <i>Barringtonia papeh</i> , <i>Leea indica</i> and <i>Tapeinosperma</i> spp., as well as palms (<i>Areca catechu</i> , <i>Licuala lauterbachii</i> and <i>Strongylocaryum latius</i>), <i>Pandanus</i> spp. and bamboos.
Lowland Forests, Mixed Species, Logged or Degraded	This category seems to include: degraded forests, cleared to sparse remnant forests, very open canopy, with isolated trees. Forests classified as "logged forest type" are not included in the merchantable area if the logging has been done recently. This is because there are grave doubts that the forest will recover within the foreseeable future from the severe logging. Degraded forests seem also to include those areas cleared less recently where regrowth is not enough to permit to define these areas as forest land.
Upland Rainforest on Hills	It is a montane forest which occurs on higher altitude ridge tops and mountain summit, generally above 600 metres. Occasionally it is present at lower elevations in relatively harsher conditions. Often tall-statured 25 to 35 m lowland rain forest changes abruptly to a lower-statured 15 to 20 m tall montane rain forest on wet, cloudy, windy sites and on ridges of <i>Ardisia</i> and <i>Rhododendron</i> , <i>Metrosideros collina</i> , <i>M. salomonensis</i> , several species of <i>Ficus</i> , <i>Psychotria</i> , and <i>Schefflera</i> , and the gymnosperms <i>Dacrydium</i> cf. <i>xanthandrum</i> and <i>Podocarpus pilgeri</i> . Scrub stands of bamboo are common.
Saline Swamp (usually mangroves)	Saline swamp occurs on land subject to tidal and supra tidal influences such as estuaries and foreshores. Two structural types of mangrove

	forest can be distinguished: one is a low, stunted, 2,5 m tall forest dominated by <i>Rhizophora apiculata</i> ; the other is up to 25 m tall and composed of <i>Bruguiera parviflora</i> , <i>B. sexangula</i> , <i>Rhizophora apiculata</i> and <i>R. stylosa</i> , with local populations of <i>Dolichandrone spathacea</i> . Other mangrove species include <i>Ceriops tagal</i> and <i>Lumnitzera littorea</i> , the latter sometimes forming pure stands. The palm <i>Nypa fruticans</i> is also present. Differing structure and composition are related both to habitat differences and to past habitat disturbance.
Non Forest & Others Areas	This category essentially comprise communities without tree cover such as herbaceous swamp communities and braided river courses. Other areas include plantations established for timber production (these are delineated as one unit and no attempt has been made to dissect or classify them further into species groups).

1.2.3 Original data 1992

National classes	Year 1992 (hectares)
Freshwater Swamp and Riveraine Forest	104801
Freshwater Swamp and River. F., Logged or Degraded	4144
Hill Forests, Mixed Species	1834772
Hill Forests, Mixed Species, Logged or Degraded	269530
Lowland Forests, Mixed Species	115713
Lowland Forests, Mixed Species, Logged or Degraded	120893
Upland Rainforest on Hills	102618
Saline Swamp (usually mangroves)	50572
Non Forest and Others Areas ¹⁾	66557
TOTAL	2669600

1) Forest plantations are included

Original Forest areas as determined by SIFMP (2003)

Loggable areas	Year 2003 (hectares)
Non operable forest and un-forested land	2109600
Un-logged natural forest	377300
Conservation areas	0
Logged over natural forest	288200
Plantations (industrial & village)	30100
Total area	2805200

Plantation areas by species groups, FAO, 2000

Species group	Area		Industrial %	Non Industrial %
	ha	%		
Acacia				
Dahllbergia				
Eucalyptus	12000	24.0	100	
Gmelina	8500	17.0	100	
Mahoganies	5000	10.0	100	
Rubber				
Teak	1500	3.0	100	
Terminalia	7000	14.0	100	
Other Broadleaved	15900	31.9	100	
Casuarina				
Pinus spp				
Other Coniferous				
Unspecified				
Total	49900	100.0		

In the period 1990 to 2000 the annual planting rate is estimated to 1000 hectares per year.

