

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Montenegro

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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Report preparation and contact persons

Contact persons

The present report was prepared by the following person(s)

Name (FAMILY NAME, first name)	Institution/address	Email	Tables
Dragan Marinovic	Ministry of Agriculture and Rural Development	marinovic_dragan@yahoo.com	N/A
Aleksandar Stijovic	LUX-DEV, FODEMO project	stijovicaleksandar@gmail.com	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Introductory Text

Place an introductory text on the content of this report

Data is mainly based on the results of the first National Forest Inventory that was made in 2010, and the results published in 2013.

In the past, in Montenegrin forestry we have seen the different, often very discordant data on forest resources at the national level, in terms of their area presence, share of the different origin forests, mixture, height of the wood volume, volume increment etc. In addition, by 2005, only the stand (management) forest inventories have been conducted in Montenegro. Information obtained this way were used for preparation of General and Special management plans, Forest management programs for private forests, that is, for preparation of planned documents of lower order - lower planning level (Operational projects, etc.). By resuming and subliming the results of stand-small area inventories, we have been creating the informational basis for preparation of planned documents of higher order - Spatial plan of Montenegro by 2020, the National Forest Policy, General forest management plans. Given the disputable nature of such a procedure for obtaining the data in the national level, reliability of the above-mentioned planned documents was also relative. The solution for overcoming this situation was the national (large area) forest inventory (NFI), which will provide, in both qualitative and quantitative terms, a reliable and comprehensive database about the forest resources of Montenegro, which can be used as the basis for realistic macro-economic planning in the forestry sector.

The National Forest Inventory of Montenegro was implemented, for the first time on scientifically grounded bases, implemented in partnership between the Ministry of Agriculture and Rural development (MARD), Forest Administration and the FODEMO project (project “ *Forestry Development in Montenegro* ”). The National Forest Inventory, with expert assistance of international consultants from GeoFIS, Germany and UNIQUE forestry and land use, Germany, was implemented in the period from 2009-2012. Thus, the forestry

sector of Montenegro has, in this very important segment of forest management, was placed into an equal position with the forestry sectors of highly developed countries of the European Union and the World . In accordance with the need of realistic planning and requests for correspondence with both local and international organizations, the defined methodology of the national forest inventory shall take into account the wide scope of information on forest resources status, their spatial distribution, structural characteristics, time development, degree of utilization and changes. Within that meaning, the basic and most frequently required information collected by national inventory shall pertain to the area under forests, volume compared to the tree species and forest types, age, increment and productive possibilities of forests, habitat conditions, possibilities of multi-functional utilization, plans, and recording in the entire territory of the state. Pursuant to the above stated, the central database on Montenegrin forests has been established, which will, along with the permanent updating as per individual inventory cycles, enable its utilization by forestry and other governmental sectors and professional-expert associations, individuals, then correspondence with relevant international institutions and non-governmental organizations. That will create the basic assumptions for successful overcoming of numerous deficiencies that were burdening the forestry sector.

Desk Study?

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

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

Documents for this question:

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

1.1 Categories and definitions

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

1.2 National data

1.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	NFI 2010	Forest, OWL	2010	Secondary data source. MCPFE, 2010. State of Europe's Forests 2010MCPFE, 2007. State of Europe's Forests 2007

2	MONSTAT 2012	Inland water, Country area	2012	Secondary data source.: FAOSTAT data, 2007.
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

1.2.2 Classification and definitions

National class	Definition
Forest	Forests shall be considered areas of land bigger than 50 ares, covered with forest trees whose crown canopy is above 10 % of the land area and dominant trees higher than 5m, that is, the trees capable of reaching that height in their physiological maturity phase.
Forest land (Other wooded land (international term) = forest land (national term))	Forest land shall be considered to be areas bigger than 50 ares, covered by forest trees:- forest trees higher than 5 m, or the trees capable of reaching that height in their maturity phase and whose crown canopy is 5 – 10% of the land area;- forest trees that are not capable of reaching the height of above 5 m, that is, covered by the combination of trees and low forest vegetation provided that their density is higher than 10% of the area.Forest and other forest land shall also be deemed temporarily barren areas where the natural regeneration of forest trees has started, fire protectionlanes, areas covered with non-forest vegetation whose area is less than 50 ares if it is within the forest and other forest land complexes, forest treesprotection belts larger than 50 ares and wider than 20 m and forest roads.
Not forest and not forest land(Other land (international term) = Not forest and not forest land (national term))	All land that is not defined as “Forest” or “Forest land”.
N/A	N/A

1.2.3 Original data

Forest expansion, reforestation

Montenegro's land area is characterised by a high coverage with forest of 59.9% (826 782 ha, relative standard error 0.5 %) and forestland of 9.9 % (137 480 ha), together forest and forestland cover 69.8% (964 262 ha) of the land area of 1 381200 ha . Montenegro's forests are located partly on very steep and rocky slopes; in total thus 11.9 % of the forest area and 8.4 % of the forestland area have not been accessible for tree measurement. The estimate for the wood volume in the total forest of Montenegro is 122 Mio m³ with an increment of 2.9 Mio m³ and based on the assumption that the inaccessible forests show relative volumes per ha that are one third below the level of accessible forests. This, while the wood volume in accessible forests that cover 728 133 ha amounts to 116 Mio m³ with an increment of 2.8 Mio m³ (assessed with a relative standard error of 1.5 %).

The information available on the forests in Montenegro was mainly relaying on data from forest management in public forests in the central and northern part of Montenegro. Major statistical properties are considerably

different to so far existing best estimates that have been published in the National Forest Policy, the Spatial Plan of Montenegro Until 2020 in 2008 and in the report State of Europe's Forest 2011:

- Forest area (now at 59.9 %, so far estimated at 45 %),
- Volume (122 mio m³ vs. 72 mio m³) and
- Volume increment (2.9 mio m³ vs. 1.4 mio m³).

1.3 Analysis and processing of national data

1.3.1 Adjustment

Forests cover 59.9% (826.782 ha) of the total land area of Montenegro, forest land covers 9.9% (137.480 ha) of the land of Montenegro, and the rest area are Not forest and not forest land.

1.3.2 Estimation and forecasting

Forest area

Forest and forest land cover 69.8% of the land in Montenegro. Other land (not forest and not forest land) is calculated deducting from the total area.

1.3.3 Reclassification

1.4 Data

Table 1a

Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	626	626	626	827	827
	Other wooded land	118	118	118	137	137
	Other land	601	601	601	381	381
	... of which with tree cover	N/A	N/A	N/A	N/A	N/A
	Inland water bodies	36	36	36	36	36
	TOTAL	1381.00	1381.00	1381.00	1381.00	1381.00

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	0.26	N/A	N/A	N/A	N/A
	... of which afforestation	N/A	N/A	N/A	0.21	N/A	N/A	N/A	N/A
	... of which natural expansion of forest	N/A	N/A	N/A	0.05	N/A	N/A	N/A	N/A
	Deforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which human induced	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reforestation	N/A	N/A	N/A	0.32	N/A	N/A	N/A	N/A
	... of which artificial	N/A	N/A	N/A	0.14	N/A	N/A	N/A	N/A

Tiers

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

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> • Forest • Other wooded land • Afforestation • Reforestation • Natural expansion of forest • Deforestation 	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	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

1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	Forest area,data from the NFI	Continuous implementation of the NFI,every 10 years
Other wooded land	OWL area,data from the NFI	Continuous implementation of the NFI,every 10 years

Other land	Other land (not forest and not forest land) is calculated deducting from the total area .	N/A
Other land with tree cover	N/A	N/A
Inland water bodies	Inland water bodies is calculated during preclassification deducting from the total area.	N/A
Forest expansion	A comparison of NFI data with the previous data available from forest management plans and other sources	N/A
Deforestation	A comparison of NFI data with the previous data available from forest management plans and other sources	N/A
Reforestation	A comparison of NFI data with the previous data available from forest management plans and other sources	N/A

Other general comments to the table

Previous data (based on existing management plans) were related only to the forest area and forest land . The data were accurate for high forest and part of copice forest, but the data for the shrubs, shrubberies and maquis and private forests previously given expert estimate. The first national forest inventory included the entire territory of the country and all categories of forests and forest lands. For Forests and OWL, 2010.,and 2015. data are from NFI. Other land with tree cover data are not available.

