

# GLOBAL FOREST RESOURCES ASSESSMENT 2015

## COUNTRY REPORT

# **Israel**

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
Brand David	KKL-JNF	davidb@kkl.org.il	10, 11,17, 19, 20, 21
Talmor Ronen	KKL-JNF	ronent@kkl.org.il	1a, 2, 5, 6, 12, 18
Mor Ira	KKL-JNF	irah@kkl.org.il	1b, 3, 4, 8a, 9, 13, 14, 15, 16
Golan Omer	KKL-JNF	omerg@kkl.org.il	8b
Ben-Moshe Noam	KKL-JNF	noamb@kkl.org.il	7

### Introductory Text

Place an introductory text on the content of this report

Israel forests are small in area but under intensive use and pressure. When Israel was established in 1948, the woody vegetation was very limited. This is due to generations of over exploitation of forest resources (over grazing, cutting & wild fires). Since 1948, forest department had started wide planting operations from one hand and minimize overgrazing from the other hand. The result is the development of planted forest (mainly pines) and reestablishment of natural type forest (mainly Oaks and Pistacia).

Most of the forest area is managed by KKL – Land Development Authority, Forest Department. KKL is a national organization that acts under the inspection of the Ministry of Agriculture. Some of the natural forests area is National Parks or Natural Reservations and managed by the Nature Reserves and Parks Authority. This report covers all area types.

Today, most areas are protected by the National Forestry Master plan (No. 22) and National Natural Reserves & Parks Master plan (No. 8).

All planted forests and most natural forests are managed by the forest department (there is no private forestry in Israel). The forests have limited commercial value. Management goals are mainly for recreation, landscape improvement, soil conservation and ecological services. Timber production and grazing are considered as by products.

The main hazard to forest resources nowadays is development pressure such as transportation and urbanization development. Other threats are wild fires, public pressure on the land and global changes (such as global warming, droughts etc.).

All forest areas are mapped in a GIS platform. Because of the minimal commercial value of forest resources (for timber), detailed forest inventory activity is limited.

Desk Study?

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

Desk Study?	no
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## 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	Forest GIS Project	N/A	2013	With an information assistance by other GIS Projects
2	Statistical abstract of Israel	N/A	2013	N/A

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	Same as FRA 2015.
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 in situ; 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. (Same as FRA 2010).
Other land	Same as FRA 2015
...of which with tree cover	Land classified as “Other land”, spanning more than 0.5 hectares with a canopy cover of more than 10 percent of trees able to reach a height of 5 meters at maturity. (Same as FRA 2010)
Inland water bodies	Same as FRA 2015
Afforestation	Same as FRA 2015
Reforestation	Re-establishment of forest through planting and/or deliberate seeding on land classified as forest. (Same as FRA 2010).

### 1.2.3 Original data

<p><b>Forest area</b></p> <p>See final reporting table.</p> <p><b>Forest expansion, reforestation</b></p> <p>Afforestation: expert estimates including introduced species in afforestation.</p>
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## 1.3 Analysis and processing of national data

### 1.3.1 Adjustment

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## 1.3.2 Estimation and forecasting

## 1.3.3 Reclassification

## 1.4 Data

Table 1a













Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	132	153	155	154	165
	Other wooded land	34	33	33	33	60
	Other land	1998	1978	1976	1977	1939
	... of which with tree cover	1	1	1	1	1
	Inland water bodies	43	43	43	43	43
	TOTAL	2207.00	2207.00	2207.00	2207.00	2207.00

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	2.208	0.001	0.2502	N/A	0.6	0	0	N/A
	... of which afforestation	2.2	0	0.2382	0.7262	0.6	0	0	N/A
	... of which natural expansion of forest	0.008	0.001	0.012	N/A	0	0	0	N/A
	Deforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which human induced	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reforestation	0.8	0.8	0.3471	0.4284	N/A	N/A	N/A	N/A
	... of which artificial	0.8	0.8	0.3471	0.4284	0.2	0.2	0.1	N/A

