



**Carrying out selected sectoral analysis as a solid ground for the preparation of
IPARD III programme and of Strategy for Agriculture, Rural Development and Fishery
2021-2027**

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Forestry Sector Study Report Final



May 2021

FORESTRY SECTOR STUDY

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1 CHAPTER 1: INTRODUCTION BACKGROUND AND KEY FIGURES

This introductory chapter provides general information about Albania. It also describes the context of the sector analyses regarding preparation for EU accession, the objectives of the sector report and the methodology used in the preparation of the Forestry sector analysis. Finally, the section presents central key figures related to the Albanian economy and to the agricultural sector specifically.

1.1 INTRODUCTION: General Information about forestry in Albania

Albania is a small, mountainous country in the Balkan Peninsula, with a long Adriatic and Ionian coastline. The country is bordered by four countries, Montenegro to the northwest, Kosovo to the northeast, North Macedonia to the east, Greece to the south. The total length of the borders is 1,094 km. The Republic of Albania covers an area of 28,748 km². The terrain is predominantly mountainous, with 70% of the territory at elevations of more than 300 m. The physical geography is defined by its relief, with numerous successive mountain range and its average altitude, more than 700 metres above sea level.

The country is administratively divided into 12 regions and 61 municipalities.

The population of Albania on 1 January 2020 is 2,845,955 inhabitants¹. According to INSTAT, data the number of residents in urban areas far exceeds the number of residents in rural areas. This represents a significant change compared to the early 1990s, when about two-thirds of the population lived in rural areas. Demographic features in Albania include:

- A decrease in total population, from 3.06 million inhabitants in 2001, to 2.91 million in 2011 and 2.85 million in 2020;
- Urbanization of population; the population composition shifted from 43 per cent urban and 57 per cent rural in 2001, to 54 per cent urban and 46 per cent rural in 2020.

Whereas the declining population trend seems to have stopped, urbanization will most likely continue throughout the coming decade.

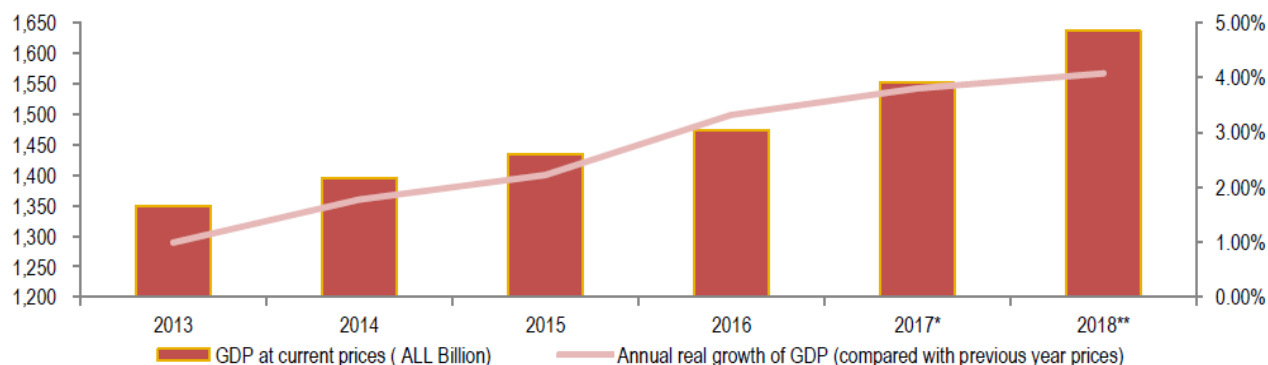
Albania has made remarkable economic progress during the past three decades. It went through a process of transition from a centralized economy to a market-based economy on the principles of the free market, and due to the strong growth performance, Albania grew from one of the poorest nations in Europe to a middle-income country, with poverty declining by half during that period (see Figure 1).

Today, Albania is at the cusp of opening formal negotiations for accession to EU membership. Yet, despite this significant progress, living standards are still more than three times lower than those inside the EU. Poverty remains widespread, with 39.1 percent of the population living on less than euro 5 a day as of latest measurement². The majority of the poor live in rural areas. The poverty measures are significantly higher in rural areas than in urban areas. The statistics show that the incidence of poverty is almost 3 times higher in rural areas compared to Tirana, and twice as high compared to other urban areas.

¹ The issue of population in Albania is important for forest management planning. Unlike more developed countries, with relatively static populations, experiencing predictable natural growth rates, combined with an historical pattern of movement of their populations to more urbanized areas, Albania has had much greater movements, which combine emigration to other countries with more than normal internal migrations from rural to urban and rural areas within the country. As there is no recent official census regarding the total resident population within the territory of Albania (the latest Population and Housing Census is dated 2011), the latest estimation made by INSTAT are used and presented.

² World Bank World Development Indicators (WDI): Albanian GDP per capita adjusted for purchasing power parity (PPP) and at constant 2011 dollars increased from USD 3,229 in 1991 to 11,802 in 2017. The equivalent EU figure increased from USD 25,066 in 1991 to USD 37,331 in 2017. The poverty rate is stated for income adjusted by PPP in constant 2011 dollars. Albania's poverty headcount ratio (\$5.50 a day at 2011 PP P) fell from 51.5 percent of the population at its first measurement in 1996 to 39.1 percent of the population at its currently latest measurement in 2012.

Figure 1: GDP and real growth rate, 2013 - 2018



Source: World Bank 2019.

Forests represent one of the major natural resources of the country. Due to their natural and diverse structure, as well as extensive natural regeneration, they represent crucial resources for the further development of Albania. However, it is estimated that in the last 20 years, about 100,000 ha of forest has been destroyed and the effects are obvious: erosion, landslides and the loss of wildlife habitat.

The country itself is geographically excellently positioned in terms of diverse climatic influences: the coastal lowlands have typically Mediterranean climate while the highlands have a continental climate. In both the lowlands and the interior, the weather varies markedly from north to south) and is home to over one hundred tree species. The main species found are beech, various species of oak, fir, spruce, Scots and European pine, and less significant numbers of noble broadleaves, including acacia, poplar, maple and willow as well as chestnuts, walnuts and fruit trees (cherry, apple, pear).

1.2 METHODOLOGY

The main purpose of the sector analyses is to identify which segment/area/beneficiary should be targeted within each sector through the future IPARD III programme in Albania. The study will follow the following steps:

- Structural description of the sector
- Variations and disparities at regional/municipal level
- Investment requirements and capacities
- Market potentials
- National policies and regulation
- SWOT analysis and benchmarking

The analyses are focusing on the following aspects:

- Forest resources and management
- Land use and land use change
- Forest-based sector including industries & Forest-based products, services and value chains
- Forest Policy and Governance
- Level of attainment of relevant EU standards
- Education and Qualification

The study was carried out by a team of two experts between October 2020 and January 2021. It adopted a qualitative approach combining both desk-based and field research by analysing recent developments and the current state of the sector, including opportunities, constraints and challenges, with special focus on investments needs/potentials.

The study was divided in two phases: the first phase was based on a desk review of the sector and sub-sectors in order to generate an understanding of market and value chains dynamics, the actors involved and the constraints

and challenges within the value chains. This phase employed primary and secondary data sources drawn from a range of studies, analyses, policy papers and other relevant documents from both national and international sources (MARDWA, UNSTAT, EUROSTAT, USDA, UNIDO, and FAOSTAT). The second phase consisted of field interviews/meetings at the national and local levels.

Both secondary and primary information/data sources have been used to meet the study objectives; semi-structured interviews with value chain actors and sector experts were used as primary source of data. Data were analysed using various techniques including descriptive analysis, trend analysis, text analysis, SWOT analysis. The combination of qualitative and quantitative analysis has been crucial to identify/understand trends, gaps and needs for investments. The study presents:

- Background and key figures of the sector
- Structural characteristics of the sector
- Market and trade
- Government policy for the sector
- Level of attainment of relevant EU standards
- Development opportunities and related investment needs
- Identification of potential and needs in the sector and provision for related recommendations.

The sector study was presented on March 19th in an online round table discussion to relevant stakeholders. Comments and contributions from participants³ mainly focusing on strategies, needs and investments are reflected in this final version⁴ of the report.

1.2.1 Primary data collection

Reliable and up-to-date information on the state of forest resources - not only on area and area change, but also on such variables as growing stock, wood and non-wood products, carbon sequestration, protected areas, use of forests for recreation and other services, biological diversity and forests' contribution to national economies is crucial to support decision-making in forestry at all levels.

Statistical data sources on forest resources used in this study comprise the following central elements:

- Statistical Information based on the data from INSTAT
- National Forest Inventory (NFI)
- Time-series records from FAOSTAT

The methodology used for this study includes field visits as well to the municipalities of Librazhd, Korce, Malesia e Madhe and Puke. In all of these municipalities semi-structured interviews were held with numerous actors and stakeholders such as Municipal Forest Responsible Departments, Forest Inspectorate, Forest companies, and Forest and Pasture User Associations (regional & communal level). At the national level, meetings were organised with the Ministry of Tourism & Environment, National Agency of Protected Areas, and the National Forest Agency and Forest Faculty. The results and findings of these interviews were discussed within the team.

1.2.2 Secondary data collection

Secondary sources of information used within the study, are taken from existing reports earlier developed by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in the same field study, the World Bank Environmental Services Project, other Ministry of Tourism and Environment reports made available, and similar studies conducted in other countries.

Furthermore, official government, non-governmental organizations (NGO), and producers' organizations and institutes webpages were visited, and a project's repository established.

³ Participants include representatives of MARD, MTE, NFA, NAPA, Faculty of Forestry Sciences, NFFPUA, Municipalities (Puke, Elbasan, Bulqize, Maliq, Mat), CNVP, ANPA, ARDA, SARDF team, GIZ, WB, Forest nursery owner, wood processing and pellet producing company.

⁴ Final version of March 31st, 2021

1.2.3 Data analysis

Regarding data/information analysis, secondary statistical data has been subject of standard descriptive analysis including tables and graphs depicting historical trends. Comparison of production and consumption trends was done, when applicable/necessary. Regarding notes from the meetings are analysed by using simple content summarizing approach and qualitative content analysis techniques, with the aim to sum up the most relevant and interesting topics emerged from the interviews. Value chain analysis was adopted as general framework for analysis of value chain structure and (products, financial, and information) flows.

The analysis of data shows differences, highlighted in the text, between INSTAT and National Forest Inventory data. This is due to different methodology in data collection.

INSTAT data on forest statistics are based on information collected on annual basis from the Ministry of Tourism and Environment and other responsible institutions under its authority as the National Environment Agency. These information are based on elaboration by the Ministry on administrative data collected quarterly in all the municipalities of the country, applying the classifications and definitions according to the relevant EU regulations.

More exact figures on forest situation are available by the National Forest Inventory carried out through a comprehensive land recording of the ground cover with contemporaneous remote sensing method, and field visits which reflect the state of national forests more accurately.

The National Forest Inventory provides the forest situation figures based on observed physical cover of the ground surface according to the FAO Land Cover Classification System software version 3 (LCCS3).

1.2.4 Limitations of the available data

The study combines qualitative and quantitative analyses methodology. This allows for a better understanding of the status and dynamics of the relevant product chain. The study combines analysis of secondary and primary data. The constraint faced is that for some indicators (related to domestic production and trade) there are no available statistics, while for some others there are no recent statistics. However, where latest data are available these were analysed.

1.2.5 Assumptions for the sector study

The main objective of the report is to provide a comprehensive analysis of the forest sector in Albania. The report contributes to the analysis of the internal strengths and weaknesses as well as of the external opportunities and threats to the sector. In light of the needs and problems of the sector and the challenges ahead, investment needs are estimated, and policy recommendations are formulated based on the following set of assumptions:

- The state of the forest resources is well-known (there are enough accurate data about the area, growing stock and characterisation of forests).
- There is a well-defined need for interventions/investments in the forestry sector.
- Key responsible institutions are set up and sector policies are defined.
- Wide array of benefits from sustainable forest management are recognised and possibly measured.

In this way, the report contributes to the formulation of a number of possible interventions for the development of the sector.

1.3 SUMMARY OF KEY SECTOR FEATURES

Forests represent one of the major natural resources of the country (37% of the territory of Albania). Due to their natural and diverse structure, as well as extensive natural regeneration, they represent crucial resources for the further development of Albania.

Broadleaf forests dominate over coniferous, with a large proportion of oak forests that are mainly used for fodder and firewood production. There is a large portion of degraded or open forest areas in the country (36% of all forest area is covered by shrubs, barren land and/or other forest area).

There are limited or no data about forest health and damages, particularly of forest diseases. Even reported data on some of the damages (forest fires, illegal logging) are not reliable and accurate since different sources report different data.

The overall productivity of Albanian forests is low (52 m³/ha)⁵, and the area of good productive high forest is reducing. This is the result of various factors including but not limited to:

- Large proportion of shrubs and coppice forest.
- Overuse of forest resources over the last 50 years.
- Overgrazing of forests areas.
- Lack of management measures for the last 30 years.
- Mediterranean climate/vegetation.

The support of the forestry sector to the economy is therefore very limited. The contribution of forestry sector to the GDP cannot be calculated since it is aggregated to the contribution of the agriculture sector. The trade balance is negative and the employment rate very low.

The government investments in forestry are focused on improving the state of the forests. However, the level of investment is not adequate and there are no investments supporting forest harvesting.

Illegal and/or unregulated logging are continuing despite government efforts to control them. The government has set a ban on forest commercial activities with the aim to better control and eventually stop illegal logging. Similarly, in order to stop poaching, there is also a ban on hunting for a five-year period. Both these decisions have heavily influenced the level of income generated by the forest sector.

The key actors in the forestry sector include government institutions (Ministry of Tourism and Environment, National Forest Agency, National Agency for Protected Areas), Municipalities, Forests and Pastures Users Associations and private businesses and individuals implementing forestry related activities.

Since 2016, the management of forest resources has been transferred to local government units (municipalities). Most of the municipalities do not have the adequate human and financial resources to provide for a proper management of forest resources.

The Directorate of Forest at the Ministry of Environment plays a limited role within forest management and cannot guide the sector development since there is little or no connection with the municipalities and their forest management departments. Hopefully the recently established National Forest Agency will complete this gap.

The management of forests within protected areas is under the National Agency for Protected Areas. These forests are mainly managed for their environmental function and biodiversity protection.

Carbon sequestration is a great potential for Albanian forests. However, the identification of the right methodology and payment scheme is a challenge.

Investments are mostly provided by international donors. The Environment Services Project has supported the forestry sector by strengthening institutional capacities, supporting IPARD-like grants to improve land management, and introducing Payment for Environmental Services Schemes. The IPARD II program for Albania has included no forestry related measures.

Public investments in the forestry sector during 2019 were focused mainly on afforestation, preparation of management plans and thinning operations. Clearly there is no investment in other forestry activities such as: forest tending, nurseries, water point construction, pasture improvement and soil erosion control measures.

In April 2020, the Parliament approved the new law 57/2020 "For Forests", providing a legal framework for the implementation of the Forest Policy of 2018.

⁵ INSTAT 2019

2 CHAPTER 2. FORESTRY RESOURCES AND MANAGEMENT

2.1 FORESTRY RESOURCES

Forests provide foundations for life on earth through ecological functions, by regulating the climate and water resources and by serving as habitats for plants and animals. Forests also provide a wide range of essential goods such as wood, food, fodder and medical herbs, in addition to opportunities for recreation, and other services.