1.3 Analysis and processing of national data

1.3.1 Calibration

Calibration factor applied for original data for 1992

Source	Total land area (1000 ha)
National data	2669.6
FAOSTAT	2799.0
<i>Calibration factor</i>	<i>1.04847</i>

Calibration factor applied for original data for 2003

Source	Total land area (1000 ha)
National data	2805.2
FAOSTAT	2799.0
<i>Calibration factor</i>	<i>0.99779</i>

Calibrated 1992 data

National classes	Year 1992 (hectares)
Freshwater Swamp and Riveraine Forest	109,880.70
Freshwater Swamp and River. F., Logged or Degraded	4,344.86
Hill Forests, Mixed Species	1,923,703.40
Hill Forests, Mixed Species, Logged or Degraded	282,594.12
Lowland Forests, Mixed Species	121,321.61
Lowland Forests, Mixed Species, Logged or Degraded	126,752.68
Upland Rainforest on Hills	107,591.89
Saline Swamp (usually mangroves)	53,023.22
Non Forest and Others Areas	69,783.02
TOTAL	2,798,995.51

Calibrated 2003 data

Loggable areas	Year 2003 (hectares)
Non operable forest and un-forested land	2104937.78
Un-logged natural forest	376466.167
Conservation areas	0
Logged over natural forest	287563.078
Plantations (industrial & village)	30033.479
TOTAL	2799000.51

1.3.2 Estimation and Forecasting

The estimation and forecasting for the reporting years 1990, 2000 and 2005 is carried out after the Reclassification into FRA 2005 classes (See section 1.4.1)

1.4 Reclassification into FRA 2005 classes

Reclassification matrix for original data for 1992

National classes	FRA 2005 categories				
	Forest	OWL	Other land	Inland water	OLWTC
Freshwater Swamp and Riveraine Forest	100%				
Freshwater Swamp and River. F., Logged or Degraded ¹⁾	80%		20%		
Hill Forests, Mixed Species	100%				
Hill Forests, Mixed Species, Logged or Degraded ¹⁾	80%		20%		
Lowland Forests, Mixed Species	100%				
Lowland Forests, Mixed Species, Logged or Degraded ¹⁾	80%		20%		
Upland Rainforest on Hills	100%				
Saline Swamp (usually mangroves)	100%				
Non Forest and Others Areas ¹⁾	75% ³⁾		25%		

- 1) Degraded forests seem to include those areas cleared less recently, damaged by cyclones and by shifting cultivation. There is conflicting evidence on the recovery of forests after logging; several examples exist in Solomon of forest that have been logged and now carry a crop with sufficient volume to be logged again while others report areas logged out with no sign of recovery. Since the document doesn't permit a substantial distinction between these two cases, it is difficult to classify the "logged and degraded forest type". Could be quite correct to classify it as 20 % of non forest-other land area where recovery after a too severe logging is not possible, and the rest as cleared or degraded forests capable to convert again in closed forest coverage. This seems to be quite in line with the forest depletion trend, as expressed in the inventory
- 2) Other land includes 43 225 ha of non forest land, including plantation and 23332 cloudy (obscured on photos).
- 3) Calculated as the area of plantations divided by the total area Non Forest and Other areas.

Reclassification matrix for original data for 2003

National classes	FRA 2005 categories				
	Forest	OWL	Other land	Inland water	OLWTC
Non operable forest and un-forested land	74% ¹⁾		26% ¹⁾		
Un-logged natural forest	100%				
Logged over natural forest	100%				
Plantations (industrial & village)	100%				

¹⁾ Expert estimate

1.4.1 Estimation and forecasting

Linear interpolation and extrapolation was used for the estimation and forecasting.

FRA 2005 Categories	Area (1000 hectares)				
	1990	1992	2000	2003	2005
Forest	2768	2688	2371	2252	2172
Other wooded land	NDA	NDA	NDA	NDA	NDA
Other land	31	111	428	547	627
...of which with tree cover ¹⁾	NDA	NDA	NDA	NDA	NDA
Inland water bodies ²⁾	91	91	91	91	91
TOTAL	2890	2890	2890	2890	2890

¹⁾ Area of "Other land with tree cover" is included in the area reported under "Other land" and should therefore be excluded when calculating the total area for the country.

²⁾ FAOSTAT figure

1.5 Data for national reporting table T1

FRA 2005 Categories	Area (1000 hectares)		
	1990	2000	2005
Forest	2768	2371	2172
Other wooded land	NDA	NDA	NDA
Other land	31	428	627
...of which with tree cover ¹⁾	NDA	NDA	NDA
Inland water bodies	91	91	91
TOTAL	2890	2890	2890

1) Area of "Other land with tree cover" is included in the area reported under "Other land" and should therefore be excluded when calculating the total area for the country.