## Tiers

Category	Tier for status	Tier for reported trend
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Forest	Tier 3	Tier 3
Other wooded land	Tier 3	Tier 3
Forest expansion	Tier 3	Tier 3
Deforestation	Tier 2	Tier 2
Reforestation	Tier 3	Tier 3

## Tier criteria

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

## 1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	All the data from 2000 and so on was recalculated. This data is more reliable now than it was on previous sent assessments because of more raw data we have.	There is some decline in afforestation and reforestation Since 2004, and there are some fellings in the natural forests (because of massive constructions in Israel, especially in the decade of the 1990's). Although, between 1990 and 2004 there were much afforestations and reforestations to increase significantly the 'Forest' category area value.
Other wooded land	All the data from 2000 and so on was recalculated. This Data is more reliable now than it was on previous sent assessments because of more raw data we have.	N/A
Other land	N/A	N/A
Other land with tree cover	N/A	N/A
Inland water bodies	N/A	N/A
Forest expansion	We observe the phenomenon of natural expansion of pines outside the forest area. We don't have accurate numbers. The numbers are expert estimation and might change in the future after research and mapping work.	N/A
Deforestation	N/A	N/A

Reforestation	N/A	...of which artificialExpected reforestation rate for the next 5 years is about 400-500 ha. per year.
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<b>Other general comments to the table</b>
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N/A
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## 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 <b>outside</b> 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	Forest GIS Project	N/A	2013	With an information assistance by other GIS Projects
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
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## 2.2.2 Classification and definitions

National class	Definition
Other naturally regenerated forest	Same as FRA 2015.
of which of introduced species	Same as FRA 2015.
Planted forest	Same as FRA 2015.
of which of introduced species	Same as FRA 2015.

## 2.2.3 Original data

See final reporting table.
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## 2.3 Analysis and processing of national data

### 2.3.1 Adjustment

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### 2.3.2 Estimation and forecasting




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### 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	0	0	0	0	0
	Other naturally regenerated forest	66	65	67	66	76
	... of which of introduced species	0.5	0.5	0.5	0.5	0.5




	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	66	88	88	88	89
	... of which of introduced species	21	28	27	26	26
TOTAL		132.00	153.00	155.00	154.00	165.00

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
0	0	0	0	0	0	0	0	0

Table 2c

Categories	Area (000 hectares)				
	1990	2000	2005	2010	2015
Mangroves (forest and OWL)	0	0	0	0	0
... of which planted	N/A	N/A	N/A	N/A	N/A

## Tiers

Category	Tier for status	Tier for reported trend
Primary forest	Tier 3	Tier 3
Other naturally regenerated forest	Tier 1	Tier 1
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><b>Tier 3</b> : 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><b>Tier 2</b> : Data sources: Full cover mapping/ remote sensing or old NFI (more than 10 years) <b>Tier 1</b> : Other</p>	<p><b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other</p>

## 2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	N/A	N/A
Other naturally regenerating forest	N/A	The main change from the previous report is a better mapping system
Planted forest	Area data of introduced species comes only from the calculated area of planted forest stands, which have at least 80 percent dispersion of introduced species.	N/A
Mangroves	N/A	N/A

### Other general comments to the table

The main change from the previous report is a better mapping system

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

Documents for this question:

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

#### 3.1 Categories and definitions

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

#### 3.2 National data

##### 3.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Inventory	N/A	N/A	Inventory is accomplished about every 10 years in all planted forest areas.
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

### 3.2.2 Classification and definitions

National class	Definition
Growing stock	Volume over bark of all living trees more than X cm in diameter at breast height (or above buttress if these are higher). Includes the stem from ground level or stump height up to a top diameter of Y cm, and may also include branches to a minimum diameter of W cm. (Same as FRA 2010).
Above-ground biomass	Same as FRA 2015
Below-ground biomass	Same as FRA 2015
Dead wood	Same as FRA 2015
Carbon in above-ground biomass	Same as FRA 2015
Carbon in below-ground biomass	Same as FRA 2015
Carbon in dead wood	Same as FRA 2015
Carbon in litter	Same as FRA 2015
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a specified depth chosen by the country and applied consistently through the time series. (Same as FRA 2010).