Albania is one of the few European countries where there has been a decline in forest area in recent decades, due to clearance for agriculture, overgrazing and cutting for fuelwood. Tree felling has exceeded net annual increment, resulting in a decrease in the growing stock; there has also been a decline in its quality as a result of illegal cutting. Most of the forest is available for wood supply; of the rest, the larger part is not available for economic reasons.

At present, the forests are under pressure from increasing demands of land-based products and services, which frequently lead to the conversion or degradation of forests into unsustainable forms of land use. When forests are lost or severely degraded, their capacity to function as regulators of the environment is also lost, increasing flood and erosion hazards, reducing soil fertility and contributing to the loss of plant and animal life. As a result, the sustainable provision of goods and services from forests is jeopardized.

At the present days of climate changes due to the increase of GHG in atmosphere, forests play an important role for its sequestration, playing a natural climate change mitigation role. Also, the forests play the main role of water regulator on the earth and for drinking water security, to produce energy from biomass and to control the land by water erosion. Consequently, disappearance of the forest induces with itself land poverty and disability to achieve sustainable development.

Sustainably managed forests have multiple environmental and socio-economic functions important at the national and local scales and play a vital part in sustainable development.

2.1.1 Forest area and other wooded land

In 2020, 41.6% of the total area of the country (2.87 million hectares) is covered by forests, 17.6% are pastures and 24% is agricultural land (See Table 1).

Table 1: Areas according to land use classes.

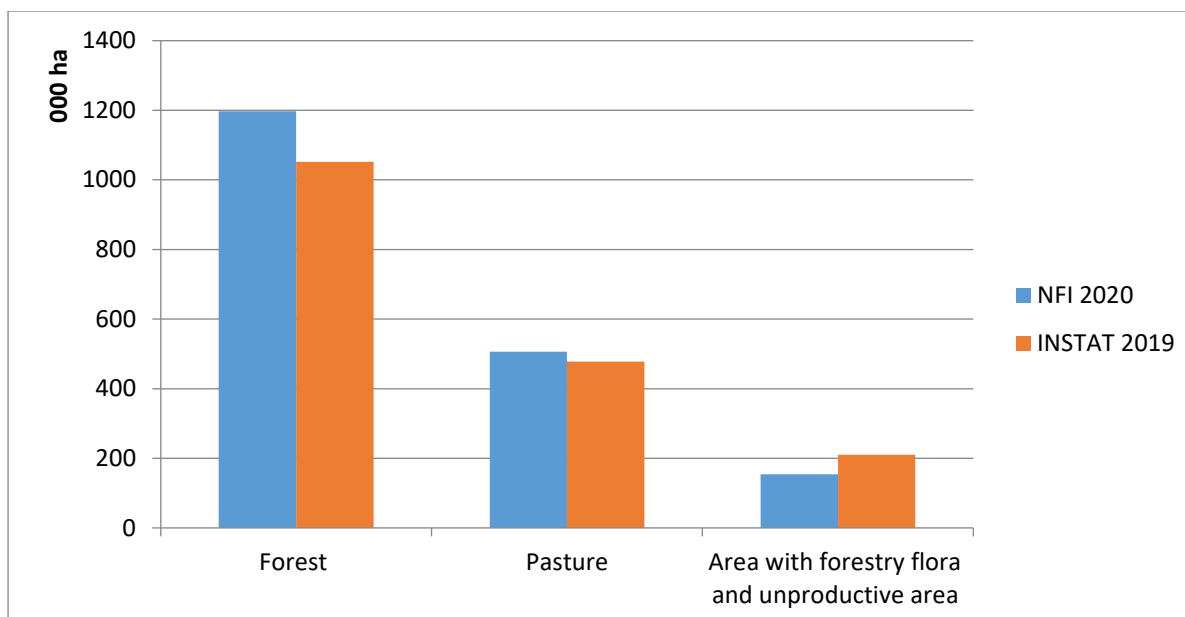
Land use classes	Surface (ha)	Surface (%)
Forest	1.197.258,41	41,6%
Pasture	506.287,47	17,6%
Area with forestry flora and unproductive area	153.903,00	5,4%
Urban zone	66.337,46	2,3%
Water surface	78.012,85	2,7%
Agricultural land	702.646,34	24,4%
Others	170.354,59	5,9%
Total (km²)	28.748,00	

Source NFI 2020.

The 2020 data shows an increase of the forest and pasture areas compared to the data from INSTAT (see Figure 2). However, this increase is possibly due to the different methodology applied for data collection (see paragraph 1.2.3 for details).

According to INSTAT, in 2019 the forest and pasture fund of Albania covers a total area of 1,740,307 (ha) and 60.5 % of the total area of the country. In 2019 forests cover an area of 1,051,843 (ha) representing 60.4 % of the forest and pasture fund. Pastures and meadows have an area of 478,081 (ha) or 27.5 % of the forest and pasture fund. Areas with forest vegetation and unproductive that are part of the forest have occupied a 210.383 (ha) or 12.1 % of this fund.

Figure 2: Comparison of INSTAT and NFI data on forest and pasture coverage



Source: Elaborations on NFI and INSTAT data.

According to the results from the national forest and pasture inventory, the surface of forest and pasture funds in Albania in 2020 is considered to be approximately 1,197,258 ha and 506,278 ha respectively (see **Error! Reference source not found.**).

Table 2: Land Cover Forests/Pastures

Land cover Forests / Pastures	Surface (ha)	(%)
Total Forests	1.197.258,41	70.28%
Deciduous forests	975,425.96	57.26%
Coniferous forests	145,942.40	8.57%
Mixed forests	68,990.95	4.05%
Burned forest areas	6,899.10	0.40%
Total Pasture	506,287.47	29.72%
Land with natural grasses	359,814.36	21.12%
Swamps and pastures	3,184.20	0.19%
Area with shrubs	77,482.15	4.55%
Alpine vegetation	31,841.98	1.87%
Bush	1,592.10	0.09%
Gariga	13,798.19	0.81%
Burnt pastures	18,574.49	1.09%
Total	1,703,545.87	100%

Source: NFI 2020.

Coppice is the most adopted form of management, followed by high forests, summer pastures and shrubs (**Error! Reference source not found.**).

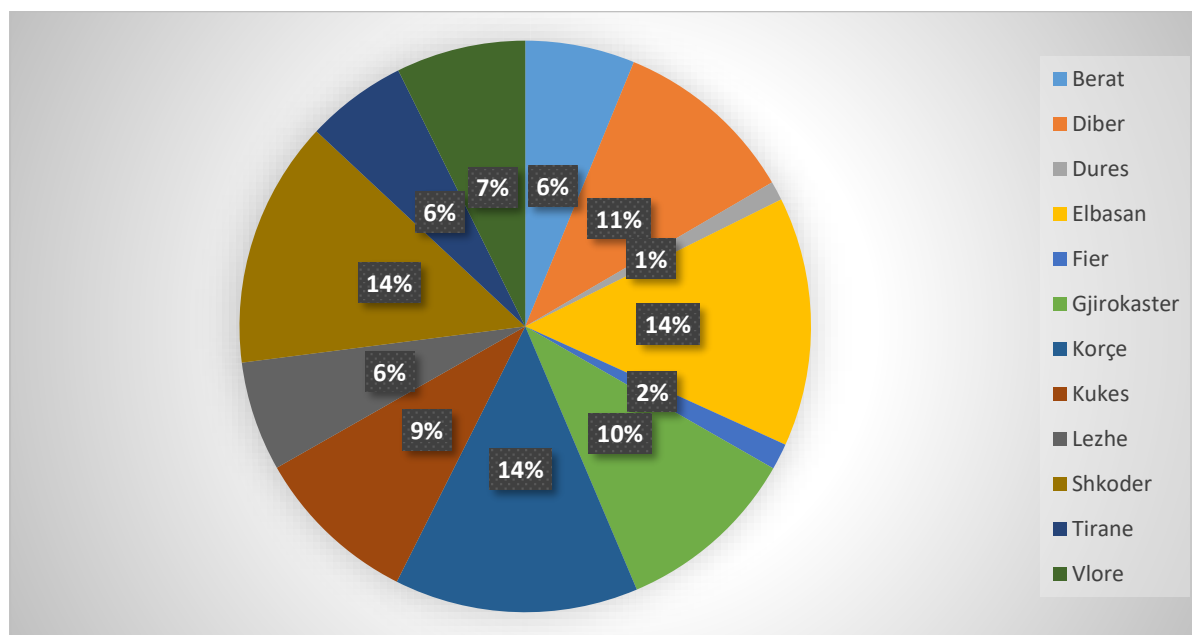
Table 3: Area according to the form of management for each region

Region	High forest	Coppice	Shrubs	Rangelands	Summer pastures	Winter pastures
Berat	17,513.10	33,434.10	22,289.40		18,043.80	10,083.30
Diber	56,784.90	56,784.90	9,021.90		36,618.30	7,429.80
Dures	3,714.90	5,837.70	3,184.20			2,653.50
Elbasan	65,276.10	40,333.20	61,030.50	2,653.50	18,043.80	9,552.60
Fier	4,245.60	8,491.20	4,776.30	1,061.40		4,245.60
Gjirokaster	27,596.40	52,539.30	41,925.30	2,122.80	38,741.10	32,903.40
Korçe	57,315.60	98,179.50	7,429.80		69,521.70	3,184.20
Kukes	26,004.30	67,398.90	16,982.40	4,245.60	48,293.70	13,798.20
Lezhe	23,350.80	28,657.80	21,228.00	12,736.80	11,675.40	5,307.00
Shkoder	67,929.60	81,727.80	15,390.30	3,184.20	23,881.50	21,758.70
Tirane	15,390.30	22,289.40	29,719.20	2,122.80	9,552.60	15,390.30
Vlore	21,758.70	39,802.50	24,942.90	4,245.60	16,451.70	55,192.80
TOTAL	386,880.30	535,476.30	257,920.20	32,372.70	290,823.60	181,499.40

Source: NFI.

According to NFI 2020 data the regions with the most significant forest areas are Shkodra, Korçe and Elbasan with 14% of all forest areas in the country (Figure 3). They are followed by Diber which own 11% of forest areas, and Gjirokaster. Finally, the provinces with less forest areas are Tirana, and Durres.

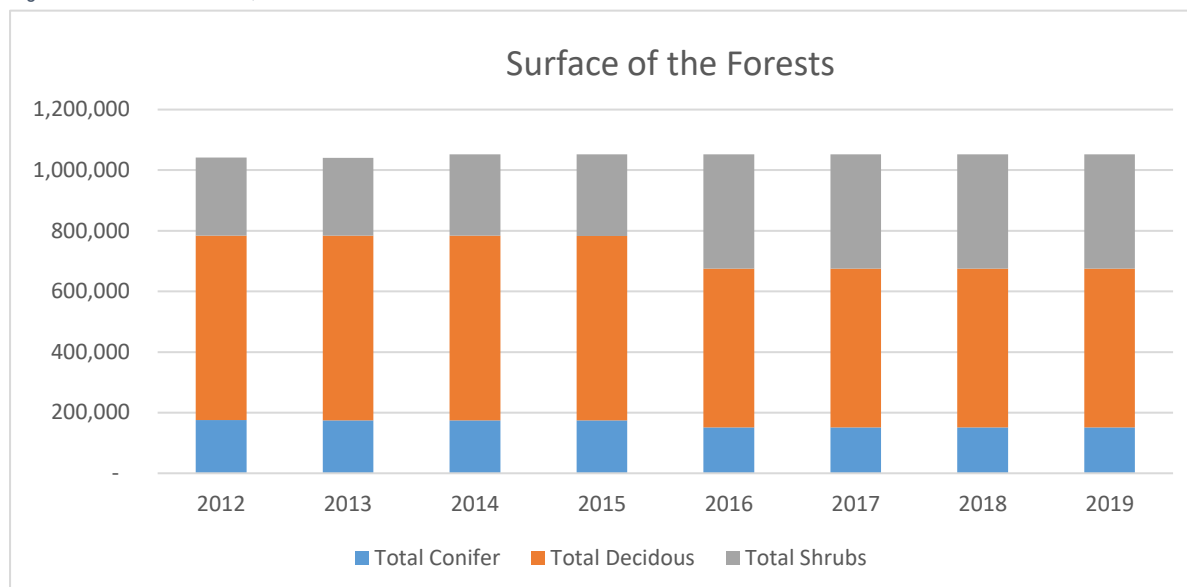
Figure 3: Area of forest by region



Source: INSTAT.

According to data from INSTAT Albania the overall forests surface has increased of 10.453 ha over the period 2012 -2019. During the last 25-30 years the forest has been severely degraded mainly because of unsustainable and often illegal logging operations but also due to forest fires. Especially during the period of 2007-2012, it was estimated that about 150,000 ha of forest were destroyed/ damaged because of forest fires. The figures from INSTAT show clearly a decline in high forest areas (Figure 4) and decrease in forest volumes. The area of high forest sharply declined while the area of shrub land increased in 2014. In particular the area occupied by shrubs has increased of 119,894 ha, while the areas occupied by conifer and deciduous have reduced of ha 24,449.00 and 84,992.00 respectively. In 2018 it is estimated that only 6 % of the surface of the country was covered by dense forest (over 75 % canopy cover) and 17 % was covered by open forest (>30 % canopy cover). Over-building, fragmentation, high fuelwood-use for cooking and heating have contributed to this loss.

Figure 4: Forest's variations, 2012-2019



Source: INSTAT.

2.1.2 Forest structures: high forests and coppice forests

The diversity of forest species and the dynamism of forest ecosystems is variable all over the country. Several forest ecosystems are present according to elevation and distance from the sea. Those are mainly dominated by the following forest trees species:

- Beech forests, *Fagus sylvatica*
- Oak forests
- Mediterranean pines including *P. halepensis*, *P. pinaster*, *P. pinea*, and *P. nigra*, *P. heldreichii*, and *Abies alba*
- Shrub and small tree ecosystems, *Arbutus unedo*, *Erica* sp., *Carpinus* sp., *Corylus* sp. and *Ostrya carpinifolia*
- Chestnut, *Castanea sativa*
- Mixed hardwood forests, *Acer* sp, *Fraxinus* sp; and

Most of the forest ecosystems in Albania show typical structures for countries in South-East Europe, for which a large amount of deciduous forests are typical (Table 5).

According to INSTAT, approximately 83 % of the forest consists of semi-natural forests originating from natural regeneration. High forest constitutes 42 %, while coppice accounts for the remaining 56%. Deciduous forests amount to 523.908 ha in total (49.8% of total) of which 57,4% are oak, 37,4% are beech, and with a small percentage of other broadleaf forests such as acacia, poplar, maple and willow.

Coniferous forests make up 14,3 %, of the forests, represented mainly by black pine (62%), Mediterranean pines (wild pine, soft pine), white fir (10 %), and 28 % of other coniferous trees.

The **Error! Reference source not found.** below provides the surface of forests and pasture according to form of management. According to this interpretation forests managed as coppice occupy the largest portion of forests area (46%) while high forests cover only 32% and shrubs 21%. Most of the pastures are located in mountainous area (summer pastures 58%) while rangelands cover only 6% of the pasture area.

Table 4: Forest and pasture area according to management system.