1.6 Comments to National reporting table T1

No data are available on the occurrence of Other wooded land. If areas of other wooded land exist, they are likely to be included within the figure for Other land.

2 Table T9 – Diversity of tree species

2.1 FRA 2005 Categories and definitions

Category	Definition
Number of native tree species	The total number of native tree species that have been identified within the country.
Number of critically endangered tree species	The number of native tree species that are classified as “Critically endangered” in the IUCN red list.
Number of endangered tree species	The number of native tree species that are classified as “Endangered” in the IUCN red list.
Number of vulnerable tree species	The number of native tree species that are classified as “Vulnerable” in the IUCN red list.

2.2 National data

2.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
IUCN Http://www.fao.org/forestry/site/20747/en	H	Vulnerable species, Endangered species, Critically endangered species	2000	

2.2.2 Original data

Endangered species in the IUCN Red List

Diospyros insularis

Vulnerable species in the IUCN Red list

Aglaia brassii

Aglaia parksii

Aglaia rubrivenia

Archidendron oblongum

Calophyllum confusum

Calophyllum obscurum

Gonystylus macrophyllus

Intsia bijuga

Livistona woodfordii

Mangifera altissima

Mastixiodendron stoddardii

Myristica petiolata

Pterocarpus indicus

Terminalia rerei

2.3 Data for National reporting table T9

FRA 2005 Categories	Number of species (year 2000)
Native tree species	NDA
Critically endangered tree species	0
Endangered tree species	1
Vulnerable tree species	14

2.4 Comments to National reporting table T9

Endangered species in the IUCN Red List

Diospyros insularis

Vulnerable species in the IUCN Red list

Aglaia brassii

Aglaia parksii

Aglaia rubrivenia

Archidendron oblongum

Calophyllum confusum

Calophyllum obscurum

Gonystylus macrophyllus

Intsia bijuga

Livistona woodfordii

Mangifera altissima

Mastixiodendron stoddardii

Myristica petiolata

Pterocarpus indicus

Terminalia rerei

3 Table T11 – Wood removal

3.1 FRA 2005 Categories and definitions

Category	Definition
Industrial wood removal	The wood removed (volume of roundwood over bark) for production of goods and services other than energy production (woodfuel).
Woodfuel removal	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

3.2 National data

3.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
FAOSTAT http://apps.fao.org/faostat/form?collection=LandUse&Domain=Land&service=1&hasbulk=0&version=ext&language=EN	M	-Industrial roundwood production, -Wood fuel production	1988-1992 1998-2003 1988-1992 1998-2003	

3.2.2 Classification and definitions

No definitions available.

3.2.3 Original data

Industrial roundwood production (m³ under bark)

1988	1989	1990	1991	1992	
310000	311000	330000	330000	330000	
1998	1999	2000	2001	2002	2003
734000	734000	734000	554000	554000	554000

Wood fuel production (m³ under bark)

1988	1989	1990	1991	1992	
134000	138000	138000	138000	138000	
1998	1999	2000	2001	2002	2003
138000	138000	138000	138000	138000	138000

FAOSTAT gives values under bark. To get the volume over bark, these values are multiplied by 1.15. The resulting original data is given below:

Industrial roundwood production (1000m³ over bark)

1988	1989	1990	1991	1992	
357	358	380	380	380	
1998	1999	2000	2001	2002	2003
844	844	844	637	637	637

Wood fuel production (1000 m³ over bark)

1988	1989	1990	1991	1992	
154	159	159	159	159	
1998	1999	2000	2001	2002	2003
159	159	159	159	159	159

3.3 Analysis and processing of national data

3.3.1 Estimation and forecasting

The average yearly data from 1988-1992 was used as the estimate for 1990 and the average yearly data from 1998-2002 was used as the estimate for 2000. The original data for 2003 was used as the estimate for 2005.

3.4 Reclassification into FRA 2005 classes

Industrial roundwood -----→ 100% industrial wood removal.

Woodfuel production -----→ 100% woodfuel removal.

3.5 Data for National reporting table T11

FRA 2005 Categories	Volume in 1000 cubic meters of roundwood over bark					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Industrial roundwood	371	761	637			
Woodfuel	158	159	159			
TOTAL for Country	529	920	796	NDA	NDA	NDA