### 3.2.3 Original data

<p><b>Growing stock</b></p> <p>See final reporting table.</p> <p><b>Carbon stock</b></p> <p>Soil carbon: The soil carbon was measured only in one forest and then extrapolated for the rest of the country. This forest is a pine plantation that established at the edge of the Negev desert between the years 1965 and 1969. The site located at the transition between sub-humid and arid Mediterranean climatic zones.</p>
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## 3.3 Analysis and processing of national data

### 3.3.1 Adjustment

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## 3.3.2 Estimation and forecasting

## 3.3.3 Reclassification

## 3.4 Data

Table 3a




Category		Growing stock volume (million m <sup>3</sup> over bark)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Total growing stock	5.9	5.6	5.7	5.8	5.9	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	3.3	3	3.1	3.2	3.3	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	2.6	2.6	2.6	2.6	2.6	N/A	N/A	N/A	N/A	N/A

Table 3b

Category/Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010
1 st	<i>Pinus halepensis</i>	Aleppo pine	1.7	1.3	1.3	1.3
2 nd	<i>Quercus calliprinos</i>	Palestine oak, Kermes oak	1.3	1.3	1.3	1.3
3 rd	<i>Pinus brutia</i>	Turkish pine	0.9	1	1.1	1.2
4 th	<i>Cupressus sempervirens</i>	Mediterranean cypress	0.3	0.3	0.3	0.3
5 th	<i>Pinus pinea</i>	Stone pine	0.2	0.2	0.2	0.2
6 th	<i>Ceratonia siliqua</i>	Carob tree	0.1	0.1	0.1	0.1
7 th	<i>Olea europea</i>	Olive tree	0.1	0.1	0.1	0.1
8 th	<i>Eucalyptus gomphocephala</i>	Tuart tree	0.1	0.1	0.1	0.1
9 th	<i>Eucalyptus camaldulensis</i>	River Red Gam	0.1	0.1	0.1	0.1

10 th	Acacia cyanophylla	Blue-leafed ( golden ) wattle	0.1	0.1	0.1	0.1
Remaining			1	1	1	1
TOTAL			5.90	5.60	5.70	5.80

**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)	8	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	2	N/A
Minimum diameter (cm) of branches included in growing stock (W)	8	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 <sup>3</sup> per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
	Net annual increment	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A

Table 3d

Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Above ground biomass	7.6	7.3	7.4	7.5	7.69	N/A	N/A	N/A	N/A	N/A










	Below ground biomass	1.9	1.8	1.8	1.8	1.8	N/A	N/A	N/A	N/A	N/A
	Dead wood	0.08	0.09	0.08	0.08	0.08	N/A	N/A	N/A	N/A	N/A
TOTAL		9.58	9.19	9.28	9.38	9.57	.00	.00	.00	.00	.00

Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Carbon in above ground biomass	3.6	3.4	3.5	3.5	3.6	N/A	N/A	N/A	N/A	N/A
	Carbon in below ground biomass	0.9	0.8	0.8	0.8	0.8	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Living biomass</i>	4.5	4.2	4.3	4.3	4.4	N/A	N/A	N/A	N/A	N/A
	Carbon in dead wood	0.04	0.04	0.04	0.04	0.04	N/A	N/A	N/A	N/A	N/A
	Carbon in litter	0.01	0.01	0.01	0.01	0.01	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Dead wood and litter</i>	0.05	0.05	0.05	0.05	0.05	N/A	N/A	N/A	N/A	N/A
	Soil carbon	3.97	4.02	4.07	4.12	4.12	N/A	N/A	N/A	N/A	N/A
TOTAL		8.52	8.27	8.42	8.47	8.57	.00	.00	.00	.00	.00

## Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 2	Tier 2
Net annual increment	Tier 1	Tier 1
Above ground biomass	Tier 1	Tier 1
Below ground biomass	Tier 1	Tier 1

Dead wood	Tier 1	Tier 1
Carbon in above-ground biomass	Tier 1	Tier 1
Carbon in below ground biomass	Tier 1	Tier 1
Carbon in dead wood and litter	Tier 1	Tier 1
Soil carbon	Tier 1	Tier 1

### Tier criteria

Category	Tier for status	Tier for reported trend
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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other
<ul style="list-style-type: none"> <li>• Carbon in above ground biomass</li> <li>• Carbon in below ground biomass</li> <li>• Carbon in dead wood and litter</li> <li>• Soil carbon</li> </ul>	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

### 3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	N/A	N/A
Growing stock of broadleaved coniferous	N/A	N/A

Growing stock composition	N/A	N/A
Net annual increment	N/A	N/A
Above-ground biomass	N/A	N/A
Below-ground biomass	N/A	N/A
Dead wood	N/A	N/A
Carbon in above-ground biomass	N/A	N/A
Carbon in below-ground biomass	N/A	N/A
Carbon in dead wood	N/A	N/A
Carbon in litter	N/A	N/A
Soil carbon	Reported depth for soil carbon estimates: 50 cm	N/A

**Other general comments to the table**

most of the numbers in this table are expert estimations

## 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	Forest GIS Project	N/A	2013	N/A
2	Master Plan for Forest and Afforestation	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

#### 4.2.2 Classification and definitions

National class	Definition
Multiple use	Same as FRA 2015.
N/A	N/A

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

#### 4.2.3 Original data

See final reporting table.

### 4.3 Analysis and processing of national data

#### 4.3.1 Adjustment

#### 4.3.2 Estimation and forecasting

#### 4.3.3 Reclassification

### 4.4 Data

Table 4a



Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	0	0	0	0	0
	Multiple use forest	82	101	100	99	118

Table 4b

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

6 th	N/A	N/A	N/A	N/A
7 th	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A
TOTAL			.00	

2010	
Name of local currency	N/A

Category
<b>Plant products / raw material</b>
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
<b>Animal products / raw material</b>
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 <sup>3</sup> u.b.)	
	Total wood removals	...of which woodfuel
1990	113	13
1991	113	13
1992	113	13
1993	113	13
1994	113	13
1995	113	13
1996	105	10
1997	124	14
1998	113	13
1999	113	13
2000	81	8.01
2001	27	2.04
2002	27	2.04
2003	27	2.04
2004	27	2.04
2005	27	2.04
2006	27	2.04
2007	27	2.04
2008	27	2.04
2009	27	2.04
2010	27	2.04
2011	27	2.04

Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 2	Tier 2
Multiple use forest	Tier 2	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 4.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	Most Israel forests serve as a multiple use forests. Timber production is only a by-product of forest management activity. Timber production is used/applied, but not as a designated function.	N/A
Multiple use forest	The most common use is grazing. Picking mushrooms and herbs is for private use only. Hunting and grazing are allowed only with a special permit.	There is gradual increase over the years
Total wood removals	N/A	N/A
Commercial value of NWFP	N/A	N/A

## Other general comments to the table

N/A
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## 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 GIS Project	N/A	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

### 5.2.2 Classification and definitions

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

### 5.2.3 Original data

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## 5.3 Analysis and processing of national data

### 5.3.1 Adjustment

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### 5.3.2 Estimation and forecasting




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### 5.3.3 Reclassification

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## 5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
	Protection of soil and water	N/A	N/A	N/A	N/A	15
	... 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	0	0	0	0	0
	... of which erosion, flood protection or reducing flood risk	N/A	N/A	N/A	N/A	15
	... 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	6
...of which public recreation	N/A	N/A	N/A	N/A	6
...of which carbon storage or sequestration	N/A	N/A	N/A	N/A	N/A
...of which spiritual or cultural services	N/A	N/A	N/A	N/A	N/A
...of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