Form of management	Surface (ha)	(%) of total	% of forests/pasture
Total forests	1.197.258,41	70.28%	100%
<i>High forest</i>	387.941,44	22.77%	32%
<i>Coppice</i>	552.989,03	32.46%	46%
<i>Shrubs</i>	256.327,93	15.05%	21%
Total pasture	506,287.47	29.72%	100%
<i>Rangelands</i>	30.780,58	1.81%	6%
<i>Summer pastures</i>	294.007,61	17.26%	58%
<i>Winter pastures</i>	181.499,28	10.65%	36%
Total	1.703.545,87	100%	

Source NFI 2020.

The following Table 5 describes the changes in the national forest structure, highlighting the reduction of coniferous and deciduous trees and the increase of shrubs.

Table 5: Forest structure (ha) by category and Year

Forest category	2012	2013	2014	2015	2016	2017	2018	2019	Variation 2012- 2019 (%)
Black pine	109.000	108.491	108.491	108.468	93.644	94.144	94.143	94.141	-13,6
Fir	15.180	15.180	15.180	15.180	13.105	15.180	15.180	15.180	-
Other conifer	51.180	51.180	51.180	51.157	44.165	41.591	41.591	41.590	-18,7
Total Conifer	<i>175.360</i>	<i>174.851</i>	<i>174.851</i>	<i>174.805</i>	<i>150.914</i>	<i>150.915</i>	<i>150.914</i>	<i>150.911</i>	<i>-13,9</i>
Beech	196.990	196.990	196.990	196.841	169.467	171.447	171.447	171.443	-13,0
Oak	343.620	343.620	343.620	343.471	295.706	301.149	301.145	301.142	-12,4
Poplar	1.790	1.790	1.790	1.791	1.543	1.790	1.790	1.790	0,0
Other Deciduous	66.500	66.500	66.500	66.447	57.207	49.539	49.534	49.533	-25,5
Total Deciduous	<i>608.900</i>	<i>608.900</i>	<i>608.900</i>	<i>608.550</i>	<i>523.923</i>	<i>523.925</i>	<i>523.916</i>	<i>523.908</i>	<i>-14,0</i>
Strawberry tree	58.600	58.600	58.600	58.600	82.246	94.642	94.644	94.643	61,5
Hornbeam	96.700	96.700	96.700	96.700	135.718	132.746	132.744	132.742	37,3
Other	101.830	101.830	113.721	113.598	159.435	149.643	149.641	149.639	46,9
Total Shrubs	<i>257.130</i>	<i>257.130</i>	<i>269.021</i>	<i>268.898</i>	<i>377.399</i>	<i>377.031</i>	<i>377.029</i>	<i>377.024</i>	<i>46,6</i>
Total Forest	1.041.390	1.040.881	1.052.772	1.052.253	1.052.236	1.051.871	1.051.859	1.051.843	1,0

Source: INSTAT, 2019.

According to data from the NFI 2020 (see Table 6 below) 83% of high forests are under 100 years old (minimum harvesting age) and 83% of coppice forest are under 30 years old. This clearly shows that the area of forest at harvesting age is very limited.

Table 6: Area and volume of forests according to age classes and management system

Forest category	Age Class (year)	Surface (ha)		Percentage %	
		Surface (ha)	Percentage %	Volume m ³	Percentage %
High Forest	0-20	13.267,5	3.4	43.602,7	0.47
	21 - 40	76.951,4	19.8	3.950.677,0	22.06
	41 - 60	92.872,4	23.9	6.814.781,0	28.11
	61 - 80	74.828,7	19.3	8.439.504,0	19.51
	81 - 100	65.276,1	16.8	8.684.409,0	14.58
	101 - 120	34.495,5	8.9	6.193.953,0	7.72
	121 - 140	12.736,8	3.3	3.040.146,0	3.06
	141 - 160	7.429,8	1.9	2.059.486,0	2.15
	>160	10.083,3	2.6	3.174.382,0	2.35
	Total	387.941,5		42.400.940,7	
Coppice	0-10	33.434,1	6	43.502,1	0.19
	11 -20	247.306,0	44.7	1.683.345,0	22.86
	21 -30	180.437,9	32.6	4.001.280,0	46.04
	31 - 40	70.052,4	12.7	3.028.203,0	23.15
	41 - 50	16.451,7	3	1.014.895,0	6.16
	>50	5.307,0	1	260.931,0	1.6
		Total	552.989,1		10.032.156,1
Bush	0 - 5	4.776,3	1.9		0.0
	6 - 10	36.618,3	14.3	408.268,0	3.8
	11 - 15	93.403,1	36.4	1.882.560,0	12.7
	16 - 20	91.280,3	35.6	2.126.388,0	60.8
	21 - 25	22.820,1	8.9	779.370,0	15.2
	26 - 30	1.592,1	0.6	39.872,3	1.3
	>30	5.837,7	2.3	60.978,4	6.3
		Total	256.327,9		5.297.436,7
Total		1.197.258,5		57.730.533,5	

Source: NFI 2020.

The figures from the National Forest Inventory (NFI) show that Albania has a large proportion of immature forest which require tending support for complete rehabilitation. Supporting forest tending operations provides jobs and income to local population. The resulted timber, although with no commercial value can be used for bioenergy.

2.1.3 Wood resources and carbon stocks in forests

According to the U.N. FAO, Albania's forests contain 49 million metric tons of carbon in living forest biomass, while according to the National Agency of Natural Resources in 2014 the total proven reserves of wood as fuel is about 6 Mtoe. Wood production for energy in 2014, was 210 Ktoe.

There are no more recent data about the total carbon stock of Albanian forests.

2.1.4 Forest types and generic management regimes

A sustainable management of forests is particularly important since forests fulfil more ecosystem services compared to other types of land use.

According to NFI 2020 data (Table 7) high forests occupy 32.4% of the area and 73.4% of the volume, coppice forests cover 46.2% of the area and 17.4% of the volume, while shrubs forests occupy 21.4% of the area and count for only 9.2% of the volume.

Table 7: Wood volume according to the form of management.

Growing stock	V(m ³ /ha)	Surface		Volume	
		(ha)	%	m ³	%
High forest	109,30	387.941,4	32,4	42.400.940,3	73,4
Coppice	18,14	552.989,0	46,2	10.032.155,4	17,4
Shrubs	2,07	256.327,9	21,4	5.297.435,8	9,2
Total/Average	48.22	1.197.258,3	100	57.730.531,5	100

Source: NFI 2020.

According to the composition (Table 8), Albanian forests are largely dominated by deciduous forests (80% of the area and 64% of the growing stock), while conifers cover only 11% of the area and 22% of the volume.

Table 8: Forest area and volume, according to forest composition.

Forest type	Surface		Volume	
	(ha)	%	m ³	%
Coniferous	134.797,7	11.3	11.454.765,6	21.7
Mix dominated by conifers	48.824,4	4.1	3.857.673,2	7.3
Mix dominated by deciduous	57.315,6	4.8	3.993.845,6	7.3
Deciduous	956.320,8	79.9	38.424.247,2	63.7
Total	1.197.258,4	100%	57.730.531,6	100%

Source: NFI 2020.

The majority (78%) of forest areas in Albania are classified as economic forests, i.e., forests which are actually managed for economic purposes. Protected forests represent the 20% of the forest and serve primarily for the protection of land, waters, biodiversity and landscape; including national parks, natural parks, and nature preserves, forests intended for leisure activities, sports, recreation, teaching, and scientific research.

Special purpose forests (2%) are those forests that are especially rare in nature or have a special cultural, religious, or historic importance; as well forests managed for the protection of important water bodies or other important infrastructures.

Table 9: Structure of forest area and forest land by vegetation form, purpose of use and availability⁶

Vegetation form	Available surface (ha)			Total (ha)
	Economic forests	Protected forests	Special purpose forests	
1. High Forests	323.406	118.113	10.721	452.240
2. Coppice forest	279.289	55.220	2.306	336.815
1+2 All forests	602.695	173.333	13.027	789.055
3. Shrubbery	224.961	26.909	466	252.336
4. Barren land	138.588	29.025		167.613
3+4 Shrub and barren	363.549	55.934	466	419.949
5. Other forest area	12.664	16.737		29.401
1+2+3+5 FAO forests	840.320	216.979	13.493	1.070.792
6. All forest and forest land	978.908	246.004	13.493	1.238.405

Source: Ministry of Environment

2.2 LAND USE AND FORESTRY

Forestry, pastures, and crop production are the most important land uses in rural areas in Albania. It is typical in rural Albania that villagers manage both agricultural and forestry resources in diverse agroforestry systems where agricultural crops, trees and livestock are found within the same management unit. Land use change is one of the major challenges Albania. This affects forestry and rural development in terms of how land is continuously and efficiently managed, in terms of demographic and migration trends, and regarding economic development in rural areas. As a consequence, land use changes impact the preservation and maintenance of land productivity, provision of good and ecosystem services, as well as social structures, traditional knowledge and know-how. Agroforestry development requires a clear definition of potential sites to be used for the purpose, and in Albania

⁶ Source: Ministry of Environment, 2016

there are some experiences of developing agroforestry systems on agriculture land (e.g., in Korca where some privates are planting fast growing trees on agriculture land).

2.2.3 Land use and land use change

There has been a clear trend of land use change with different manifestations as regards the shaping of rural areas and agricultural and forest areas. The major impact on land use is a large-scale migration of the population within the country resulting in intensified urbanization and the appearance of abandoned land as a counterpart. More specifically, two underlying mechanisms can be summarized: a) a stronger urbanization and transformation of traditional cultural land use forms, and b) a trend of land abandonment following the trend of urbanization that affects the amount and management of forest land.

Understanding the demographic changes is essential for studying the social pillar of rural development.

A very-up-to-date comparison of population development is shown in Table 10⁷.

Table 10: Demographic changes by region during the last 20 years

Qarku/Prefectures	2000	2020	Difference	Percentage
Berat	193.020	122.003	-71.017	-36,8
Dibër	189.854	115.857	-73.997	-39,0
Durrës	245.179	290.697	45.518	18,6
Elbasan	362.736	270.074	-92.662	-25,5
Fier	382.544	289.889	-92.655	-24,2
Gjirokastrë	112.831	59.381	-53.450	-47,4
Korçë	265.182	204.831	-60.351	-22,8
Kukës	111.393	75.428	-35.965	-32,3
Lezhë	159.182	122.700	-36.482	-22,9
Shkodër	256.473	200.007	-56.466	-22,0
Tiranë	597.899	906.166	308.267	51,6
Vlorë	192.282	188.922	-3.360	-1,8
Total	3.068.575	2.845.955	-222.620	-7,8

Source: INSTAT

Out of 12 Prefectures, 10 show a general decline in population, with 9 having a decrease of more than 20%, and 3 (Gjirokastrë, Dibër, Berat) have lost more than 35% of their population since 2000. The only increase in population is observed in the municipalities of Tirana (+51%) and Durrës (+18%). This general decline implies that rural areas are widely abandoned with severe potential impacts on rural development.

Since population pressure and intensity of land use are widely shrinking, competition for land use in Albania is not a pre-dominant phenomenon as observed in other, partly densely inhabited countries in Europe.

Moreover, land use is rather affected by limited or inconsistent land use planning and enforcement and implementation of planning and controlling instruments of land use forms. This entails:

- Weak implementation of spatial planning of land as a resource and non-transparent estate trading
- Uncoordinated settlement processes, lacking guidance and limited controlling
- Weak implementation of environmental standards in exploitation of natural resources; e.g., hydropower and mining

In addition, rural poverty evokes major pressure on forest land. Rural areas are predominantly poor, low-income areas, which has led to increased exploitation of forests, especially in terms of particular demand for fuelwood and illegal activities of harvesting and marketing wood resources.

2.2.4 Forest ownership structure

The current forest land structure and ownership pattern in Albania is determined by the political and historical developments that the country has gone through. Until 1990, all forests and pastures were state owned property.

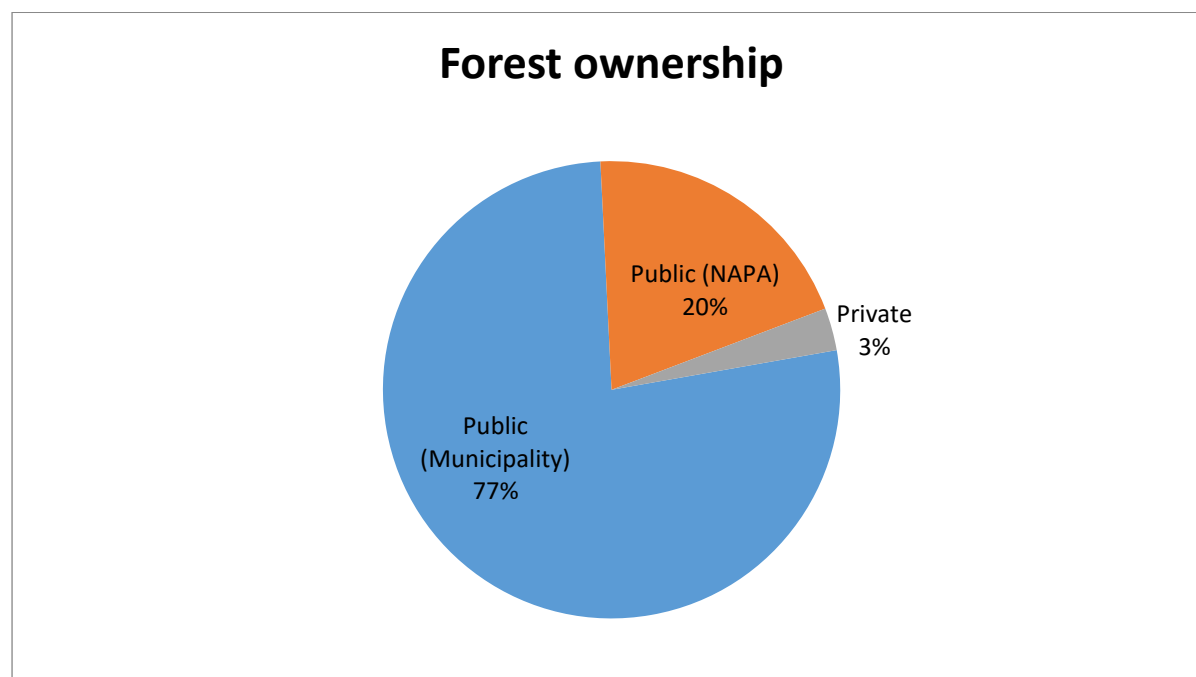
⁷ Source: INSTAT

After the political, economic and social changes of 1990s, three forms of ownership were introduced: state, communal and private ownership.

In the last 15 years the most important policy decision related to the forestry sector was the transfer of property rights on forest area from the state to the local governments. The new function of forestry services established in 2016 defines the municipality as the owner of forests and pastures located within its administrative territory.

The results of this policy, which have changed the ownership structure, are shown in the Figure 5 below.

Figure 5: Forest Ownership



Source: INSTAT

Publicly owned forest land in Albania is predominant (Figure 5), with a minor share of private forests, which has been stable at 28,780 ha (3%) since 2014. Publicly owned are managed mainly (77%) by Municipalities, except for forests within protected areas (20%) that are forests managed by the National Agency for Protected Areas.

Table 11: Area of forest by ownership types by forest management system and species composition

Forest category	Public forests		Private forests	
	Area (ha)	%	Area (ha)	%
High forests	437,745	42.0%	14,495	1.4%
Coppice forests	327,590	31.5%	9,226	0.9%
Shrubs	244,968	23.5%	7,509	0.7%
Total	1,010,303	97.0%	31,230	3.0%
mixed	16,171	1.55%	-	
Coniferous	156,861	15.06%	8,922	0.86%
Broadleaf	837,271	80.39%	22,308	2.14%
Total	1,010,303	97.00%	31,230	3.00%

Source: INSTAT 2015.