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 outside 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	NFI 2010 and NFI methodology 2009	Forests byStand origin (natural and planted forest)	2010	N/A
2	MONSTAT 2012	Basic data on forestry development Growing and regeneration Artificial reforestation and replanting	2012	N/A
3	Forest management plans (FMP)	Forests byStand origin(natural and planted forest)	permanently	N/A

4	NFI Montenegro	Forest area, planted forest	2010	N/A
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2.2.2 Classification and definitions

National class	Definition
Naturally forests	Natural forests are forests that naturally regenerate from seeds or from shoots and sprouts-Naturally regenerated high forest stands - regenerated from seed,-Coppice forests - regenerated from shoots and sprouts.
Semi-natural forests - Mixed standsby origin	Forest of naturally regenerated native species where there are clearly visible indications of human activities, as well as forests established through planting, seeding or assisted natural regeneration.
Artificial forests	Forest of native species, established through planting or seeding mainly for production of wood or non wood goods, as well as protecting functions mainly for soil protection.
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.
Naturaly forest	Naturally regenerated forest of native species where there are no clearly visible indications of human activities and Naturally regenerated forest where there are clearly visible indications of human activities

2.2.3 Original data

<p>Stand origin</p> <p>Definition: The origin of a forest may either be plantation, natural regeneration or a combination of these and is recorded in classes as defined below.</p> <p>This attribute is assessed for forest but not for forest land.</p> <p>The stand origin is determined with direct evaluation on the field using all evidence available or based on the prior descriptions. If a clear differentiation between artificial regeneration and natural regeneration is not possible, natural regeneration is assumed. If for a tree the decision between vegetative propagation origin and origin from a seedling is not possible then origin from a seedling is assumed.</p> <p><i>Table - List of classes for the attribute “Stand origin”</i></p>
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ID	Class	Explanation
1	Naturally regenerated high forest stand	<p>No planted trees at all.</p> <p>To separate naturally regenerated high forest stands vs. coppice forests: a minimum of 1/3 the trees need to have originated from seedlings (pollards are considered coppice trees)</p>
2	Coppice forests	<p>No planted trees at all.</p> <p>To separate naturally regenerated high forest stands vs. coppice forests see above</p>
3	Mixed stands by origin	<p>Up to 2/3 all of trees originate from planting.</p> <p>Must note fulfil conditions for class 5</p>
4	Artificial stands	<p>More than 2/3 of all trees originate from planting.</p> <p>Must not fulfil conditions for class 5</p>
5	Previous coppice stands converted to high forest	<p>In forest under conversion to high forest coppice trees usually also occur. If the conversion process is advanced and there are at least 10 or more seedlings (or nursery plants) with a height of at least 1,3 m per ar (100 m²), the stands will be classified as previous coppice stands converted to high forest.</p>

2.3 Analysis and processing of national data

2.3.1 Adjustment

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2.3.2 Estimation and forecasting

Trend is expecting to be growing.

2.3.3 Reclassification

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2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	N/A	N/A	N/A	109	109
	Other naturally regenerated forest	N/A	N/A	N/A	710	710
	... of which of introduced species	N/A	N/A	N/A	0.8	0.94
	... of which naturalized	N/A	N/A	N/A	0	0
	Planted forest	N/A	N/A	N/A	8	8
	... of which of introduced species	N/A	N/A	N/A	0	0
TOTAL		.00	.00	.00	827.00	827.00

Table 2b

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

Table 2c

Categories	Area (000 hectares)				
	1990	2000	2005	2010	2015

Mangroves (forest and OWL)	0	0	0	0	0
... of which planted	0	0	0	0	0

Tiers

Category	Tier for status	Tier for reported trend
Primary forest	Tier 1	Tier 1
Other naturally regenerated forest	Tier 3	Tier 3
Planted forest	Tier 3	Tier 3
Mangroves	Tier 3	Tier 3

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	Forest area obtained from national category "protection forest" and "national parks".	N/A
Other naturally regenerating forest	NFI data	N/A
Planted forest	NFI data, MONSTAT and FMP	N/A
Mangroves	N/A	No mangrove forest in Montenegro

Other general comments to the table

Areal data for the introduced tree species used from the NFI, 2010. For values for 2015, we used extrapolation: 5-years' increment added to the 2010 value, where for the area increment a surrogate was taken from the volume increment.

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	National Forest and Forest land Administration Policy,	Volume of growing stock, composition of stock	2008	Secondary data source
2	FRA 2005 Country report for Serbia & Montenegro (State Statistical Office)	Forest cover and growing stock in state owned forests	1995	Statistical Bulletin
3	MCPFE, 2011. State of Europe's Forests 2011	N/A	2010	Secondary data source.
4	MCPFE, 2007. State of Europe's Forests 2007	N/A	2007	Secondary data source.

5	NFI	Growing stock, Net annual increment (NAI), Dead wood, Carbon in dead wood, Total biomass, Carbon in biomass,	2010	Primary data source
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3.2.2 Classification and definitions

National class	Definition
Growing stock	Volume over bark of all living trees more than 10 cm in diameter at breastheight (or above buttress if these are higher). Includes the stem from ground level or stump height up to a top diameter of 7 cm, and may also include branches to a minimum diameter of 7 cm.
Net annual increment (NAI)	Average annual volume of gross increment over the given period of 10 years, less that of natural losses on all trees, measured to minimum diameters as defined for “Growing stock”.
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 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.
Total biomass	Above-ground biomass + below-ground biomass (All living biomass above the soil including stem, stump, branches, bark, seeds, and foliage + all biomass of live roots. Fine roots of less than 2mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.)
Carbon in biomass	Carbon in above-ground biomass + below-ground biomass.

3.2.3 Original data

Growing stock					
Coniferous or Broadleaves	P forest (1000 ha)	V (m3) millions of m3*	V/ha (m3/ha)	Total increment (Zv) millions of m3*	Zv/ha

Inaccessible forest area (canyons, cliffs, etc.).	158	5.2	0,0	0,0	0,0
Broadleaves trees	510	69.4	136,3	1.5	2,9
Coniferous trees	159	46.8	293,5	1.3	8,1
Total	827	121.4*	159,8	2.8	3,8

* 121.4 milions ofm3 represent all accessible forest + inaccessible (116.2+5.2)

Biomass stock and Carbon stock

Coniferous or Broadleaves	Total V millions of m3	Total increment millions of m3	Total biomass millions of m3	Carbon in biomass (1000 t)	Carbon in increment (1000t)
Broadleaves trees	69.4	1.5	108.8	36.693	772
Coniferous trees	46.8	1.3	77.9	17.298	476
Total	116.2	2.8	186.7	53.991	1.248

Data is for Biomass, forest & forestland in Montenegro

Data is for Biomass, forest

3.3 Analysis and processing of national data

3.3.1 Adjustment

3.3.2 Estimation and forecasting

Growing stock

Data source are from NFI 2010. Trend of growing stock is expecting to be growing.