## Tiers

Category	Tier for reported trend	Tier for status
Protection of soil and water	Tier 2	Tier 2
Ecosystem services, cultural or spiritual values	Tier 3	Tier 3

## Tier criteria

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

## 5.5 Comments

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

**Other general comments to the table**

N/A
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## 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	Forest GIS Project	N/A	2013	N/A
2	Master Plan for Forest and Afforestation	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

#### 6.2.2 Classification and definitions

National class	Definition
Conservation of biodiversity	Same as FRA
N/A	N/A
N/A	N/A
N/A	N/A

#### 6.2.3 Original data

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### 6.3 Analysis and processing of national data





### 6.3.1 Adjustment

### 6.3.2 Estimation and forecasting

### 6.3.3 Reclassification

## 6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	27	27	27	27	26
	Forest area within protected areas	27	27	28	28	36

### Tiers

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

### Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> <li>Conservation of biodiversity</li> <li>Forests within protected areas</li> </ul>	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 6.5 Comments

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

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<b>Other general comments to the table</b>
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N/A
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## 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	Inventory	N/A	N/A	Inventory is accomplished about every 10 years in all planted forest areas.
2	Foresters reports	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

#### 7.2.2 Classification and definitions

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

#### 7.2.3 Original data

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### 7.3 Analysis and processing of national data

#### 7.3.1 Adjustment

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## 7.3.2 Estimation and forecasting

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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. <i>Acacia saligna</i>	0.54	0.6
2. <i>Acacia victoria</i>	0.03	0.042
3. <i>Acacia salicina</i>	0.03	0.01
4. <i>Parkinsonia aculeata</i>	0.02	0.005
5. <i>Tipuana tipu</i>	N/A	0.01
6.	N/A	N/A
7.	N/A	N/A
8.	N/A	N/A
9.	N/A	N/A
10.	N/A	N/A
Total	0.62	0.667

## Tiers

Category	Tier for status	Tier for reported trend
Invasive species	Tier 1	Tier 1

## Tier Criteria

Category	Tier for status	Tier for reported trend
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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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other
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### 7.5 Comments

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

Other general comments to the table
N/A

## 8. How much forest area is damaged each year?

Documents for this question:

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

### 8.1 Categories and definitions

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

### 8.2 National data

#### 8.2.1 Data sources

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

#### 8.2.2 Classification and definitions

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

#### 8.2.3 Original data

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## 8.3 Analysis and processing of national data

### 8.3.1 Adjustment

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### 8.3.2 Estimation and forecasting

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### 8.3.3 Reclassification

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## 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	9.54	N/A	8.92	N/A	8.94	N/A	6.96	N/A	5.01	N/A
	... of which forest area burned	0.7363	812	0.7176	726	1.0068	790	2.1235	663	0.8092	682
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	2.15	N/A	1.75	N/A	5.99	N/A	0.19	N/A	6.18	N/A
	... of which forest area burned	0.6257	736	0.7355	745	5.4101	881	0.6263	604	0.7094	557

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	Matsucoccusjosephi	1980 - 1990	7.276
1	Thaumetopeawilkinsoni	2007 - 2008	2.4
1	Orthotomicuserosus	1998 - 2000	1.08
1	Phorocantasempunctata	1998 - 2000	0.186
1	Leptocybeinvasa	2005 – 2008	1
1	Ophelimusmaskelli	2005 – 2008	0.5
1	Lymantriadispar	1999 – 2000	1.5
1	Pineuspini	2005 – 2008	0.05
2	Seiridiumcardinale	1982 – 1989	0.1
2	Displodiapineaf.sp.cupressi	1982 – 1989	0.2

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"> <li>• Insects</li> <li>• Diseases</li> <li>• Severe weather events</li> </ul>	Tier 2	Tier 2

## Tier criteria

Category	Tier for status	Tier for reported trend
Burned area	<b>Tier 3</b> : National fire monitoring routines <b>Tier 2</b> : Remote sensing surveys <b>Tier 1</b> : Other	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other