Private forests are mainly owned by individuals and in very rare cases by institutions. As far as private ownership of forests is concerned, the privatization of the forest fund in Albania is not allowed, being still considered as a strategic sector, even the areas of shrubs and degraded forests that constitute a large portion of the forest fund. The existing legal framework in Albania provides only for the restitution of those forests that were privately owned

before establishment of the communist regime in 1944, and only up to a maximum of 100 hectares for each former owner. This is the key reason that privately owned forests today constitute only 3% of the forests in Albania.

The main goals of the association of private forest owners are to address the needs and interests of private owners; help its members with the management of private forests; protect the forests and the environment; increase the tourism and recreation values of forests; and disseminate promotional materials. Although private forest areas are very small, they have been intensively exploited in recent years. Owners are trying to make as much profit as possible, without thinking about the future of their forests. On the other hand, there are no subsidies available to encourage responsible management; there is no clear legislation on the management of private forests; and there is no manual on the technical aspects of private forest management. There are currently no investments in private forests, while illegal exploitation by the owners and illegal logging by others are among the biggest concerns in these forests. In some area's ownership is not clear: the completion of ownership documentation is complicated by bureaucracy and corruption, and there are many cases of conflict and disputed ownership. Forest management is typically ad hoc, leading to the degradation of private forests, low incomes, and frequent forest fires.

2.3 FORESTRY MANAGEMENT

Albania's forests are one of the areas in Europe with the greatest need for improvement.

At present municipalities are regarded as the forest owner and solely responsible for forest management since the new forest policies came into place in 2016.

However, even to date, a considerable number of municipal forest offices are thinly resourced in terms of office facilities and staffing with consequences on proper management of their activities. In addition, the reduced technical capacity and insufficient staffing affected the undertaking of several functions like the development of national forest policy and legislation, national reporting and monitoring. While municipalities own the forest and pasture resources, these functions are still required at the central level.

Importantly, municipalities lack the authority to collect fines (a competency of the line Ministry).

Fire protection is a completely new function of local governments, which has been decentralized with no prior analysis of local capability to fulfil this function.

New approaches to forest management are necessary to deal with environmental problems and to meet the current needs of society with regard to the sustainable use of natural resources.

2.3.3 Production of forest goods

Based on the data of the last National forest Inventory (2004) the annual timber production is estimated about 1.15 Million cubic metre. The official data showed that the average quantity of industrial wood felled annually is 28,212 cubic meter while the quantity of fuelwood felled is around 382,200 cubic metre. Various studies have shown that wood fuel consumption is much higher than the official figure and the most recent study of FAO (2017) indicated that total wood fuel consumption coming directly from forests in Albania is estimated to be 2,479,093 m³.

The production of timber is the most important objective of forest management in Albania. However, data on the exact amount of timber used annually is ambiguous.

According to the cadastre reports (Table 12), data on legal and illegal logging are as follows:

Table 12: Data on legal and illegal logging

Year	Timber legally harvested (m ³)	Estimated illegal logging (m ³)
2013	449,859	14,502
2014	180,343	13,793
2015	110,086	2,243

Source: Albanian cadastre reports.

From 2013 to 2015, the decrease in harvested timber was about 75.52%, while illegal logging decreased by 84.53%. Due to the large loss of forest cover in the past 25 years (an estimated 20 per cent), in February 2016, the Government installed a 10-year ban on logging (Moratorium Decision No 5, Feb 4, 2016) stating that it is not permitted to harvest any wood for any purpose from any land, with a few exceptions: a) Harvesting of fuelwood for

the needs of inhabitants in municipalities, b) Change of land use and c) Sanitary forest activities needed for forest regeneration. Decisions No 438 Jun 8, 2016 and No 808 Dec 12, 2016 mention that solely municipalities will be responsible for the fuelwood supply for heating for citizens and institutions within their area of jurisdiction and describe the processes that need to be followed. Municipalities are given two options: 1. Set up their own structure and implement all activities from fuelwood collection to marketing 2. Contract (using a tender process) a forest company to do thinning and cleaning operations. The contracted forest companies must leave the extracted fuelwood at the road head, while solely the municipalities are responsible for transport and marketing.

2.3.4 Afforestation

Afforestation measures are carried out occasionally in an effort to control erosion, despite the commitment of maintaining or increasing the forest area through afforestation/reforestation and rehabilitation of bare lands.

Afforestation is the most common forest activity randomly implemented all over Albania. Ministry of Tourism and Environment, Municipality of Tirana, schools, government institutions at both central and local level are all racing against each other on afforestation activities. In 2019, MoTE launched the “Create your own CO2” campaign envisaging the plantation of over 20 million trees within 2020.

There are no register of afforestation works and there is little control on the planting material used. The most common species used for afforestation are Black locust (*Robinia pseudoacacia*) and black pine (*Pinus nigra*).

There are a number of local nurseries that supply forest species seedlings. Forest nurseries (public and/or private ones) should be properly supported.

Afforestation is an important measure, so careful attention should be paid that the size and the amount of the support for afforestation in the foreseen sector support measure is not too limited. Careful considerations and planning efforts should be envisaged if the support program will provide for afforestation on agriculture land.

Furthermore, Albania has some issues with the high costs of afforestation works. These costs need to be carefully revised, although conditions of Albania (rough and steep terrain) provide limited space for use of machineries or other modern technologies involving less labour intensive afforestation techniques that could help reduce such high costs.

2.3.5 Agro-forestry systems; recovery/reconversion of abandoned agriculture area

It is typical for rural Albania that villagers manage both agricultural and forestry resources in diverse agroforestry systems where agricultural crops, trees and livestock are found within the same management unit.

Furthermore, although agriculture land in Albania was privatized since 1991, farmers have refused to use and get property and even abandoned some agriculture lands that are very unproductive and/or very remote what makes them unprofitable to be used for agriculture crops.

Actually, there is as well a general tendency of spontaneous natural forest regeneration on these abandoned agricultural lands in rural areas, and a modest natural afforestation and re-wilding taking place on abandoned industrial land compensated for by partial loss of forests to designations such as dam construction for hydropower plants, construction of small-scale hydropower plants, opening of quarries, or construction of road infrastructure (notwithstanding that forest net loss might occur in urban areas to extension of urban infrastructure in general).

2.3.6 Forest health and damage prevention and recovery of damaged forestry areas

Human-induced pressures are the main damaging factors for forests in Albania. The two predominant causes are:

- **Forest fires**, i.e., forest and other wooded land, on which the vegetation, including the trees, has been wholly or largely destroyed by fire
- **Human made damages** occurring as a consequence of poor management practices, over-exploitation of wood resources, illegal logging, and pollution from various sources as well as over-grazing.

In Albania fires are currently a major threat to forests. Mostly, forest fires can be considered human- and climate induced impacts as the major reasons are:

- No active fire management, high amount of fuel wood in forest.
- Low capacities and bad equipment for firefighting, mostly dependent on support from neighbouring countries.

- Ignorance about forest fire risks and prevention measures.
- Carelessness of local population and tourists.

Table 13 displays the magnitude of forest fires for the period 2012-2019.

Table 13: Data on fires and area of forest and pastures burnt in Albania 2012–2019

Year	2012	2013	2014	2015	2016	2017	2018	2019	Total
Number of fires in forest	584	71	13	118	61	436	53	32	1368
Number of fire in pasture	0	23	34	35	0	0	19	4	115
Surface burned in forest and pasture (ha)	4,756	814	50	250	181	14,805	238	42	21,136

Source: INSTAT, 2020.

According to the European Forest Fire Information System (EFFIS)⁸, data on forest damage in Albania (Table 14) are different to that presented in previous table and reveal a higher burn area every year those reported by INSTAT.

Table 14: Area affected by fires in Albania according to EFFIS.

Year	2012	2013	2014	2015	2016	2017	2018	2019	Total
Surface (ha) burned in forest and pasture (INSTAT)	4,756	814	50	250	181	14,805	238	42	21,136
Surface (ha) burned in forest and pasture (EFFIS)	43,795	583	164	2,638	2,582	27,082	2,727	8,271	87,842
Difference (ha)	-39,039	231	-114	-2,388	-2,401	-12,277	-2,489	-8,229	-66,706
Difference (%)	-89%	40%	-70%	-91%	-93%	-45%	-91%	-99%	-76%

Source: EFFIS, 2020.

Studies have shown that 29 percent of these forest fires were caused by negligence; 61 percent by unknown factors; 9 percent by arson; and only 1 percent by unusual events and lightning. However, it should be recognised that even those forest fires classified as “caused by unknown factors” can be considered to have been started as a result of human activity. They are classified under “unknown factors” as the precise cause is not known, but it can still be concluded that a large proportion of forest fires in Albania are started by human activities⁹.

Due to limited financing, the work on forest protection against pests and diseases is focused mainly on monitoring the phytosanitary situation. According to the monitoring data over several years, pests and diseases affect about 135 000 ha every year (or 13 percent of the country's forest area). The most problematic are pine disease and beech disease which cause most of the damage to forests.

2.3.7 Improving the resilience and environmental value of forest ecosystems

Many of the major factors that influence the forests are due to human activities, including land-use and landscape fragmentation, pollution, soil nutrients and chemistry, fire suppression, alteration to herbivore populations, species loss, alien invasive species, and now climate change.

Under a warmer climate may lead to productivity decline. Summer temperatures rise and reduction of precipitation may further increase fire risk. Forest productivity and total biomass is likely to decrease while tree mortality is likely to accelerate.

The species that resist high temperatures and severe long dry seasons would be least affected by climate change. For those that need moisture (silver fir, etc.), the danger of being limited in distribution or disappearing does exist. The species that produce many small seeds and have a high distribution potential (*Pinus* etc.) would be able to

⁸ Source: EFFIS - Annual Fire Reports (europa.eu)

⁹ Source: FOREST FIRES COUNTRY STUDY - REPUBLIC OF ALBANIA, 2015, Produced by the Regional Fire Monitoring.

survive and to spread at sea level, whereas oak species, which produce big seeds, would occupy new areas but very slowly.

Possible adaptation actions aiming at improving the resilience of forests include, but are not limited to:

- Implementation of the research programs aimed at the management of forest units on genetically resources, adapting of the forest species and provenance, production of hybrid species that are better adapted to climate change and the identification of better adapted cultivation systems;
- Evaluation of the actual situation for each forest type, in relation with climate change;
- Increasing of the protected forest area;
- Reduction of the illegal cuttings at the maximum extent and studying of the real need for fuel wood;
- Implementation of actions to increase the existing forest productivity (rehabilitation of the degraded forests, conversion of the coppice and shrub forests to high stem forests or planting the fast-growing species or more capable species to sink CO₂ emissions);
- Increasing of the forest area through the new reforestation;

2.3.8 Value added activities in silviculture

Few value-added silviculture activities are carried out by municipalities. The municipalities that already have valid forest and pasture management plans are investing some of the funds generated from forest related activities in implementing some cleaning and thinning operations as foreseen in the management plan in order to improve the productivity and quality of their forests.

Implementation of these activities provides jobs to the local communities as well as valuable wood material (mostly used as fuelwood). However, large part of the wood material is wasted and left over in the stands due to lack of appropriate technologies (chipping equipment), increasing the fire hazard.

2.3.9 Infrastructures and services for forestry management

Since 2005, there is no investment in providing infrastructures and services for forest management. Some forest management services are mostly provided by the Forest and Pasture Users Associations or by private consulting groups and/or individuals.

3 CHAPTER 3. Forest-based products, services and value chains

Forests have played an important role in the development of the economy and society in Albania. Apart from the economic aspects, forests provide environmental, social and cultural benefits. Because forestry has traditionally been considered as closely related to agriculture, there is no separate data regarding its contribution to the country's economy. Statistics show that agriculture sector contribution in the GDP has been reduced over the years, from 42.5% in 1992, to 21.6% in 2016 and contributes now 18.4% of the GDP and employs 38% of the workforce¹⁰, but no specific data is available regarding to forest sector contribution in GDP.

The forest-based sector is very complex and the available documentation limited, which still makes difficult analysing the sector. The analysis covers both, forest resources and the production, trade and consumption of forest products and services.

Forest products include all the primary wood products manufactured in the forest processing sector (sawn wood, wood-based panels, paper and paperboard) and the main inputs or partly processed products used in the sector (round wood, wood pulp, wood residues and recovered paper); and secondary or value-added forest products (such as wooden doors, window frames and furniture).

The whole forestry-wood sector is very complex and several value chains within the sector can be divided as follows:

- Timber and wood products
- Non timber forestry products
- Forestry based energy products

3.1 TIMBER AND WOOD PRODUCTS

3.1.1 Structure of the value chain, including access to market

Logging is carried out by the forest/ logging company based on a contract with the State/ Municipality. These contracts state where the company can harvest the wood, how much, and the techniques that should be applied. The forest company buys the wood from the logging company (in many cases the logging company is part of the forest company) and sells the wood on the local, regional or national market. According to the new forest policies and Moratorium, forest companies will not be allowed to transport and market wood from 2017 onwards unless they have imported the wood.

However informal logging by farmers collecting wood from their land or loggers who take wood from all kind of forests (without taking care of the forest resources) is considered the most common value chain. They collect, chop and dry the wood themselves and use the wood for their own needs, or sell it to traders or bring it directly to customers' homes (in the early morning hours to avoid checks by the Forest Inspectorate). It is estimated that about 80% of the fuelwood supply takes/ took place in this way.

The main forest product is wood and fuelwood for sale, which is the major contributor to the forest service revenues (see Annex 1).

Wood processing and furniture production are important sectors in Albania. Especially in the last 15 years, Albanian wood industry has been under a complete transformation process, not only in terms of the structure and organization of the enterprises, but also in the type of raw materials used to produce wood objects with a greater range of choice.

Nowadays, wood processing industry meets a considerable part of the Albanian domestic market needs with wooden products targeting mainly low-cost products for low-income customers, while import of furniture products continues and expands mainly for high class well-developed modern furniture.

More than 80 percent of raw materials, primarily wood-based panels for domestic furniture industry, are imported. Albania also imports significant volumes of ready-made furniture, including office, kitchen, and other furniture. Office and kitchen furniture are imported primarily from Italy.

The main products produced in-country are semi ready elements for chairs, tables, and other articles for export; chairs; bedroom furniture; tables; doors; windows; and flooring.

¹⁰ World Bank, 2019.

3.1.2 Employment in the timber and wood products sector

Previously, the main employer in the forestry sector was the state forest administration. Now this role has been passed on to the municipalities. According to the government decision finalizing the transfer of forests to municipalities, it is required that municipalities will have to employ within their administrations a total of 982 people who will hold positions like forest engineers (404), forest technicians (278) and administrative and other workers (300). These people will be responsible for the management of the forest resources. Not all municipalities have employed all people as required.

INSTAT provides some statistics about the number of employees in forest-based industries exists. Table 14 provides some data about the number of businesses and related employees whose activity is related to forests and wood processing. The Table 15 shows a large number of businesses working in timber production and furniture. However, it is important to consider that the majority of these businesses are small, family enterprises with limited production capacities.