Biomass and Carbon stock

Biomass and carbon are determined using the single trees wood volume and tree species group specific conversionan expansion factors

3.3.3 Reclassification

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	72.6	72.6	121.4	121.4	N/A	1.5	1.5	0.4	0.4
	... of which coniferous	N/A	31.6	31.6	48.9	48.9	N/A	0.5	0.5	0.17	0.17
	... of which broadleaved	N/A	41	41	72.5	72.5	N/A	1	1	0.25	0.25

Table 3b

Category/Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010

1 st	Fagus moesiaca / Fagus sylvatica	Beach group*	N/A	N/A	N/A	52
2 nd	Picea abies	Norway Spruce (Smrca)	N/A	N/A	N/A	24.2
3 rd	Abies alba	Silver Fir (Jela)	N/A	N/A	N/A	15.2
4 th	N/A	Hardwod group* (tvrđi lišćari)	N/A	N/A	N/A	5.5
5 th	Quercus cerris	Turkey Oak (Cer)	N/A	N/A	N/A	4.7
6 th	Pinus nigra	Black Pine (Crni bor)	N/A	N/A	N/A	3.4
7 th	N/A	Soft wood group*(meki lišćari)	N/A	N/A	N/A	3.1
8 th	N/A	Precious hardwood *(Plemeniti lišćari)	N/A	N/A	N/A	3
9 th	Quercus petraea	Sessile Oak (Kitnjak)	N/A	N/A	N/A	2.5
10 th	N/A	Other Quercus species* (Ostale vrste hrastova)	N/A	N/A	N/A	1.8
Remaining			N/A	N/A	N/A	6
TOTAL			.00	.00	.00	121.40

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)	>10	Minimum d.b.h. of 10,1cm used as limity for inclusion of trees in forest inventory in case of high forests and 5,1cm in case of coppice forests.
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	7	N/A
Minimum diameter (cm) of branches included in growing stock (W)	7	N/A
Volume refers to above ground (AG) or above stump (AS)	AG	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
CFRQ	Net annual increment	N/A	N/A	N/A	3.8	3.8
CFRQ	... of which coniferous	N/A	N/A	N/A	8.1	8.1
CFRQ	... of which broadleaved	N/A	N/A	N/A	2.9	2.9

Table 3d

Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
CFRQ	Above ground biomass	N/A	57.18	57.18	96.87	96.87	N/A	1.23	1.23	0.34	0.34
CFRQ	Below ground biomass	N/A	9.52	9.52	15.99	15.99	N/A	0.2	0.2	0.06	0.06
CFRQ	Dead wood	N/A	4.97	4.97	8.31	8.31	N/A	0.1	0.1	0.03	0.03
TOTAL		.00	71.67	71.67	121.17	121.17	.00	1.53	1.53	.43	.43

Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
CFRQ	Carbon in above ground biomass	N/A	28.59	28.59	48.43	48.43	N/A	0.61	0.61	0.17	0.17
CFRQ	Carbon in below ground biomass	N/A	4.76	4.76	8	8	N/A	0.1	0.1	0.03	0.03
CFRQ	<i>Subtotal Living biomass</i>	N/A	33.35	33.35	56.43	56.43	N/A	0.71	0.71	0.2	0.2
CFRQ	Carbon in dead wood	N/A	2.48	2.48	4.15	4.15	N/A	0.05	0.05	0.01	0.01

	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	2.48	2.48	4.15	4.15	N/A	0.05	0.05	0.01	0.01
	Soil carbon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		.00	35.83	35.83	60.58	60.58	.00	.76	.76	.21	.21

Tiers

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

Tier criteria

Category	Tier for status	Tier for reported trend
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	Data source are from NFI 2010	N/A
Growing stock of broadleaved coniferous	Data source are from NFI 2010	N/A
Growing stock composition	Data source are from NFI 2010	N/A
Net annual increment	Data source are from NFI 2010. The forests are characterised by a dominance of broadleaved trees that cover 70.1% of the forest area. The share of broadleaved of the volume is 59.8 %. The broadleaved trees show a volume per ha of only 136.3 m ³ /ha, the conifers in contrast of 293.5 m ³ /ha. The share of confers of the volume is 40.2 %. The increment of conifers is with 8.1 m ³ per ha on average higher as well compared to 2.9 m ³ / ha of broadleaved trees and conifers contribute with 46.6 % to the entire increment.	N/A
Above-ground biomass	Data source are from NFI 2010	N/A
Below-ground biomass	Data source are from NFI 2010	N/A
Dead wood	Data source are from NFI 2010	N/A
Carbon in above-ground biomass	Data source are from NFI 2010	N/A
Carbon in below-ground biomass	Data source are from NFI 2010	N/A
Carbon in dead wood	Data source are from NFI 2010	N/A

Carbon in litter	Data source are from NFI 2010	N/A
Soil carbon	Data source are from NFI 2010	N/A

Other general comments to the table

The values for category biomass and carbon are for accessible forest + inaccessible forest - 121,4 mil m³. Total biomass = Above ground + Below ground. Also, we used extrapolation (and for growing stock).

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	National Forest and Forest land Administration Policyt, 2008,	Forests intended for timber production, protection forests, National parks	2008	Secondary data source
2	MCPFE 2007	Protective forests	2000	Secondary data source
3	NFI	Forests intended for timber production, protection forests, National parks	2010	Primary data source
4	Forest law	Forest functions	2010	Primary data source
5	Wood fuels consumption in 2011 in Montenegro, 2013 Statistical office of Montenegro (MONSTAT)	Wood for energy purposes	2013	Primary data source
6	Montenegro Statistical Office - MONSTAT- Statistical yearbook 2013	Non wood forest product	2013	Primary data source

7	Report from Forest Administration - (STUDY OF FINANCING THE FOREST AND FORESTRY MONTENEGRO)	Non wood forest product	2012	Primary data source
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4.2.2 Classification and definitions

National class	Definition
Productional functions	Commercial forests are forests with emphasis on production functions. Production forest functions especially include: 1) production of wood forest products and 2) production of non-timber forest products,
Environmental functions	Protection forests are forests with emphasis on ecological functions. Environmental forest functions especially include: 1) protection of forest soil against washing off and erosion, 2) conservation of water regime, 3) conservation of biological and landscape diversity, 4) mitigation of macro climate changes, regulation and improvement of micro climate, 5) sequestration of carbon dioxide from air, 6) oxygen production and 7) conservation of habitat conditions for development of wild flora and fauna.
Social functions	Special purpose forests may be the forests where social functions are extremely stressed and the forests located within the National Parks. Social forest functions shall especially include: 1) protection of settlements and infrastructure objects against erosion and land slides, 2) favourable impact on water supply for different purposes, 3) providing space for rest and recreation, 4) development of ecotourism, 5) favourable impact on pasture and hunting, 6) research and education, 7) protection of natural heritage, 8) protection of cultural heritage, 9) supplying local population with fuelwood, 10) conservation of rural areas and, 11) defence of the country.
N/A	N/A

4.2.3 Original data

Forests available for wood supply are all forests outside national parks that are accessible and that are not subject to further substantial legal or natural harvesting restrictions. Forests available for wood supply include forests with multiple functions, such as e.g. soil protection, avalanche protection or recreation where harvesting can still take place based on adequate management.

Considering ownership and protection by national park four different management regimes exist in Montenegro:

1. Management of the public forests outside National Parks by the Forest Administration

2. Management of private forests outside National Parks by private forest owners supported by the Forest Administration
3. Management of the public forests inside National Parks by the National Park Administration
4. Management of private forests inside National Parks by private forest owners supported by the National Park Administration

Basic area data for these four management regimes are provided in Table.

- Forest management regimes, total forest area, accessible forest area, and forests available for wood supply (FAWS)

Ad- mini- strative respon- sibility	Ownership	Total forest		Accessible forest			Forests available for wood supply (FAWS)		
		Area	Share of total area	Area	Share of acc. f.	Share of total forest	Area	Share of FAWS	Share of total forest
		ha	%	ha	%	%	ha	%	%
Public Enterprise "National Parks"	1 State owned	34.353,3	4,2	21.128,4	2,9	61,5%	0,0	0,0%	0,0%
	2 Private	8.499,0	1,0	6.604,3	0,9	77,7%	0,0	0,0%	0,0%
	Interim total	42.852,3	5,2	27.732,7	3,8	64,7%	0,0	0,0%	0,0%
Forest directorate	1 State owned	398.440,7	48,2	349.763,1	48,0	87,8%	334.781,3	49,6%	84,0%
	2 Private	385.488,7	46,6	350.637,2	48,2	91,0%	340.608,3	50,4%	88,4%
	Interim total	783.929,4	94,8	700.400,2	96,2	89,3%	675.389,6	100,0%	86,2%
Total	Entire total	826.781,6	100,0	728.133,0	100,0	88,1%	675.389,6	100,0%	81,7%

4.3 Analysis and processing of national data

4.3.1 Adjustment

Trend is expecting to be growing.