<ul style="list-style-type: none"> <li>• Insects</li> <li>• Diseases</li> <li>• Severe weather events</li> </ul>	<p><b>Tier 3</b> : Systematic survey (e.g. via inventory or aerial damage assessment)  <b>Tier 2</b> : Management records <b>Tier 1</b> : Other</p>	<p><b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other</p>
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## 8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Burned area	We could not refer to the "total land area burned". The only data we have is for the forest fires	N/A
Insects	N/A	N/A
Diseases	N/A	N/A
Severe weather events	Last 4-5 years were very dry, and in some areas a lot of trees died, but it usually happens in patches. This is the reason that we don't have the numbers for damaged area.	N/A

### Other general comments to the table

N/A

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

Documents for this question:

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

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

Table 9

Category	Area of forest with reduced canopy cover (000 ha)
Reduction in canopy cover	2.26

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 2

Tier criteria

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

Comments

Category	Comments related to data definitions etc
Reduction in canopy cover	FAO data from MODIS (prefilled)

Other general comments

KKL started massive establishment of fuel breaks in forest at the year 2011. This is the reason we can not to assess reduction in canopy cover between the years 2000 and 2010

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

Documents for this question:

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

### 10.1 Categories and definitions

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

### 10.2 National data

#### 10.2.1 Data sources

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

#### 10.2.2 Classification and definitions

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

#### 10.2.3 Original data

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### 10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management	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	Israel forests are under a process of detailed planning to comply with Sustainable Management set by KKL Board of Directors. The Area in this category includes forest area that has detailed plans.
Legislation and regulations supporting sustainable forest management	Forest act no.5 1926. Latest amendment: 2012. Protects tree in forests and outside

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

Table 11

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

### 11.3 Comments

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

Other general comments

--

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

Documents for this question:

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

### 12.1 Categories and definitions

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

### 12.2 National data

#### 12.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Forest GIS Project	N/A	2013	N/A
2	Master Plan for Forest and Afforestation	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

#### 12.2.2 Classification and definitions

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

#### 12.2.3 Original data

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### 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	154
	... of which permanent forest estate	80

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

## 12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	N/A
Permanent forest estate	Areas that included in Master Plan for Forests and Afforestation (NMP22).

Other general comments

--



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

Documents for this question:

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

#### 13.1 Categories and definitions

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

#### 13.2 National data

##### 13.2.1 Data sources

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

##### 13.2.2 Classification and definitions

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

#### 13.3 Data

Table 13a

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

Table 13b

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

#### Other type of forest reporting

N/A

### 13.4 Comments

Category	Comments
updates to other sources	every year we report to the Israel Central Bureau of Statistics about the forests estate and treatments
Other field assessments	forest health assessments
N/A	N/A

Other general comments

--

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

Documents for this question:

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

### 14.1 Categories and definitions

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

### 14.2 National data

#### 14.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Forest GIS Project	N/A	2013	N/A
2	Master Plan for Forest and Afforestation	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

### 14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	120
... of which for production	N/A
... of which for conservation	N/A

Table 14b

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

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

Table 14c

<b>Percent of area under forest management plan that is monitored annually</b>	<b>10</b>
--	-----------

## Tiers

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

## Tier criteria

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

## 14.4 Comments

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

## Other general comments

Israel forests are under a process of detailed planning to comply with a new management theory. In the meantime some of the forests are stil under an anually management plans. The main goal is forest's health and vitality under limited water availability.
---

## 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	<b>Tier 3</b> : Government (national or sub-national) documentation of stakeholder inputs <b>Tier 2</b> : Government (national or subnational) requirement but stakeholder inputs not documented <b>Tier 1</b> : Other

### 15.2 Comments

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

Other general comments

--

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

Documents for this question:

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

### 16.1 Categories and definitions

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

### 16.2 Data

Table 16a













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

Table 16b

Domestic forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	Management plan	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	
	Management plan	0	3.306	4.695	6.251	6.264	6.847	
	2.Name	0	0	0	0	0	0	
	3.Name	0	0	0	0	0	0	

## Tier criteria

Category	Tier for status
<b>International</b> 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
<b>Domestic</b> 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
<b>International</b> forest management certification	Tier 3
<b>Domestic</b> 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	Certified forest area using an international forest management certification scheme
Domestic forest management certification	Domestic forest management certification

## 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"> <li>• <u>Goods</u> : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products.</li> <li>• <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.</li> </ul>
Public expenditure on forestry	All government expenditure on forest related activities.