Table 15: Businesses and employees in the wood, wood products & furniture industries

Item/Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number of enterprises	1,479	1,541	1,367	1,364	1,297	1,465	1,401	1,528	1,488
Annual average number of employees	3,394	3,544	3,610	3,882	4,334	5,092	5,453	6,295	6,857

Source: INSTAT 2020

3.1.3 Key features and challenges of timber and wood products

At present municipalities manage around 80% of the forests in Albania but widely lack capacities, experience and resources to properly manage their forests, and provide for an effective marketing of forest products.

In general, forests are best managed by people/ organisations who have a stake and directly benefit from the forest resources because it is in their own interest if forest lands are properly managed. People are willing to invest time and resources in forest management if they know they will reap the future benefits. If people are not benefiting from the forests or if procedures are too cumbersome, people will in general be demotivated and not interested in protecting and conserving forest resources.

Therefore, it is important that the government recognises user/ property rights of local farmers over traditional forest land. Fostering associations of forest owners and the forest-based industries is needed for a more coherent horizontal and vertical organization of the sector. Policies should therefore be conducive and facilitate long-term tenure arrangements to people/ organisations based on strict criteria to ensure proper and sustainable management of the forest resources.

The traditional business of wood production in small and medium-sized enterprises remain a big asset of the wood-sector in Albania. However, the latest forest policies are affecting wood-processing companies because they lack access to wood materials. The following reasons account for the contemporary developments in the sector:

- decreasing raw material supply;
- reduced availability of large-sized timber; and
- increasing responsiveness to environmental pressures

Companies expressed feelings of disillusion because they were not heard in the preparation of the revised forest policies while their business is seriously impacted. Current forest policies need more inclusive and participatory processes to reach forest owners and forest users.

The debate around the possible extension of the Moratorium entered in a critical phase. Some people believe that extending the Moratorium will even create an increased forest degradation because they expect an increase of informal collection of fuelwoods while there is a lack of funds and other resources for the Forest Inspectorate to control illegal wood extraction. Others believe that the forest status will improve because it will become easier to control illegal timber exploitation because all logging has become illegal, and people will be more aware of the value of forests and the importance of sustainable management of forest resources.

Wood processing and furniture production are important sectors in Albania. Especially in the last 15 years, Albanian wood industry has been under a complete transformation process, not only in terms of the structure and organization of the enterprises, but also in the type of raw materials used to produce wood objects with a greater range of choice.

Nowadays, wood processing industry meets a considerable part of the Albanian domestic market needs with wooden products targeting mainly low-cost products for low-income customers, while import of furniture products continues and expands mainly for high class well-developed modern furniture.

The problems to be addressed in Albanian wood manufacturing industry are not only related to quantity and capacity but also to production quality and cost.

Manufacturing companies are mostly of small and medium size, operating with a small number of employees. Despite that there is a large quantity of furniture imported; manufacturing of wood products by domestic SMEs covers a significant percentage.

Furniture market is a matured market and this condition enhances the necessity to manufacture wood products that are more qualitative in order to face an increasingly tougher competition, and for finding new markets especially in the Balkans, but considering the small size of the major part of these companies as well as their capacities, this is a remote possibility.

The competition, the low level of product processing as well as the low level of qualification of the general staff and the technical conditions of the machinery used, does not permit this industry to further improve and expand.

3.4 NON-TIMBER FORESTRY PRODUCTS

The importance of non-timber forest products (NTFPs) to rural people is widely acknowledged, as is the income generated from casual or fulltime trade on village and urban markets. Although there are no disaggregated data about employment in this sector, it is widely considered to be a very good opportunity for local communities as source of income diversification. To provide for the long term preservation and sustainable use of NTFPs, they should be included into the multiple-use forest management planning, which has to ensure that timber and NTFPs are managed in a complementary manner.

3.4.1 Structure of the value chain, including access to market

NTFPs include all biological materials other than timber and are extracted from forests for human use. Compared to wood-based products, the use of NTFPs is possible without major damage to the forest and with very limited environmental impacts. Nevertheless, the challenges of NTFPs governance may be managed through proper dialogue, stakeholder involvement and partnerships, and increasing civil society engagement. Main NTFPs collected in Albania are: nuts, fresh and processed mushrooms and forest berries, honey and wild medical and aromatic plants.

Four main types of actors are involved in value chain of NTFPs in Albania: collectors/pickers; local processors; local traders / urban wholesalers and national traders/urban exporters.

3.4.1.1 Nuts

In botanical terms, nuts are edible, dry fruits with an external shell that becomes very hard and does not open to release the mature fruit, for example: hazelnuts, and chestnuts. However a wide range of dry seeds with an edible core are also called “nuts”, but they are not true nuts (botanically), such as almonds, and walnuts.

Different nuts are used as food, to produce oil and in the cosmetics sector and some nut trees are used in the timber industry.

Edible nuts have many advantages. Their nutritional value is one of the highest in the foods we eat and they contain vitamins, minerals and amino acids. Nuts taste good and when dry, they can be stored without refrigeration for long periods.

Nuts (especially chestnuts) represent an important source of income for silvo-pastoral communities (considering that nuts, are typically located in mountainous areas), where intensive agriculture is not viable in Albania, and alternative employment opportunities are few. According to INSTAT, in 2019, all over Albania, a total of 14,199 ton of nuts and 5,845 ton of chestnuts were collected (Table 16). Walnuts represent the most important nut product in terms of production and international trade.

In terms of regional distribution (Table 16), Kukës region is the main area of chestnut production. A huge massif of 2000 ha is found in Tropoja (Kukës region). Malësia e Madhe (Shkoder region) is also important for chestnuts with a comparative advantage related to the quality of the varieties from Reç. Due to the good quality, about 50% of production is exported mainly to Italy. Dibër, Puke, Shkoder Bulqize, Librazhd and Mat districts are also significant chestnut producers.

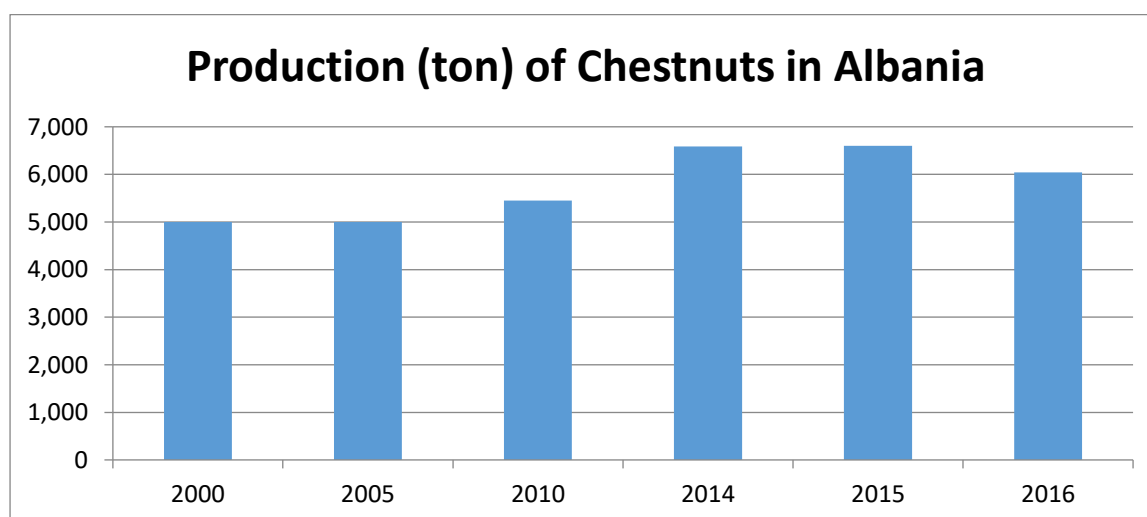
Table 16: Forest Fruit Trees Production 2019 (ton)

Qarku	Chestnuts	Nuts		Total
		Walnuts	Hazelnuts, Pine nuts, and others	
Berat	3	525	196	724
Dibër	569	886	641	2096
Durrës	33	269	236	538
Elbasan	339	1.130	523	1992
Fier	-	218	391	609
Gjirokastrë	38	327	311	676
Korçë	232	676	356	1264
Kukës	1.877	1.102	1.604	4583
Lezhë	1.583	392	450	2425
Shkodër	703	113	2.360	3176
Tiranë	468	285	604	1357
Vlorë	-	277	327	604
Total	5.845	6.200	7.999	20.044
		14.199		

Source: INSTAT 2019.

Production of chestnuts is largely based on existing forest massifs, most of them de facto organic and parts of the production sites also certified as organic, which represents a clear export potential. They are mostly exported as organic raw product for the processing industry. Production and productivity of chestnuts are hampered by the large number of old trees and diseases. However, production has marked modest increase over the years (Figure 6).

Figure 6: Production trends of Chestnut in Albania



Source: FAOSTAT (2018).

3.4.1.2 Berries and mushrooms

NFPs include many fresh fruits for which perishability is a serious concern. These require careful storage and handling and rapid transport to market or some level of primary processing close to the point of origin.

According to INSTAT, 2,500 ton of berries were collected in 2019 (Table 16). Elbasan, Shkodër and Dibër regions count for about 56% of all the berries amount collected in Albania.

The most collected/traded wild berries are as follows:

- Bilberry (*Vaccinium myrtillus*)
- Cowberry (*Vaccinium vitis-idaea*)
- Strawberry (*Fragaria vesca*)
- Raspberry (*Rubus idaeus*)
- Fruit of strawberry tree (*Arbutus unedo*)

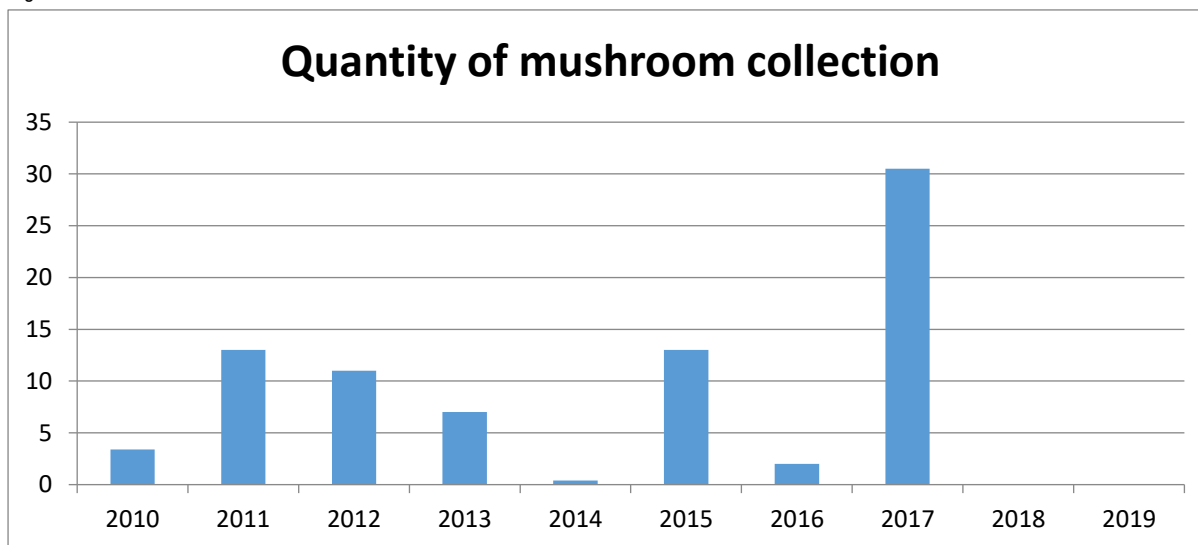
Table 17: Quantities of berries collected by Prefecture in 2019

Berries (ton)	Prefectures												Total
	Berat	Dibër	Durrës	Elbasan	Fier	Gjirokastrë	Korçë	Kukës	Lezhë	Shkodër	Tiranë	Vlorë	
	77	309	116	663	204	53	118	152	180	425	175	28	2.500

Source: INSTAT 2019

For the majority of rural households in Albania, **mushroom** serve as a safeguard in financially hard times meeting some of people nutritional needs. **Error! Reference source not found.** gives an overview of the quantity of mushroom collected over the period 2010 – 2019.

Figure 7: Mushroom collection 2010 -2019



Source: INSTAT 2020.

The most frequently collected/traded wild mushrooms are as follows:

- Boletus (*Boletus edulis*)
- Chanterelle (*Cantharellus cibarius*)
- Royal agarics (*Craterellus cornucopoides*)
- Morel (*Morchella conica*)
- Caesars mushroom (*Amanita caesarea*)

In general, in Albania there are limited processing capacities, so the products are mostly sold in the unprocessed state. Also, there is a lack of marketing activity, in order to successfully implement the commercialization of these

products (wild berries and mushrooms). The lack of processing capacities of local enterprises greatly reduces the economic impact that can be achieved by increasing the degree of product finalization.

3.4.1.4 Honey

Apiculture (beekeeping) is a popular and growing activity among small farmers in Albania, as it is considered a profitable activity with a secure market.

According to the data provided by INSTAT, in 2014 and 2015 Albania produced 3.000 tons of honey, while. From 2016-2018, Albanian farmers produced almost 4.000 tons of honey every year. The number of bees/bee-hives was increased too, between 2014 and 2018. In 2014, there were 261.000 bees/bee-hives, whereas in 2018 there were 285.000 bees/bee-hives, registering a peak in 2016, by having 303.000 bees/bee-hives (see Table 18).

Table 18: Number of bee-hives and honey production 2016 – 2018.

Year	2016	2017	2018
Number of bee-hives (thousand)	303.0	290.0	285.5
Honey production, (thousand tonnes)	3,923.0	3,614.0	3,936.7

Source: <http://www.instat.gov.al/media/5651/albania-in-figures-2018.pdf>.

The municipality of Saranda and Korça are well known in Albania for their honey production. Firms in these areas are the most consolidated and market-oriented ones. Although this is a growing sector, beekeeping is currently practised on a small scale. Honey production in many other areas remains a component of subsistence farming. There are some outliers like Morava Ltd., a firm located in Korça that exports to demanding markets. However, since many of them use producer to customer market channels, the need for better product packaging, promotion and distribution is evident.

There is as well a growing demand for honey and other value-added products such as royal jelly, propolis and wax. However most producers argue that there is a shortage of honey and other products such as propolis in the Albanian market.

3.4.2 Key features and challenges of NTFP

Working with NTFP is a seasonal engagement and not a primary business for almost all local households. The local population is aging, young people are continuously leaving the rural areas, and the traditional knowledge in dealing with NTFPs is decreasing so is the attention of collectors to NTFP conservation.

NTFP are a widely used and have a major potential for sustaining livelihood in rural areas, however marketing of NTFP needs to be substantially improved to increase access to national and international markets. Many opportunities to expand/extend the sector by tapping into export demand opportunities in international markets exist, but the sector is underdeveloped and disorganized.

Currently, most of the products exported are only partially processed, losing the possibility for considerable value added. Key value chain actors from the private sector such as organizers of collection and purchase points, small integrated processors/exporters, and large integrated export companies require expertise to understand what investments and other next steps they should take to develop their value chain as business relationships.

The whole system is very sensitive to weather conditions, market factors, characteristics of the participants in the chain, the business environment, as well as horizontal and vertical integration within the value chain of all stakeholders.

The economic importance of the NTFPs, especially in the rural areas, is widely recognised. However problems exist and are evident. These include: unsatisfactory quality of the product due to poor collection procedures, lack of training and professionalism of collectors, poor organization of purchase and transport of collected NTFPs, and dissatisfaction with the distribution of the value in the NTFP value chain.