4.3.2 Estimation and forecasting

The future harvesting potential, the annual average yield for 2011 to 2012 was determined for the forests available for wood supply, that cover 81.7 % of the total forest area, as 1.4 Mio m³ for one approach and 1.8 Mio m³ for a year. Both applied approaches use average harvesting rates per main stand type, species group and diameter class of economic forest and apply an overall 10% reduction to consider for restrictions due to specific forest functions. The first approach is based on harvests planned in currently valid forest management plans and the second is based on regional yield tables; both approaches consider the need for a conversion of a considerable part of the beech coppice to high forest. The difference between the two approaches can be explained by cautious forest management plans with reference to canopy closure, a factor that could not be so well considered in the second approach. It may also be an indication that forest management planning could foresee to some degree higher harvests. Both estimates are far below the increment. Provided that future harvests are in the magnitude of the annual yield of model this will lead to a strong increase of the volume per ha from 155.5 m³/ ha to 171.5 m³/ ha by 2020. Due to the extremely high fellings that have been conducted during the 20th century the forests currently lack of stems with large diameters, thus of valuable assortments but have the potential to improve in the long term when the current harvests stay within that range.

4.3.3 Reclassification

Forest Designated functions

National class	Area (1000 ha)	FRA 2010 Designated function
Protection forests, -subclass For soil, water and other ecosystem functions *	n.a.	
National Parks	106	100% Conservation of biodiversity
Timber production	675.4	100 % Production
other	45.3	100% No or unknown function

* Protection forest exist and they are included in other 3 category. Those data are not available

Forests are the dominating land category in all national parks, with the exception of the Skader Lake national park.

The national parks are reclassified to Forest area within protected areas in next Table

National park	National park	Forest			Forest land			Forest & forest land		
		Area (from GIS)	Area	% of total forest area in NPs	% of NP area	Area	% of total forest land area in NPs	% of NP area	Area	% of total f. & fl. area in NPs
	[ha]	[ha]			[ha]			[ha]		

1, Skadar Lake	43283.7	4328.9	10.1	10.0	1805.4	22.4	4.2	6134.3	12.1	14.2
2, Biogradska Gora	5668.6	3454.3	8.1	60.9	199.4	2.5	0.5	3653.7	7.2	64.5
3, Lovcen	6267.4	5209.8	12.2	83.1	104.2	1.3	0.2	5314.0	10.4	84.8
4, Durmitor	34003.5	19374.9	45.2	57.0	5038.4	62.6	11.6	24413.2	48.0	71.8
5, Prokletje	16668.8	10484.5	24.5	62.9	900.2	11.2	2.1	11384.7	22.4	68.3
Total	105892.0	42852.3	100.0	40.5	8047.6	100.0	18.6	50899.9	100.0	48.1

4.4 Data

Table 4a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	N/A	543	543	675	675
	Multiple use forest	0	0	0	0	0

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	Wild honey	N/A	3324	11
2 nd	Forest fruits and fresh mushrooms	Rubus sp., Vaccinium sp., Fragaria sp., Boletus sp., Cantarelus sp..	1227	1
3 rd	Wild meat	Wild boar, rabbit, partridge and pheasant	147.7	12
4 th	Skins	Fox and wolf	43.43	10

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			4742.13	

2010	
Name of local currency	EUR

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	446	185
1991	N/A	N/A
1992	N/A	N/A
1993	N/A	N/A
1994	N/A	N/A
1995	N/A	N/A
1996	N/A	N/A
1997	N/A	N/A
1998	N/A	N/A
1999	N/A	N/A
2000	N/A	N/A
2001	N/A	N/A
2002	N/A	N/A
2003	N/A	N/A
2004	434	170
2005	473	165
2006	519	176
2007	450	141
2008	488	179
2009	366	174
2010	396	162

2011	446	185
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Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 3	Tier 2
Multiple use forest	Tier 3	Tier 2

Tier Criteria

Category	Tier for status	Tier for reported trend
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

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

Wood fuels consumption in 2011 in Montenegro by Statistical office of Montenegro (MONSTAT) 2013 show 732 912 m³ (heating wood) and 326 649 m³ for wood industry, and 40 495 m³ for export. Total forest production based on this document are 1 100 056m³.

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	Forest law	Forest functions	2010	Primary data source
2	Water Law	Forest functions	2007	Secondary data source

3	National Forest and Forest land Administration Policy, 2008,	Forests intended for timber production, Protection forests, National parks	2008	Secondary data source
4	Fourth National Report of Montenegro to the Convention on Biological Diversity	Forest functions	2010	Primary data source
5	Law on National Parks	Forest functions	2009	Secondary data source

5.2.2 Classification and definitions

National class	Definition
Environmental functions	Forests with emphasis on ecological functions. Environmental forest functions especially include: 1) conservation of biological and landscape diversity 2) sequestration of carbon dioxide from air
Social functions	Social forest functions shall especially include: 1) providing space for rest and recreation, 2) development of ecotourism, 3) research and education, 4) protection of natural heritage, 5) protection of cultural heritage,
N/A	N/A
N/A	N/A

5.2.3 Original data

Name and national category of the protected areas of nature	Surface (ha)	Share in the state territory in percentage (13.812 km ²)
<i>National parks</i>	101.733	<u>7,77%</u>
Skadarsko jezero	40.000	
Lov#en	6.400	
Durmitor	33.895	
Biogradska gora	5.400	
Prokletije	16.038	
<i>Reserves of nature</i>	650	<u>0.047%</u>
- in the NP Skadarsko jezero: the Monastery land, Pan#eva oka, Crni žar, Grmožur and Omerova gorica	420	

- in the NP Durmitor: Crna Poda	80	
Salt Pans in Tivat	150	
<i>Monuments of nature</i>	13638.54	<u>0.987%</u>
#alovi#a klisura	1.600	
Lipska pe#ina	/	
Cave Magara	/	
Cave Globo#ica	/	
Cave Spila at Trnov / Virpazar	/	
Cave Babatuša	/	
Novakovi#a cave at Tomaševo	/	
Pit Duboki do at Njeguši	/	
Canyon of the river Piva	1.700	
Canyon of the river Komarnica	2.300	
Communities of <i>Pinetum mughi montenegrinum</i> at Ljubišnja (1.000ha), Durmitor (5.200ha) and Bjelasica (400ha)	1.000 + (5.600)	
Communities of <i>Pinus heldraichii</i> in Orjen (300ha), Lov#en (300ha) and Rumija (100ha)	400 + (300)	
Individual dendrological facilities: <i>Quercus robur scuteriensis</i> at #urioc near Danilovgrad, <i>Quercus pubescens</i> in Orahovcu near Kotor, olive trees at Mirovica, the Old Bar and Ivanovi#i, Budva etc	/	
Beaches of the Skadar Lake	(<2)	
Velika plaža in Ulcinj	600	
Mala plaža in Ulcinj	1,5	
Beach Valdanos	3	