### 17.2 National data

#### 17.2.1 Data sources

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

### 17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	N/A	N/A	N/A
Public expenditure on forestry	116000	57000	N/A
	2000	2005	2010
Name of Local Currency	NIS	NIS	NIS



**17.4 Comments**

Category	Comments related to data definitions etc
Forest revenue	Some revenue comes from felling permits during forest treatments . The forests itself do not provide revenue. Forests in Israel are serving mainly for ecological and social objectives. National Parks Authority gets a revenue from hunting license and visits in parks and reserves that some of them are forests.
Public expenditure on forestry	Government budgeting only National Parks Authority
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	Israel Land Administration	N/A	2008	GIS system
2	Forest GIS Project	N/A	2008	With an information assistance by other GIS Projects
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

## 18.2.2 Classification and definitions

National class	Definition
Public ownership	Same as FRA 2015
Private ownership	Same as FRA 2015
individuals	Same as FRA 2015
private business entities and institutions	Same as FRA 2015

## 18.2.3 Original data

See final reporting table.
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## 18.3 Analysis and processing of national data

## 18.3.1 Adjustment

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## 18.3.2 Estimation and forecasting









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## 18.3.3 Reclassification

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## 18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	129	150	152	36
	... of which owned by the state at national scale	N/A	N/A	N/A	N/A
	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	N/A
	Private ownership	3	3	3	118
	... of which owned by individuals	2	2	2	2
	... of which owned by private business entities and institutions	1	1	1	1
	... of which owned by local, tribal and indigenous communities	0	0	0	0
	Unknown ownership	0	0	0	0
TOTAL		132.00	153.00	155.00	154.00

## 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
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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	129	150	152	0
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	36
<b>TOTAL</b>	<b>129.00</b>	<b>150.00</b>	<b>152.00</b>	<b>36.00</b>

Category	Tier for reported trend	Tier for status
Public Administration	Tier 2	Tier 2
Individuals	Tier 2	Tier 2
Private companies	Tier 2	Tier 2
Communities	Tier 2	Tier 2
Other	Tier 2	Tier 2

### 18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	This category refers to forests owned and managed by NPA	N/A
Private ownership	Most of the forests owned and managed by KKL which is NGO	N/A
Unknown ownership	N/A	N/A
Management rights	Anyone is allowed to collect mushrooms or herbs for private use. Endangered species are forbidden to collect. Commercial use is forbidden on public land.	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	Contribution of the forestry sector to national economy, 1990 - 2006	Forestry employment	2008	FAO study
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

#### 19.2.2 Classification and definitions



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

#### 19.2.3 Original data

Figures taken from the FAO study: “Contribution of the forestry sector to national economies 1990 – 2006”

**19.3 Data**

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	4	3	1	1
	... of which female	N/A	N/A	N/A	0.1

**19.4 Comments**

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

Other general comments to the table
N/A

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

Documents for this question:

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

### 20.1 Categories and definitions

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

### 20.2 Data

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

Category	Million	Currency	Year for latest available information
Gross value added from forestry (at basic prices)	3.5	NIS	N/A

### 20.3 Comments

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

Other general comments

National data, not prefilled with UNdata/Eurostat
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## 21. What is forest area likely to be in the future

Documents for this question:

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

### 21.1 Categories and definitions

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

### 21.2 National data

#### 21.2.1 Data sources

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

### 21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	173	N/A

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	3

### 21.4 Comments

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

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Forests earmarked for conversion	N/A
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Other general comments

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