Collectors averagely gain two to three times less than the processors, while the share of trade margins in the market prices is rather high. The level of knowledge in the procedures for all participants in the value chain is low. Impact of processors on collectors for the selection of appropriate methods for sustainable collecting and good "collection practices" is minimal, which is a major threat to break in an integrated value chain.

Processing of the NTFPs is mainly primary and refers to the phases of drying and/or freezing. Capacity building for processing with higher degree of finalization would influence the creation of higher value for all participants in the value chain, whereas encouraging entrepreneurship would have positive effects on rural development and poverty reduction.

There is an evident growing sale trend of all the NTFP types. The basis for achieving competitiveness in international markets is improvement of the technical and technological aspects in proceedings with the NTFPs, standardization and certification, and implementation of marketing activities, in order to provide transparent information on market opportunities for all participants in the value chain.

Although the harvesting and export of non-timber forest products have significantly increased over the past decade, the current legislation is inadequate to ensure their sustainable use. It does not cover all NTFPs exported and it does not set quotas for allowed harvesting per area. This poses a risk of overexploitation of NTFPs, which could highly damage the forest ecosystems. The legal regulation of this field in accordance with international conventions and regulations on sustainable use, and the establishment of monitoring, would result in the conservation of biodiversity and the sustainable use of the NTFPs.

Finally, it should be noted importance of improvement the institutional and procedural framework relevant for the NTFPs sector in Albania with the aim for its affirmation and contribution to the overall national economy. The NTFPs represent a significant part of the forest ecosystems values, and thus can be a driver of development and motivation for change in the concept of the use of forest resources.

3.5 FORESTRY-BASED ENERGY PRODUCTS

3.5.1 Structure of the value chain, including access to market

Wood biomass is of great importance as source for heating and cooking in Albania and especially in rural Albania. Biomass from forests as well as wood residuals from wood-processing industry represent significant potential for energy production.

Wood biomass as a source of renewable energy is mentioned in the National Action Plan for Renewable Energy Resources (2015-2020). This plan foresees the following sources of renewable energy for reaching the set target of 38% by 2020:

- Hydropower, wind energy, solar energy: 25%
- Biomass: 10%
- Biofuels: 3%

In 2019 the contribution of biomass (mainly from wood and wood residuals) to the final energy consumption was 9% (see Table 19).

Table 19: Production and consumption of primary energy by biomass (t)

Production of primary products	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total	1643	1494	1676	2041	2021	2117	2013	1661	1997	1727
Fire Wood	205	208	207	202	202	214	188	168	162	160
Percentage (%)	12	14	12	10	10	10	9	10	8	9

Source: INSTAT 2020.

Although a contribution of biomass of 10% is mentioned to reach the overall renewable energy target, a maximum share of wood biomass is mentioned of about 1% (See Table 20).

The plan foresees a reduction of wood fuel consumption from 211.5 ktoe in 2013 to 167.79 ktoe in 2020 and the need to do re-afforestation of at least 2200 ha annually.

Table 20: Theoretical potential of biomass to contribute to the renewable energy balance¹¹

¹¹ Source: National Action Plan for Renewable Energy Resources (2015-2020) in Albania. Ministry of Energy and Industry. Available at: https://www.energycommunity.org/portal/page/portal/ENC_HOME/DOCS/4076384/2E8C39A260DC7B48E053C92FA8C058E3.pdf

BIOMASS SOURCE	PERCENTAGE TO CONTRIBUTE TO THE RENEWABLE ENERGY BALANCE
FORESTS	1.07%
BIOMASS FROM SEED/ FRUITS/AGRICULTURAL PRODUCTION	4.45%
URBAN WASTE	5.80%
WASTE FROM FRUIT TREES	0.65%
CATTLE WASTE	2.37%
POWER PLANTS	0.26%
TOTAL	14.6%

The fuelwood is extremely important in the rural areas and smaller municipalities where large part of households use fuelwood for heating.

Following the Law on Moratorium, the Decisions No 438 Jun 8, 2016 and No 808 Dec 12, 2016 mention that solely municipalities are responsible for supplying fuelwood from forest cleaning operations for heating for citizens and institutions within their area of jurisdiction.

However at present, many municipalities claim that the demand for fuelwood is much higher than the legal and sustainable supply and face a number of problems to fulfil this new mandate of supplying fuelwood. As a consequence, Municipalities focus on the supply of fuelwood to institutions and often let citizens find their fuelwood on the informal market.

Production of pellets is a new activity starting to shyly grow in Albania. Although still limited there is an increasing number of enterprises adventuring into this business. However, most of the raw material (wood) needed for pellet production is imported, while the pellets are mostly exported. The use of forest operations debris is limited due to lack of technology (chipping machines) and bad condition of forest roads¹². The companies are uncertain about the future of this business. Considering the situation of Albanian forests, dominated by young forest stands requiring cleaning and thinning operations, there is some opportunity for valuing the thin timber produced by these operation through production of pellets.

3.5.2 Key features and challenges of forestry-based energy products

The formation of an industrial biomass sector is seen among the most promising fields for investments. In the light of enhanced biomass demand in the EU (due to Bioenergy strategy, Biomass Action Plan), entering this field of business could safeguard a higher domestic value generation as compared to lower value products such fuelwood and charcoal, but needs respective strategic planning of resource and capacity needs, infrastructure and logistics.

One of the biggest challenges is that the demand for fuelwood is much higher than the potential supply through thinning and sanitary forest operations indicated in forest management plans. As a result prices for fuelwood increase and people turn to the informal market. The marketing of fuelwood is said to be already largely informal constituting up to 80% to 90% of the market share.

Pellet companies are severely impacted by the new forest legislations as they face difficulties in accessing wood, sawdust and other sources of wood biomass for making pellets. Their production is at present lower than the capacity of their plants. Pellet companies are also affected by the export ban on logs imposed by the neighbouring country like Montenegro.

The demand for pellets is at the moment higher than the supply. Pellets are exported to countries such as Italy, Kosovo, Greece and Macedonia and sold on the market.

The fundamental aspects of the policy and legal reform on forests and pastures during the last 27 years have been: (i) orientation of forest sector towards the market economy, (ii) the restitution of forests to the former owners, (iii) decentralization of the administration of forest areas from government to municipalities.

However, the whole process has not been flawless and other measures need to be taken to face the ever increasing challenges on the environment and on forests in particular. Despite the experiences and positive developments, in the forests still persist problems such as illegal logging, massive damage from forest fires, overgrazing and erosion, leading towards further degradation of forests.

¹² Only 11% of forest roads are in good condition; 5% are fair and 84% are poor (Road Travel Report – Albania. ASIRT 2013)

Informality in the Albanian economy remains high, including the forestry sector. Regarding the country enforcement capacity there is some place for concern. The main reason is that if foresters make maximal efforts to apply the law, there is no response from other administrative bodies and justice authorities.

European integration is the main priority of Albanian foreign policy since the beginning of 90's. To achieve this purpose the Albanian legislation on forest and environment must be improved and regulated according to European Union requirements.

4 CHAPTER 4. GOVERNMENT POLICY FOR THE SECTOR

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4.1 LEGAL FRAMEWORK

The legal framework related to forestry sector in Albanian complex and entails a number of laws regulating various aspects of forest and forestry sector management. The most relevant laws are:

Law 57/2020 "On Forests"¹³. The recently approved law on forests aims at protection of forests as an asset of special importance, for the great and irreplaceable values in protecting climate, soil, preserving and improving production potentials, natural environmental balances, biodiversity, genetic resources and the hydric regime, as obligations of national and international interest. The law will contribute in the sustainable development of the forest sector, which enables a better life for society today and future generations, regulating relations in the sector of forests, which have a substantial impact on the quality of the natural environment, on the development of agriculture, energy and tourism, poverty reduction, population displacement, conflict mitigation and social, gender-based inequalities, as well as in the security of the country. The law will preserve, increase the area and total volume of the national forest fund, regulate relations and guarantee financial sustainability, functional organization at all levels of government for the exploitation and use of sustainable and balanced forest resources against the possibility that forests have, without compromising continuity of life and forest cycle. Likewise, the law provides for the guarantee of services quality aiming at proper protection, improvement and regeneration of forest space. The law on forests already foresees the adoption of a number of bylaws that will define various aspects in the sector including relationship with forest users. Hopefully these bylaws will be adopted prior to the implementation of the sector's proposed support measures.

Law No 5/2016 "On the moratorium of commercial forest activities in the Republic of Albania" The forest fund in Albania in the period 2006-2017 suffered a drastic decrease by about 32% or over 20 million cubic meters. The purpose of this law is to reduce interventions on the forest fund, degraded as a result of over exploitation and other damages, aiming of improving and restoring their conditions. The duration of this law is 10 (ten) years from the date of its entry into force.

¹³ This law is partially aligned with the:

- European Council Regulation (EC) no 2173/2005, dated 20 December 2005 "On the establishment of a licensing scheme FLEGT on the import of timber into the European Community "as amended CELEX No 32005R2173, Official Journal of the European Union, Series L. No 347, dated 30.12.2005, pg 1-6.
- European Union Regulation no 995/2010 of the European Parliament, dated 20 October 2010 "On the definition of the obligations of operators, which trade timber or timber products", as amended, CELEX no 32010R0995, Official Journal of the European Union, Series, L.no 295, dated 12.11.2010, pg 23-34.
- Implementing Regulation of the European Union Commission No 607/2012, dated 6 July 2012 "On detailed rules in relation to the due diligence system, frequency and the nature of controls over organizations monitoring, as provided in Regulation (EU) no 995/2010 "On the determination of obligations of operators which trade timber or timber products", as amended, CELEX no 32012R0607, Official Journal of the European Union, Series, L.no 177, dated 7 July 2012, pg. 16-18.

Law 81/2017 "For protected areas"¹⁴ The purpose of this law is to declare, preserve, manage the sustainable use of environmental protected areas and their natural and biological resources based on the principle of sustainable development as well to guarantee the fulfilment of environmental, economic, cultural and social functions in the interest of the whole society as well as determining the responsibilities of public institutions or private legal persons for their preservation and sustainable administration.

Law No 13/2015 "For local self-government" This law regulates the organization and functioning of local government units in the Republic of Albania as well as defines their functions, competencies, rights and duties of the relevant bodies. In the chapter VII, article 27 is stated that municipalities are responsible for administration of forests and pastures, respecting the existing legal framework for forests.

Penal Code of the Republic of Albania (articles 201-207). Considering that forest resources are very important in preservation and protection of the environment from pollution, all crimes against forests are included in the chapter of penal offence against the environment¹⁵, unlike the previous Penal Code which considered the forest crimes in the offences of damaged in the economy sector.

Other laws whose dispositions set up rules for and regulate forestry related activities in Albania, include:

- Law no. 9587, dated 20.07.2006, "On biodiversity protection" (amended 2013, 2014).
- Law no. 10006, dated 23.10.2008 "On the protection of wild fauna" (amended 2009, 2013).
- Law no. 10120, dated 23.04.2009 "On the protection of natural medicinal and oil-etheric plants" (amended 2009, 2013).
- Law no.10253, dated 11.03.2010 "On hunting".
- Law no. 9867, dated 31.01.2008 "On regulations and procedures for international trade of endangered wild flora and fauna".
- Law no. 10431 dated 09.06.2011 "On environment protection" (amended 2013).
- Law no. 61-2016 dated 02.06.2016 "On the moratorium of hunting on the Republic of Albania".

4.2 ORGANIZATION OF THE FOREST SECTOR

During the 1990-2005 period the forest and pasture sector has been under the responsibility of the Ministry of Agriculture and the administration of the forest resources was conducted by the General Directorate of Forests and Pastures. The forest resource administration at local level was done from the Forest Service Directorates which were operating in 36 districts. From January 2006 up to now the forest and pasture sector is under the responsibility of the Ministry of Environment (nowadays the Ministry of Tourism and Environment -MoTE). The Ministry is still responsible for the definition of policies, strategies and legislation for the forestry sector.

The territorial reform and new administrative organization in 61 municipalities was associated with decentralization of the forest administration from government to the new municipalities. Since then, each municipality is responsible for management of the forest resources inside their territory and almost all have employed forest specialists for administration and protection of forest and pasture areas.

In general, the main problem is the lack of financial resources from the municipalities and the level of investment in forests has been at very low level. Even as the revenues generated from the sale of wood are low due to the poor state of the forests, the proceeds generated from forests are not fully reinvested into the sector according to the law requiring a reinvestment rate of at least of 80%. The forest management structures lack the logistic base as well as vehicles and consequently are not able to control the entire forest area to prevent illegal logging or forest fires.

4.2.1 Institutional set-up

At the central level the MoTE is responsible for the development of policies and legislation related to forests and their management. The ministry also covers a technical role as regards the management and extension service

¹⁴ This law is partially aligned with European Council Directive 94/43/EEC of 21 May 1992 "On the Conservation of Natural Habitats and wild flora and fauna" as amended CELEX 31992L0043, Official Journal of the European Union, Series, L, no 206.dated 22 July 1992,pg 7-50.

¹⁵ Articles 201-207 of the Penal Code in the Republic of Albania

related to forests. This role, however, is barely implemented since the ministry lacks local structures to fulfil the relevant and required duties.

The recently established **National Forest Agency¹⁶ (NFA)** is responsible for the good governance of forests, their preservation and development, sustainable and multifunctional use of forest resources, as natural resources with national importance. NFA extends its activity throughout the territory of the Republic of Albania and is organized in 2 levels: a) at the central level through the central directorate with 34 employees; b) at regional level through 4 (four) regional forest agencies that will be active on 2021. The responsibilities of the National Forest Agency (NFA) consist on:

- a) Ensuring performance in the forestry sector.
- b) Assessment of the forest situation.
- c) Organization of the work for inventory and research in the field of forests.
- d) Organization of work and drafting of documents for forest management.
- e) Organization of work for monitoring and control of forests.

National Agency for Protected Areas¹⁷ (NAPA) established in 2015, is responsible for the management of the protected areas and natural resources within their boundaries. Forests within protected areas are not transferred to municipalities and are under the responsibility of the NAPA. The NAPA also has the role of extension service to provide support to municipalities in the management of the forest resources. Locally, the NAPA is organized into 12 Regional Administrations for Protected Areas (RAPA). Each RAPA is responsible for the management of the protected areas within the respective region.

As mentioned earlier, direct competences in forestry are held at the municipal level. The institutions at these levels are responsible for forest policy and law implementation. There are significant differences in performance of individual municipalities resulting from their overall administrative and economic capacity and the condition of their forest resources.

Important stakeholders are the Forest and Pastures User Associations (FPUA) established within every municipality to help with the management of forest and pasture and to assist the municipalities in guaranteeing the governance and management of forest areas within their administrative boundaries. The FPUA are organised at local level and their task is coordination between forest users at village level. They are engaged in the implementation of activities which are related to forest management at administrative unit level. These associations are organised at regional level and constitute the Regional Federation of Forests and Pastures which is also part of the National Federation for Forests and Pastures. These are non-profit organisations and represent the interest of all users of forests and pastures in Albania.

CNVP (Connecting Natural Values and People) is another important partner for development of forest resources in Albania. It works with public, private, donor using evidence-based analysis to improve the sustainable livelihoods of rural communities. The focus of CNVP work includes six main areas: sustainable forest management, climate change, environment and natural resource management, agro- rural development, renewable energy and waste management.