Beach Velji pijesak	0,5	
Beach Topolica, Bar	2	
Beach Sutomore	4	
Beach Lušica, Petrovac	0,9	
Beach Šanj	3,5	
Beach Peštin	1,5	
Buljarica	4	
Beach Petrovac	1,5	
Beach Drobnji pijesak	1	
Beach Sveti Stefan	4	
Beach Milošer	1	
Beška Plaža	5	
Slovenska plaža, Budva	4	
Beach Mogren	2	
Jaz	4	
Beach Pržno	2	
Savinska Dubrava in Herceg Novi	35,46	
Botanical reserve of laurel and oleander, above the well Sopot near Risan	40	
Botanical garden of mountain flora in Kolašin	0,64	
Botanical garden of the general Kovačević in Grahovo	0,93	
Park “13 jul” and “Njegošev park” in Cetinje	7,83	
Park of the hotel Boka in Herceg Novi	1,2	
City park in Tivat	5,897	
Park of the Castle at Topolica	2	

<i>Special natural features areas</i>	354,7	<i>0,025%</i>
Hill Spas, above Budva	131	
Semi-island Ratac with Žukotrljica	30	
Island the Old Ulcinj	2,5	
Hill Trebjesa, Nikšić	159	
<i>Areas protected by municipal decisions</i>	15.000	<i>1.086%</i>
Kotorsko – Risanski Bay, municipality of Kotor	15.000	
TOTAL UNDER NATIONAL PROTECTION	124.964,24	9,047%

The sum of of the protected areas of nature on the table is higher for 6412,00 ha because of the overlapping (double counting) on individual cases - monuments of nature, reserves of nature and special natural features areas that are partly located under the National parks

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
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
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Other general comments to the table

We do not have clearly separate areas primarily only for the protection of soil and water, we have a forest area with protection function (social functions or environmental functions)Based on the development plans and programs of forest management in the future it is planned to map forest functions and to obtain the functions forest area. The available FMP data have been used to estimate the proportion of protection forests. These are forests, where the main forest function(s) is protection. That does not mean, that protection forests are not managed and that no any harvest is taking place. In general, it is assumed that – like in the past FMP – the harvesting is possible, but the rate is much lower. The proportion of forests in the sub-sample of 241.600 ha in the central FMP database (that consists mainly of forests located in the north of Montenegro) shows that 76% is economic forest and 24% (58.000 ha) are forests where other functions are dominating. Of these, protection forests (protection forest by Forest law which serve for protection of land, water springs and streams, protection of inhabited areas, economic and other facilities, etc.) make nearly 100%. Mainly soil protection and a small percentage of water protection functions are summarized under protection forests.

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	National Forest and Forest land Administration Policy, 2008, http://www.gov.me/files/1210596615.pdf	Protection forests, National parks	2008	Secondary data source
2	MCPFE 2007	Protective forests	2000	Secondary data source
3	NFI 2010	National parks, emerald sites, Natura 2000	2010	Primary data source
4	Low about national parks	Protected areas, national parks	2009	Primary data source
5	Low about nature protection	National parks, protected area	2009	Primary data source

6.2.2 Classification and definitions

National class	Definition
National parks	National Parks are natural sites of land or sea, or land and sea designated to protect the ecological integrity of one or more ecosystems for present and future generations, with preventing the inappropriate use of natural resources or other adverse actions and activities, and provide a basis for spiritual, scientific, educational, and recreational needs and the needs of visitors that should be compatible with the environment and culture.
Other protected area	Natura 2000 (on establishing) and Emerald zones
N/A	N/A
N/A	N/A

6.2.3 Original data

	Forest area		Forestland area		forest and forestland [ha]	
	[ha]	% of total forest	[ha]	% of total Forestland	[ha]	% of total forest & forestland
Forests/ Forestland in national parks	42852.3	5.2	8047.6	5.9	50899.9	5.3
Forests in Emerald zone areas	120579.9	14.6	21054.0	15.3	141633.9	14.7
Forests/ forestland in national parks or Emerald zone areas	126452.4	15.3	22867.4	16.6	149319.7	15.5
Forests/ forestland in national park or Emerald zone or in inaccessible area	194622.3	23.5	30531.7	22.2	225154.0	23.3
Total forest area	826781.6	100.0	137480.2	100.0	964261.9	100.0

A large part of the forests and forestland is under protection considering forests in national parks and in the Emerald zones. 5.2 % of the forests are located in national parks, 14.6 % of the forests are located in Emerald zone areas. Forest that is either located in a national park in an Emerald zone or that is located on inaccessible area comprise 23,5 % of the forest area of Montenegro, for forestland this share of quasi protected area is 22.2%. Within the national parks and the Emerald zones forest and forestland have a high percentage of the entire area, forests cover 40.5 % of the area of national parks and 47.6 % of the Emerald areas.

National park	National park	Forest			Forest land			Forest & forest land		
		Area (from GIS)	Area	% of total forest area in NPs	% of NP area	Area	% of total forest land area in NPs	% of NP area	Area	% of total f. & fl. area in NPs
	[ha]	[ha]			[ha]			[ha]		
1, Skadar Lake	43283.7	4328.9	10.1	10.0	1805.4	22.4	4.2	6134.3	12.1	14.2
2, Biogradska Gora	5668.6	3454.3	8.1	60.9	199.4	2.5	0.5	3653.7	7.2	64.5
3, Lovcen	6267.4	5209.8	12.2	83.1	104.2	1.3	0.2	5314.0	10.4	84.8
4, Durmitor	34003.5	19374.9	45.2	57.0	5038.4	62.6	11.6	24413.2	48.0	71.8
5, Prokletje	16668.8	10484.5	24.5	62.9	900.2	11.2	2.1	11384.7	22.4	68.3
Total	105892.0	42852.3	100.0	40.5	8047.6	100.0	18.6	50899.9	100.0	48.1

6.3 Analysis and processing of national data

6.3.1 Adjustment

6.3.2 Estimation and forecasting

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	27	27	27	43	43
	Forest area within protected areas	13	13	13	192.53	192.53

Tiers

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

Tier criteria

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

6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	Covers an area of national parks by NFI data	Trend is expanding , because of the creation and establishment of two regional parks (Komovi and Piva)
Forest area within protected areas	Covers an area of national parks and emerald sites by NFI data	N/A

Other general comments to the table

Forest area within protected areas: MCPFE Class 1.1- Include forests and OWL in national parks. For 1.1. the area was estimated (this category not yet entirely established). MCPFE Class 1.2- Includes forests and OWL in nacional parks except the core area (class 1.1). MCPFE Class 1.3 - Includes EMERALD areas. Proposed NATURA 2000 areas not yet established. MCPFE Class 1.3 - Not existing. Conservation of biodiversity - Forests/ Forestland in national parks

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	NFI, 2010.	Invasive tree species	2010	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
Invasive species	invasive species are alien species of wild plants, animals and fungi, whose colonization or spreading threatens the biodiversity of Montenegro;
Invasive plants	the plants that are naturally wider (without direct human assistance) in natural or semi-natural habitats, and cause significant changes in the composition and structure of communities and ecosystem processes are not represented in Montenegro or represented a negligible percentage.
N/A	N/A
N/A	N/A

7.2.3 Original data

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7.3 Analysis and processing of national data

7.3.1 Adjustment

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7.3.2 Estimation and forecasting

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7.3.3 Reclassification

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7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
1. Robinia pseudoaccacia	0	0.72
2.	0	0
3.	0	0
4.	0	0
5.	0	0

6.	0	0
7.	0	0
8.	0	0
9.	0	0
10.	0	0
Total	0	0.72

Tiers

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

Tier Criteria

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

7.5 Comments

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

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	NFI	Forest fire	2010	Primary data source
2	ICPforest	Insects, fungi and forest fire	2012	Secondary data source
3	Monstat	Demages in forest	2012	Primary data source
4	N/A	N/A	N/A	N/A

8.2.2 Classification and definitions

National class	Definition
Number of fires	Number of fires per year.
Area affected by fire	Area burned per year.
Damages caused by insects	Damages caused by insects in m3
Damages caused by diseases	Damages caused by diseases in m3
Damages by natural disasters	Damages by natural disasters in m3

8.2.3 Original data

A major threat to Montenegro's forests is forest fire. The areas damaged per year comprise nearly 1 % of the forest area. The majority of the fires in forests occurred in the Karst Region, but the North Region and the East Region show high damages by fire as well.