4.3 STRATEGIC DOCUMENTS

Relevant strategic objectives of the forestry sector development are defined both in the National Cross-cutting Strategy for Environment 2014-2020 and the National Cross-cutting Strategy for Agriculture and Rural Development 2014-2020. Both documents aim at the sustainable and multi-functional development of forests and pastures. However, the implementation of the strategic actions foreseen in both documents is limited, and the issues related to the forest sector are only occasionally subjects of public political agendas (e.g. forest fires).

The **Forest Policy Document in Albania for the period 2019-2030¹⁸**, defines four strategic directions for the future development of the forestry sector in Albania:

1. Good governance: Positioning forests as a government priority as one of the most important and vital resources, and raising awareness on the importance of forests.

¹⁶ Decision of the Council of Ministers (DCM) No 570, dated July 17,2019 "For creation, organisation and functioning of National Forest Agency".

¹⁷ DCM No 102,dated February 4,2015

¹⁸ Developed by MOG and CNVP with the financial support of SIDA, approved through DCM no. 814 of 31.12.2018 .

2. Functional organization: Establishing and strengthening an efficient organizational system from the centre to the most remote villages based on best standards and practices.
3. Sustainable harvesting: Using forest resources on a sustainable basis by balancing their multipurpose use and potential.
4. Quality services: Providing quality services for the forests, aiming at better protection, quality, and use of fast-growing species.

In April 2020, the Parliament approved the new law 57/2020 "For Forests", providing a legal framework for the implementation of the Forest Policy of 2018.

4.4 RELEVANT NATURE PROTECTION POLICIES

Albania attained candidate status for EU membership in June 2014. Since then Albania's aspiration to achieve EU membership has been the driving force behind the country's efforts in changing its legal framework and orienting its policy toward EU standards.

Water and air pollution, land degradation/soil erosion, biodiversity losses and waste management are Albania's key environmental challenges. Rapid urbanization and increasing demand for natural resources has led to increasing depletion and degradation. Disaster risks and climate variability and change pose other threats to Albania making the country more vulnerable to climate change.

Albania has achieved significant progress in the adoption of new, modern environmental legislation. Environmental policies required as part of European Union accession are helping to integrate sustainable development principles across all sectors. This process is driven by the efforts to approximate the EU environmental acquis. However, some subsidiary acts due to be adopted are still lacking and the implementation of legislation lags behind. Sometimes the legislation is too advanced vis-à-vis the administrative, institutional and financial capacities in place.

Albania is working on aligning its national agenda, as set out in the National Strategy for Development and Integration for the period 2015–2020 (NSDI-II), with the 2030 Agenda for Sustainable Development. The challenges include developing a national vision until 2030 and aligning the Sustainable Development Goal (SDG) implementation and monitoring efforts with the EU accession process.

The **National Strategic Document for Biodiversity Protection** and the **NSDI Midterm Review Report (2020)** identify the following objectives for the nature conservation in Albania:

- Further completion of the legal framework in the field of nature protection and achieving full approximation with the EU acquis in this field by 2020;
- Practical implementation of the national legal framework in the field of nature protection;
- Establishment of the Natura 2000 Network of Areas of Interest for the European Community and ensuring their sustainable management;
- Increase the surface area of protected areas, especially marine and coastal protected areas, as a contribution to achieving the global target for these 'Aichi target 11' areas;
- Further enhance and strengthen the capacity of protected area management structures;
- Implementation of management plans for protected areas that have an existing plan as well as drafting and updating management plans;
- Implementation of existing action plans for species and habitats and drafting new plans for endangered species;
- Rehabilitation of protected areas;
- Strengthening the implementation of the 5-year hunting moratorium and completing the legal framework for this area.

The EC 2020 Report for Albania recognizes that the Country is well advanced in alignment with the acquis in the field of nature protection, in particular for the Habitats and Birds Directives. However, the Report also indicates that the law enforcement remains generally weak and despite numerous capacity building activities and technical assistance, the institutional capacities of the main actors are still limited, including the National Agency for Protected Areas. The legislation on strategic investment raises concerns for the protection of biodiversity, as it may allow large tourism and industrial investments in protected areas, e.g. the proposed airport in the Vjosa-Narta

area. This conflicts with other national laws and with international biodiversity protection conventions that Albania has ratified. It is identified that Albania shall comply with national and international nature protection and water management obligations, ensure public participation and consultation, and guarantee high quality EIA reports that include impact assessments on nature and biodiversity.

The **EU Biodiversity Strategy for 2030** contains specific commitments and actions to be delivered by 2030, including establishing a larger EU-wide network of protected areas on land and at sea, building upon existing Natura 2000 areas, with strict protection for areas of very high biodiversity and climate value. Moreover, a series of concrete commitments and actions shall be undertaken to restore degraded ecosystems across the EU by 2030, and manage them sustainably, addressing the key drivers of biodiversity loss.

Moreover, the **Western Balkans Green Agenda** identifies the mainstreaming the biodiversity safeguards across all economic activities as one of its five pillars, which at the same time has a central place within the **European Green Deal**. Implementation of Birds and Habitats Directives, together with enforcement of Environmental Impact Assessment and Strategic Environmental Impact Assessment Directives are seen as preconditions for further sustainable infrastructure development.

4.5 NATIONAL AND INTERNATIONAL SECTOR DEVELOPMENT PROGRAMMES

The major recent donor intervention in the forest sector is for **Environment Services Project (ESP)**. It is financially supported by the World Bank which provides EUR 7,693,000; the Swedish Government EUR 7,692,000 and the Global Environmental Facility (GEF) EUR 2,215,000. The World Bank is acting as administrator of the amount provided. The Ministry of Tourism and Environment (MTE) has the overall responsibility for the Project. The project has supported the forestry sector by strengthening institutional capacities, supporting IPARD like grants to improve land management, and introducing Payment for Environmental Services Schemes.

The key achievements under the institutional support component include the development of the Document for Strategic Policies in the Forestry Sector, development of the new law on Forests and the support to the establishment of the National Forest Agency. Additionally, the project has supported the development of two important management tools like the National Forest Inventory and the Albanian Forest Information System. The project is supporting six municipalities to develop new forest and pasture management plans based on specifically developed guidelines approved in 2018. The project has also supported the registration of Forest and Pastures under the ownership of municipalities.

Under the competitive IPARD like grants scheme, the project has strengthened the capacities of ARDA and other technical bodies in grant management. The project has supported two grant calls and has supported in total 124 applications mostly dealing with reforestation of degraded areas, silviculture treatment in forest stands, pasture improvement, etc.

The four-year project “**Forests for Local Economic Development**” was implemented by CNVP with financial support from Swedish Development Cooperation through Sida. The main objective of the project was “Improved decentralised and sustainable Communal Forestry providing increased production, service and income to rural communities”. The project activities covered five specific focus areas, including 1) Land tenure and property rights for communal forestry; 2) Structure and functioning of the communal forestry organisations; the FPUAs, and their regional and national Federations; 3) Value chain development for forest products and the related associations and producer groups; 4) Sustainable Forest Management and practices within communal forestry; and 5) Sharing and influencing policy and institutions for communal forestry based on the issues addressed. The main project partners were: Forest Pastures Users' Associations and Communes in selected target areas, Regional Federations of Communal Forests and Pastures, and the National Federation of Communal Forests and Pastures. The project has also cooperated with Albania's Ministry of Environment.

Community-based forestry, a three-year project involving CNVP Albania, the Austrian fibre-company Lenzing and the Austrian Development Agency started in May 2019 to reinforce community-based forestry through best practice afforestation, training and school cooperation. This social impact project brings together Albanian and Austrian experts to: increase forest management skills amongst communities; enable know-exchange between vocational schools; and afforest 10.00 ha of communal land. Implementation of the project's three pillars – best-practice afforestation, forest training, and vocational education – will enable a holistic approach to be used to foster know-how on sustainable forestry in Albania. The goal of the project is to increase expertise amongst local communities and experts in sustainable forest management. The beneficiary target groups are members of the

local forest users' associations, and students of local forestry schools. Partners in Austria include Lenzing, the Forestry School Traunkirchen, the Institute for Cooperation in Development Projects (ICEP), and the Austrian Development Agency (ADA). Partners in Albania include CNVP, the Federation of Communal Forest and Pastures Shkoder, the Training Centre of Communal Forestry & Rural Development, the Forestry High School Shkodra, and the Austrian Technical High School Shkodra.

5 CHAPTER 5. MARKET AND TRADE

5.1 DOMESTIC MARKET and INTERNATIONAL TRADE FLOWS

This section presents the sales, export and import of several types of wooden products. Albanian's trade patterns in forest products are straight linked to production on its own forests and the consumption. The original data was provided by INSTAT.

5.1.1 Timber and wood products

The Table 21 below shows that the production and sales of sawn wood have been by far the most important product category in Albania in 2012. This has changed in 2019, with quantities of exported densified wood growing significantly. However, fuelwood is by far the main timber product exported over the years. The changes seen from 2016 are due to the enforcement of the ban on forest harvesting.

Table 21: Timber products export (ton) by year

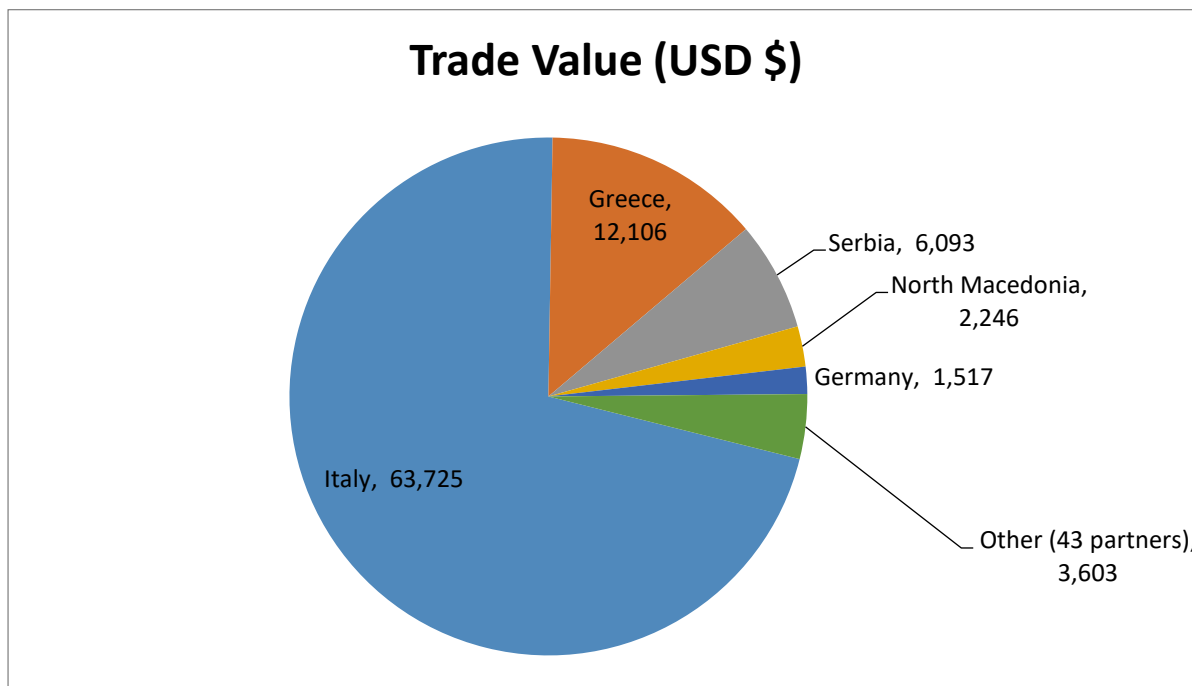
	2012	2013	2014	2015	2016	2017	2018	2019
Fuelwood	81.974	78.448	66.527	85.575	45.334	53.302	58.461	52.812
Charcoal	1.802	2.213	831				2	
Raw wood	2.564	51						
Wood cut into slices	357	9			226		120	
Wood wool								
Wooden beams for railways or trams	137	464						
Sawn timber	6.055	5.246	1.820	532	1.422	1.634	1.312	
Sheet for rhyming	171	490	143				16	
Profiled wood	395	7	46	84	366		70	241
Wooden plates	13	2	192	740	1.032	11	1.596	1.526
Wood fibre panels	611	290	232	1067	456	470	618	640
Plywood, veneer panels		26	3.365	26	35	26	6	104
Densified wood	1.576	1.205	175	4627	3.374	3.431	5.436	5.191
Wooden frames for paintings	273	144	9.282	182	240		430	786
Total	95.928	88.595	82.613	92.833	52.485	58.874	68.067	61.300

Source: INSTAT

Depending on types of wood products (primary processed or final wood products) most exports from the wood processing sector is oriented towards regional and EU markets. The major export markets for the entire wood processing industry in 2018 were as shown in the Figure 8¹⁹.

¹⁹ Source: Albania Wood Exports by region 2018 | WITS Data (worldbank.org)

Figure 8: Albania wood products export partners in 2018

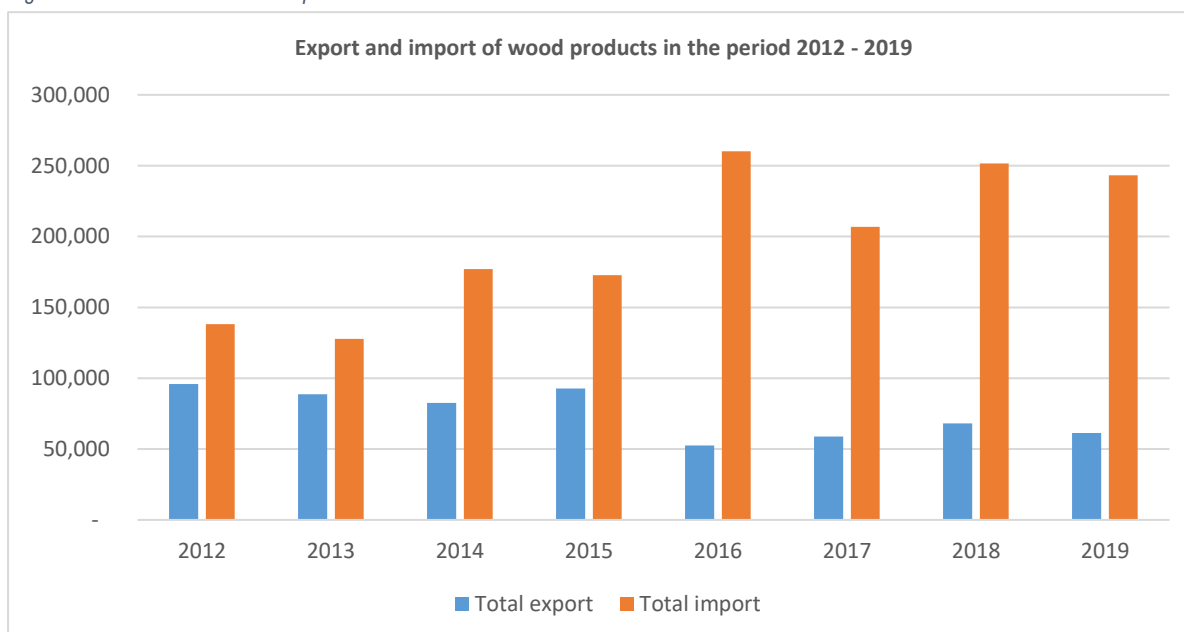


Source: The World Bank.