The areas damaged by fire over period of 5 (2006 – 2010) years identified by the NFI inventory comprise more than 30 000 ha (30 532 ha or 4.2 % of the forest area) and when forest land is included more than 40 000 ha (40 227 ha or 4.7% of the area of forest and forest land) are damaged by fire.

Forest by forest category for 5 years period (2006 -2010)

Forest category	Damaged forest area [ha]	Share per damage type [%]
111, High forest	13.345,08	43,7
113, Coppice forest	17.186,89	56,3
Total	30.531,97	100,0

Forest by forest type for 5 years period (2006 -2010)

Forest type (grouped)	Damaged forest area [ha]	Share per damage type [%]
1, Beech forests	6.240,68	20,4
2, Sessile flowered oak and bitter oak forests	8.005,66	26,2
3, Forests of other oaks	3.497,79	11,5
4, Forests of other broadleaves	7.800,14	25,5
5, Abies alba forests	690,86	2,3
6, Picea abies forests	990,92	3,2
7, Pinus nigra forests	1.500,94	4,9
8, Pinus sylvestris forests	298,07	1,0
9, Pinus heldreichii forest	396,77	1,3
10, Pinus peuce forest	812,07	2,7
13, Forests of other conifers	298,07	1,0
Total	30.531,97	100,0

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	3.995	N/A	1.376	N/A	0.103	N/A	0.21	N/A	18.311	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	0.363	N/A	0.088	N/A	0.616	N/A	11.858	N/A	48.804	N/A

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	Damagescausedbyinsectsinm3	2011	N/A
3	Damagesbynaturaldisastersinm3	2011	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Outbreak category
1 Insects
2 Diseases
3 Severe weather events

Tiers

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

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	MCPFE data for forest and OWL (as published in our Statistical yearbooks). Data for 2011 and 2012 differ significantly from the statistical yearbooks. Source for 2011-2012 is Forestry strategy 2013 (still remains to be proved or adapted).	N/A
Insects	N/A	N/A
Diseases	Best classified as tier 2	N/A
Severe weather events	N/A	N/A

Other general comments to the table

Regards to climate change and increase of average annual temperature values in the future is expected increasing a number of forest fires.

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	N/A

Tiers

Category	Tier for reported trend
Reduction in canopy cover	N/A

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

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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	National Forest and Forest Land Administration Policy (NFFLAP)	Policies supporting sustainable forest management. The document contains policy principles, objectives and statements (for implementing measures) as well as key framework for implementation and monitoring.	2008	Primary data source
2	Forest Law	Silviculture, protection, conservation and improvement of forests, planning, method and conditions of forest utilization, construction and maintenance of forest roads, monitoring of forests, as well as other issues of significance for forests, forest land and forestry continuous conservation and enhancement of forests and forest land and their functions; sustainable and multifunctional forest management; conservation and enhancement of biologic and landscape biodiversity of forests, and their environmental quality.	2010	Primary data source

3	Development Directions of Montenegro as an Ecological State	N/A	2001	Secondary data source
4	National Biodiversity Strategy and Action Plan for period 2010 – 2015	N/A	2009	Secondary data source
5	Draft Strategy with the Forest and Forestry Development Plan	N/A	2013	Secondary data source (Draft version)

10.2.2 Classification and definitions

National class	Definition
N/A	N/A

10.2.3 Original data

<p>National Forest and Forest land Administration Policy - 2008,</p> <p>Forest law – 2010,</p> <p>Strategy with the Forest and Forestry Development plan - draft version – 2013,</p> <p>Forest Development Plan – 2013,</p> <p>Forest Management Program - 2013</p>

10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management	yes			

... of which, in <u>publicly</u> owned forests	yes			
... of which, in <u>privately</u> owned forests	yes			
Legislation and regulations supporting sustainable forest management	yes			
... of which, in <u>publicly</u> owned forests	yes			
... of which, in <u>privately</u> owned forests	yes			

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	Policies related to sustainable forest management is made at the state level
Legislation and regulations supporting sustainable forest management	Laws related to sustainable forest management is made at the state level

Other general comments

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

Documents for this question:

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

11.1 Categories and definitions

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

11.2 National data

11.2.1 Data sources

	References to sources of information	Years	Additional comments
1	National Forest and Forest Land Administration Policy	2008	N/A
2	Forest Law	2010	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?	yes
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11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	In Montenegro, there is an association of private forest owners since 2008. True forest law: Competent administrative authority shall be obliged to publish the drafts of planned documents referred to in article 10 paragraph 1 subparagraph 1,2 and 3 of Forest Law on its Internet page and inform the public about the time and venue for holding the public hearing and method of submitting the opinions on planned documents. Notification about the time and venue of holding the public hearing shall be published in minimum one daily media which is distributed in the entire territory of Montenegro. Public hearing shall last minimum 15 days from the date of publishing the draft of planned documents. Public hearing referred to in paragraph 1 of this article shall be carried out by competent administrative authority and it shall compile the Report on participation of stakeholders, authorities and organizations at public hearing and results of the public hearing

Other general comments

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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	Law of forest	N/A	2010	Article about Forest purpose
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
Forest purpose	According to the purpose, in accordance with the forest function, forests shall be divided into commercial, protection and special purpose forests.
N/A	N/A
N/A	N/A
N/A	N/A

12.2.3 Original data

All of the existing forest area are permanently under forest. Forests cover 59.9% (826.782 ha) of the total land area of Montenegro. In Montenegro we have a substantial natural expansion of areas under forests, which

resulted from not only artificial afforestation but also from the spontaneous expansion of forest vegetation for the account of agricultural land. Trend is expecting to be growing.

Changing of forest purpose by clearing – Law of forest -2010

Changing the forest or forest land purpose into construction or other land use categories by clearing, may be performed only in accordance with spatial planning document, that is, by forest development plans in accordance with the law.

The changing of purpose may be performed:

- for building structures for protection against natural disasters and defence of the country;
- in the procedure of re-parcelling and rounding off agricultural land and forests (consolidation) in accordance with the law;
- in cases when it is required by public interest as stipulated by the law, or based on the Law

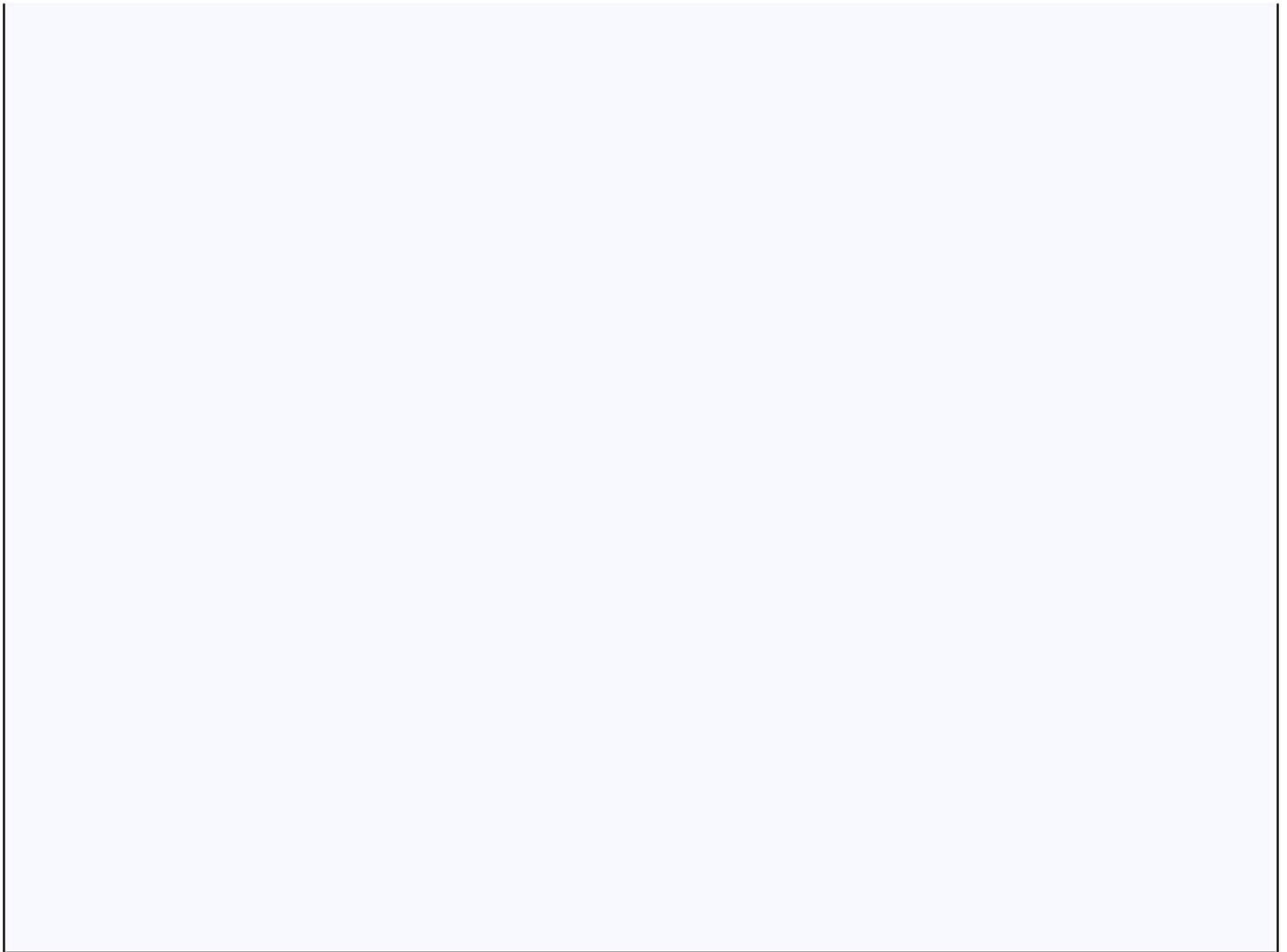
Clearing of forests and other forest land for purposes of building forest roads and other infrastructure facilities used for forest management purposes which are a compositional part of the forest and forest land shall not be considered as changing the purpose

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	827
	... of which permanent forest estate	827

Tiers

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 2
Permanent forest estate	Tier 2

Tier Criteria

Category	Tier for status
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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	All of the existing forest area are permanently under forest
Permanent forest estate	All of the existing forest are permanent forest estate

Other general comments

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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	National Forest Policy	Measure for Development and sustainable forest management	2008	N/A
2	Draft - Strategy with the Forest and Forestry Development Plan	Objectives and guidelines for development of forests and forestry	2013	N/A
3	Draft Forest Development Plan for forest area	objectives and guidelines of forest management	2013	N/A
4	Forest Management Program for management unit	Management plans	N/A	Permanently

13.2.2 Classification and definitions

National class	Definition
National Forest Policy	National Forest Policy shall define the course of development and sustainable forest management. The National Forest Policy shall be passed by the Parliament of Montenegro for the period of ten years.
Strategy with the Forest and Forestry Development Plan	The Strategy shall identify objectives and guidelines for development of forests and forestry, in accordance with the National forest policy, then measures for forest improvement, as well as orientational financial means for enforcement of the Strategy and method of their provision. The Strategy shall be enacted by the Government for the period of 10 years

Forest Development Plan for forest area	Forest Development Plan shall more closely elaborate objectives and guidelines of forest management for forest area that are stipulated by the Strategy and determine the management units for that area. Forest Development Plan shall be enacted by the Government for the period of 10 years
Forest Management Program for management unit	.Forest Management Program shall be developed for management unit and it shall encompass forests in both the state and private ownership. Forest Management program shall be passed by the competent administrative authority, with the consent of the Ministry, after previously obtaining the opinion of the state administration authority competent for environmental protection and of the forest owners associations that shall be included in the forest management program. Forest Management Program shall be passed for the period of 10 years, in accordance with the strategy and forest development plan.
NFI	The National Forest Inventory shall be performed periodically by collecting data about the status and changes in forests and forest land. National Forest inventory shall be done for purposes of drafting planned documents in forestry and exchanging information in accordance with the Law. National Forest Inventory shall include all forests and forest land in the territory of Montenegro with respect to the areas, types and structure of forests, growing stock, increment, harvesting, biological diversity and other data on forests in accordance with international standards. The National Forest Inventory shall be performed by competent administrative authority, typically every ten years.
Stand forest inventory	Stand inventory are performed permanently by collecting data about the status and changes in forests and forest land at the level of the management unit.

13.3 Data

Table 13a

Category	% of total forest area	Most recent year	Check all boxes that apply					
			Continuous	Periodic	Permanent ground plots	Temporary ground plots	Aerial/remote sensing sample based	Aerial/remote sensing full coverage
Forest inventory	100	2010		yes	yes			yes
Other field assessments	42.7	2013	yes		yes	yes		yes
Updates to other sources	N/A	N/A		yes	yes			
Expert estimate	N/A	N/A						

Table 13b

Type of forest reporting used at national scale	Check boxes that apply
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1 Criteria and Indicators reporting	no
2 Periodic national state of the forest report	yes
3 Other (please document)	yes
4 None	

Other type of forest reporting

Periodic reports of the Forest Administration
 Periodic reports of the Ministry for Government Reports of forest fires
 Report on forest health
 International reports

13.4 Comments

Category	Comments
How does your country measure and report progress towards SFM at the national level?	<p>Forest area monitored by a national monitoring framework or system(s) that provide measurement-based, periodic monitoring of forest extent and quality. The planning documents in forestry are: 1. National Forest Policy; 2. Strategy with the Forest and Forestry Development Plan 3. Forest Development Plan for forest area 4. Forest Management Program for management unit For purposes of preventing illegal activities in forests the Government may pass the Action Plan for the period of five years, in accordance with the Law. 1.National Forest Policy shall define the course of development and sustainable forest management. The National Forest Policy shall be passed by the Parliament of Montenegro for the period of ten years. 2. The Strategy shall identify objectives and guidelines for development of forests and forestry, in accordance with the National forest policy, then measures for forest improvement, as well as orientational financial means for enforcement of the Strategy and method of their provision. The Strategy shall be enacted by the Government for the period of 10 years. 3.Forest Development Plan shall more closely elaborate objectives and guidelines of forest management for forest area that are stipulated by the Strategy and determine the management units for that area. Forest Development Plan shall be enacted by the Government for the period of 10 years 4. Forest Management Program shall be developed for management unit and it shall encompass forests in both the state and private ownership. Forest Management program shall be passed by the competent administrative authority, with the consent of the Ministry, after previously obtaining the opinion of the state administration authority competent for environmental protection and of the forest owners associations that shall be included in the forest management program. Forest Management Program shall be passed for the period of 10 years, in accordance with the strategy and forest development plan.</p>
N/A	N/A
N/A	N/A

Other general comments

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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	Forest Management Program for management unit	Forest area with Management plan	Permanently	N/A
2	NFI	Forest management plan mainly focused on production Forest management plan mainly focused on conservation	2010	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	353
... 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	yes
2 High conservation value forest delineation	yes
3 Social considerations community involvement	yes

Table 14c

Percent of area under forest management plan that is monitored annually	100
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Tiers

Category	Tier for status
Forest area with management plan	Tier 1
Percent of area under forest management plan that is monitored annually	Tier 2

Tier criteria

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

14.4 Comments

Category	Comments
Forest Area with management	Forests under current forest management plans cover 353 170 ha. This information applies only to state forest
N/A	Forests available for wood supply are all forests outside national parks that are accessible and that are not subject to further substantial legal or natural harvesting restrictions. Forests available for wood supply include forests with multiple functions, such as e.g. soil protection, avalanche protection or recreation where harvesting can still take place based on adequate management. Considering ownership and protection by national park four different management regimes exist in Montenegro: 1.Management of the public forests outside National Parks by the Forest Administration 2.Management of private forests outside National Parks by private forest owners supported by the Forest Administration 3.Management of the public forests inside National Parks by the National Park Administration 4.Management of private forests inside National Parks by private forest owners supported by the National Park Administration Forests under current forest management plans cover 353 170 ha. This information applies only to state forest.

N/A	N/A
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Other general comments

We have a forest management plan that includes (together) measures and guidelines for the production and protection of forest and forest conservation.

The proportion of economic forests in the sub-sample of 241.600 ha in the central FMP database (that consists mainly of forests located in the north of Montenegro) shows that 76% on average is economic forest and 24% are forests where other functions are dominating. Of these protection forests² are nearly 100%. Mainly soil protection and a small percentage of water protection functions are summarized under protection forests.

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

Documents for this question:

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

15.1 Categories and definitions

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

Table 15

Please indicate the type of stakeholder involvement in forest management decision making required in your country	
1. Planning phase	yes
2. Operations phase	no
3. Review of operations	yes

Tiers

Category	Tier for status
Type of stakeholder inputs	Tier 3

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
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N/A	Competent administrative authority shall be obliged to publish the drafts of planned documents referred to in article 10 paragraph 1 subparagraph 1,2 and 3 of Forest Law on its Internet page and inform the public about the time and venue for holding the public hearing and method of submitting the opinions on planned documents. Notification about the time and venue of holding the public hearing shall be published in minimum one daily media which is distributed in the entire territory of Montenegro. Public hearing shall last minimum 15 days from the date of publishing the draft of planned documents. Public hearing referred to in paragraph 1 of this article shall be carried out by competent administrative authority and it shall compile the Report on participation of stakeholders, authorities and organizations at public hearing and results of the public hearing.
N/A	Mainly, owners of private forest using the technical support of experts from the Forest Administration. Representatives of private forest have participated on, together with forestry experts , in the process of training of trainers for forestry consulting . In addition to training and trainers have begun in the preparation and performance of short training courses, as well as proper training techniques logging (felling) trees and training work in the care of forests. They have also right to participate in the preparation and adoption of decisions in forestry-related private forests.
N/A	N/A

Other general comments

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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
	1.Name	0	0	0	0	0	0	0
	2.Name	0	0	0	0	0	0	0
	3.Name	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
	1.Name	0	0	0	0	0	0	
	2.Name	0	0	0	0	0	0	
	3.Name	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	Tier 3

16.3 Comments

Category	Comments related to data definitions etc
Certified forest area using an international forest management certification scheme	The forest certification process in Montenegro is at an early stage. It is expected to be realized in the future.
Domestic forest management certification	N/A

Other general comments

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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	Forest Administration	program of use funds of Forest Administration	2013	Budget for FA for 2013
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	6107
Public expenditure on forestry	N/A	N/A	6107

	2000	2005	2010
Name of Local Currency	EUR	EUR	EUR

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	Forestry is being financed by the budget. Income and expenditures are equal.
Public expenditure on forestry	The budget is changeable depending on the year to year. Depending on the realized concession fees and the use of other services in forestry (marking, non-timber forest products and other) government determines funding for next year. In recent years tendency is to reducing funds. Currently is difficult to collection fees because of the economic crisis that has affected on the timber industry. The budget varies from 7.5 million - 4 million per year. The total realized budget expenditures amounted to the Forest Administration € 6.48 million average year, of which the performance of the activities in the Forest Administration € 4.68 million (72%), and for biological and technical investments in forest € 1.80 million (28%).
Other general comments	N/A

Other general comments

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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	National Forest and Forest land Administration Policy, First Draft, 2008, http://www.gov.me/files/1210596615.pdf	Private, Public ownership	N/A	Secondary data source
2	NFI	Private, State ownership	2010	Primary data source
3	Low of forest	Private, State ownership	2010	Primary data source
4	N/A	N/A	N/A	N/A

18.2.2 Classification and definitions

National class	Definition
State ownership	Authorized administrative authority shall administer and manage the forests, forest land, trees outside forests and barren land in state ownership, in accordance with the law.
Private ownership	Forest owners shall administer and manage their forests, forest land, trees outside forests and barren land in accordance with the law.
N/A	N/A
N/A	N/A

18.2.3 Original data

State owns 52.3% of forests and woodland whereas 47.7% belongs to the private sector.

18.3 Analysis and processing of national data

18.3.1 Adjustment

18.3.2 Estimation and forecasting

18.3.3 Reclassification

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	N/A	381	381	433
	... of which owned by the state at national scale	N/A	381	381	433
	... of which owned by the state at the sub-national government scale	N/A	0	0	0
	Private ownership	N/A	245	245	394
	... of which owned by individuals	N/A	245	245	394
	... of which owned by private business entities and institutions	N/A	0	0	0
	... of which owned by local, tribal and indigenous communities	N/A	0	0	0
	Unknown ownership	N/A	0	0	0
TOTAL		.00	626.00	626.00	827.00

Tiers

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

Tier criteria

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

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	N/A	N/A	N/A	433
Individuals	N/A	N/A	N/A	0
Private companies	N/A	N/A	N/A	0
Communities	N/A	N/A	N/A	0
Other	N/A	N/A	N/A	0
TOTAL	.00	.00	.00	433.00

Category	Tier for reported trend	Tier for status
Public Administration	Tier 1	Tier 1
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

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	MCPFE, 2007. State of Europe's Forests 2007	Employment in Forestry and logging	N/A	Secondary data source.
2	FAO. 2008. Contribution of the forestry sector to national economies, 1990-2006, by A. Lebedys. Forest Finance Working Paper FSFM/ACC/08. FAO, Rome. http://www.fao.org/docrep/011/k4588e/k4588e00.htm	Employment	1990, 2000	Secondary data source.
3	MCPFE, 2011. State of Europe's Forests 2011	Employment	2011	Secondary data source.
4	Labor Law	N/A	2008	Primary data source

19.2.2 Classification and definitions

National class	Definition
Employment contract for specific time	A measurement equal to one person working full-time during a specified reference period.
N/A	N/A
N/A	N/A
N/A	N/A

19.2.3 Original data

Data for 2005 are taken from the MCPFE report and data for 1990 and 2000 from Lebedys (2008). The employment figure for year 2005 in Lebedys (2008) is equal to the one extracted from MCPFE 2007 report.

Approximately 1000 people were employed in forestry in Montenegro:

- 425 in Forest Administration,
- 8 in the Ministry,
- 12 in the Forest Inspection in Inspection Directorate
- and approximately 500 people in private companies engaged in forestry and forest works

For Forestry only data on state/public administration staff available; data on concessionaires' technical staff and on forest workers missing, also data on private forest missing.

Sources of information, data available for state administration only. - Systematization of the Ministry of Agriculture and Rural Development and the Forest Administration - 2010.

19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	3	2	1	0.43
	... of which female	N/A	N/A	N/A	0.07

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
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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
Gross value added from forestry (at basic prices)	Contribution of forestry to GDP is 0,62 for 2010. This data is taken from Study of financing of forests and forestry in Montenegro (2012)

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	Draft Strategy with the Forest and Forestry Development Plan	Forest area	2013	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	827	827

Table 21b

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

21.4 Comments

Category	Comments
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Government target/aspiration for forest area	Goal is to maintain the existing forest area and increase the quality of the timber
Forests earmarked for conversion	N/A

Other general comments