The trade balance on wood products has been negative for many years now. Foreign competitors include Italian companies for higher-value products and companies in the Balkan region, primarily Bosnia and Herzegovina and Romania, for lower-quality products with designs similar to those of domestic producers. However, the gap is significantly increased in recent years, since exports have declined, and imports strongly increased. The reduced exported amount is also due to the ban on forest harvesting in place till 2026. However, the trade balance is negative not only because of the moratorium but also since the resource base is limited. Albanian forests have a disequilibrium on age classes (more forests on younger age classes) and this greatly affects the sustainable development of the sector.

Figure 9 shows the development of export and import of wood products during the last years.

Figure 9: Trade balance for wood products



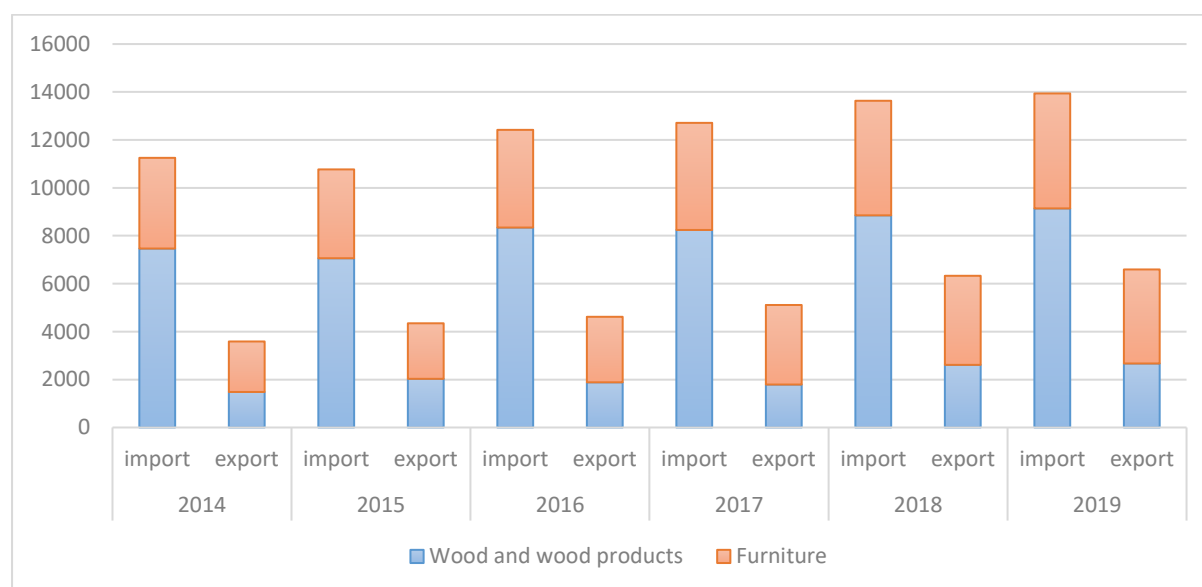
Source: INSTAT.

A more thorough analysis of the import/export data (see Annex 1) shows that Albania is:

- A net importer of sawn wood, wooden plates, and wood fibre panels
- A net exporter of fuelwood

The Figure below provides the total value (in million Albanian Lek) of import and export of wood, wood products, and furniture over the period 2014 – 2019²⁰. The value of import of both wood products and furniture largely exceed the value of export. The gap is much larger for the wood and wood products and smaller on furniture. However, the exported value of both products has increased from 2014 to 2019 by 45% from 3,589 million ALL to 6,595 million ALL despite the declining forest conditions and ban on forest harvesting according to figures from INSTAT, against an increase of only 19% in the value of imported goods.

Figure 10: Value of import & export of wood, wood products, and furniture over the period 2014 – 2019



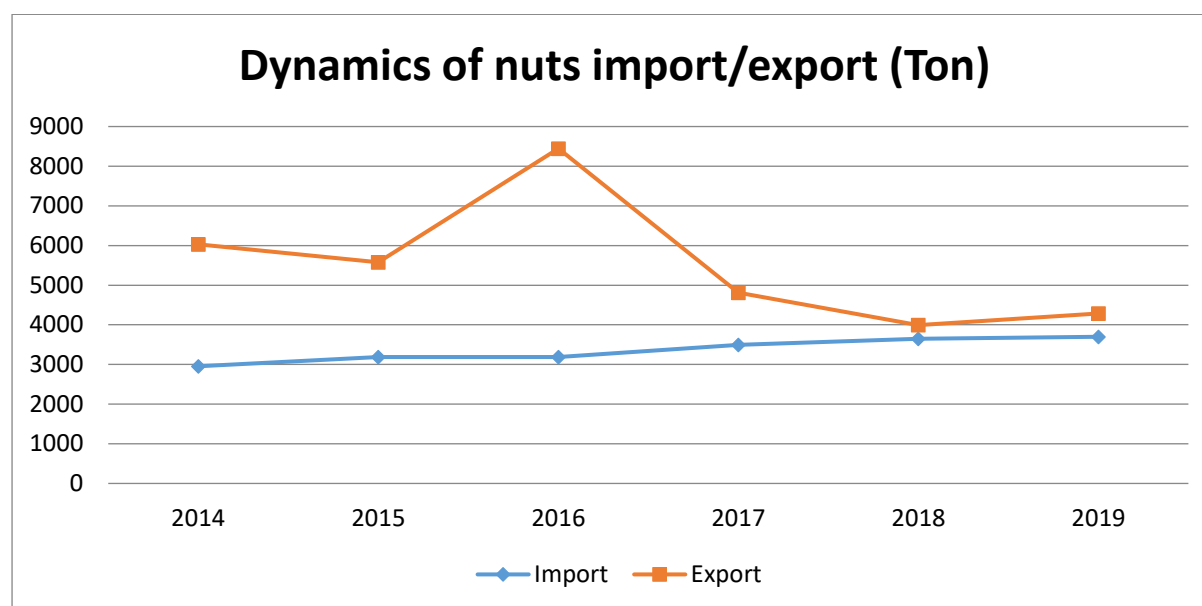
Source: INSTAT.

5.1.2 Non-timber forestry products

5.1.2.1 Nuts

Import of **nuts** has steadily increased over the last years, while the export has overall decreased (see Figure 11), although there are some abnormal fluctuations. The import trend is quite impressive with a growth between 2015 and 2019 for this product of 23%. Albania has still a positive trade balance for nuts, but the gap is closing in. In 2018 import of nuts was mainly from Turkey (374,59 MT corresponding to a value of 1,59 Mill USD).

²⁰ Source: INSTAT, data available at: <http://www.instat.gov.al/al/themes/>

Figure 11: Dynamics of the Albanian import and export of nuts²¹

Source: AGRIEXCHANGE.

It is worth to note that shrinking export of nuts occurs under stable international demand for these products, therefore some argue that this is related to a growing consumption of the product by Albanian customers. Walnuts count for the largest part of imported nuts (see Table 22), while chestnuts have the largest quantities exported (Table 23) with a boom in 2016.

Table 22: Albania import of nuts (ton)

	2014	2015	2016	2017	2018	2019
Chestnuts	103	181	196	234	272	327
Walnuts	666	791	816	1134	1177	1146
Almonds	106	86	98	50	90	101
Hazelnuts	5	31	21	26	33	31
Pistachios	61	82	38	34	55	75
	2955	3186	3185	3495	3645	3699

Source: EUROSTAT (2020)

Table 23: Albania export of nuts (ton)

	2014	2015	2016	2017	2018	2019
Chestnuts	3795	3561	5859	2712	1931	2157
Walnuts	220	0	535	47	2	13
Almonds	0	0	0	0	1	1
Hazelnuts	0	0	0	0	0	0
Pistachios	1	0	35	35	41	94
	6030	5576	8445	4811	3993	4284

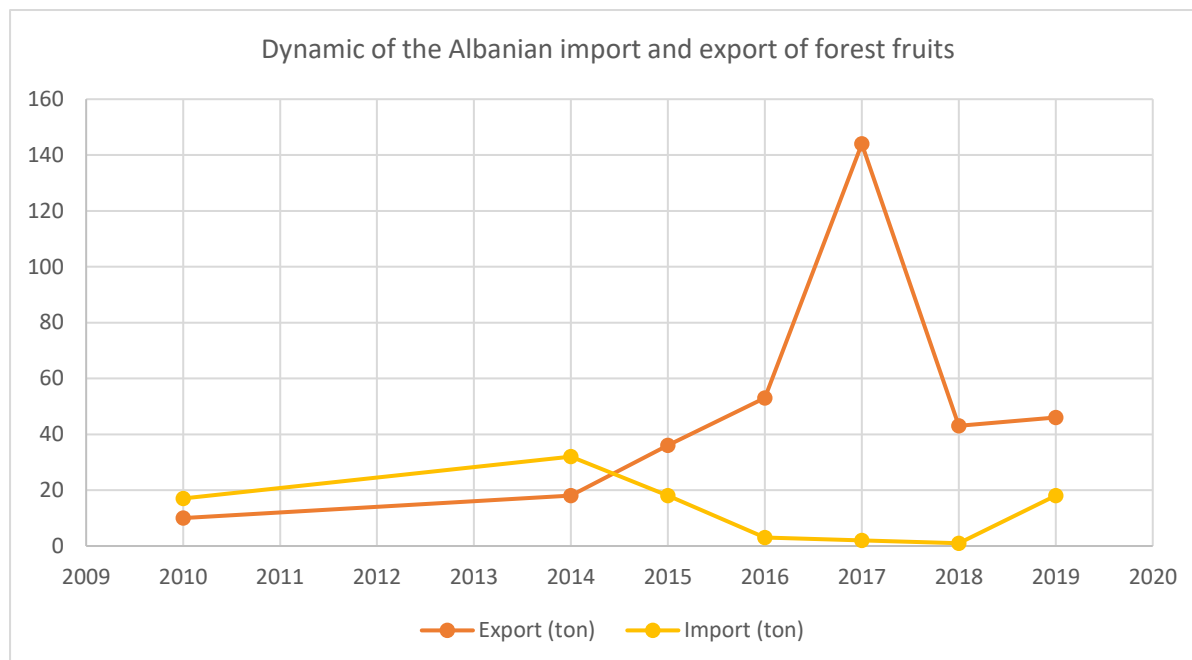
Source: EUROSTAT (2020)

²¹Source: AGRIEXCHANGE, 2020, available at <http://agriexchange.apeda.gov.in/countrysearchnew/>

5.1.2.1 Berries and mushrooms

The export of berries has a positive trend. NTFP are exported as raw materials, but recently increase the export of processed NTFP. In recent years, the total value of trade increased significantly (Figure 13).

Figure 12: Albanian international trade of forest fruits²²



Source: EUROSTAT (2020).

Albania mainly imports mainly from Greece (83% of the total), while it exports mostly to Italy, as Table 24 below shows.

Table 24: Exports and Imports of forest fruits by partner countries in 2019

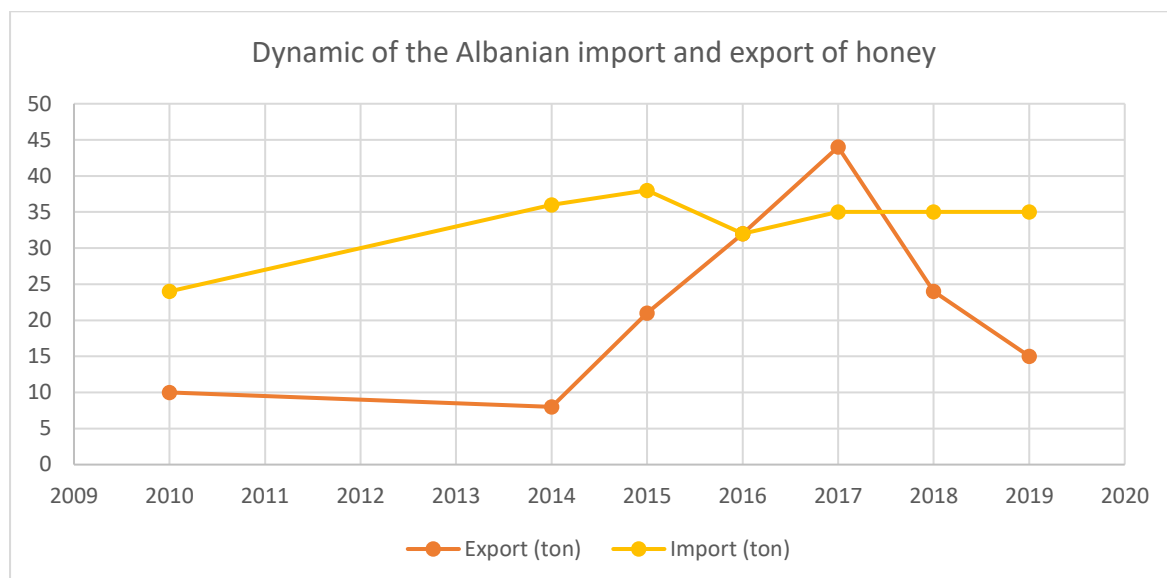
Country	Export amount (tons)	% Share in export amount	Country	Import amount (tons)	% Share in import amount
Italy	30	66%	Greece	14.0	83%
UK	11	23%	United States	1.3	8%
Montenegro	3	6%	Canada	1.1	7%
Other	2	5%	Other	0.6	2%
Total	46	100%	Total	17	100%

Source: EUROSTAT (2020).

5.1.2.3 Honey

The importing of **honey** has been stable in the last 4 years (35 ton/year), while the export has slightly decreased during the period 2015 to 2018 (see Figure 13).

²² Source: EUROSTAT 2020.

Figure 13: Dynamic of the Albanian import and export of honey²³

Albania mainly imports honey from Italy and Germany, although more recently, honey produced in China is being imported due to its low price, while it exports mostly to Kosovo.

Table 25: Export and imports by partner countries of honey (2019)

Country	Export amount (tons)	% Share in export amount	Country	Import amount (tons)	% Share in import amount
Kosovo	11	73%	Italy	15	44%
China	3	23%	Germany	10	28%
Other	1	4%	Other	10	28%
Total	15	100%	Total	35	100%

Source: EUROSTAT (2020).

5.1.3 Forestry based energy products

The marketing and trade of fuelwood and pellets doesn't encounter many difficulties as the demand is much higher than the supply. However, it is very important that the informal trade is stopped not only from an environmental perspective but also from a marketing point of view. If the informal trade isn't stopped, forest companies following the legal procedures are disadvantaged because they have to pay taxes and higher prices for their wood, which distorts the market. Of course the informal trade can only be stopped if there is sufficient and reasonable priced wood available on the formal market.

The export of fuelwood continues although the (formal) supply of fuelwood is lower than the demand within the country and fuelwood imports are expensive. A ban on the export of fuelwood might be considered.

Also access to market information is important especially related to the import of affordable wood materials to be used in pellet companies and fuelwood since fuelwood has become scarce.

²³ Source: EUROSTAT (2020)

5.2 KEY FEATURES AND CHALLENGES OF THE MARKET

5.2.1 Timber and wood products

Current developments in the wood processing sector are a response to a mixture of emerging constraints and opportunities. However, it is important to introduce structural changes so as to adapt to an increased internal demand to manufacture wood products that are more qualitative.

Successful management of a wood processing company is strongly related to a professional technical management, diversified manufacturing, high level of technological machineries used, etc.

The sector needs investment in modern equipment to improve the production process in terms of technical efficiency as well as compliance to environmental standards.

5.2.2 Non-timber forestry products

The analysis shows that there are sizeable opportunities for this sector to become more export-oriented. However, the required investments are considerable and include processing equipment, laboratories, certification and marketing-related investments in packaging, labelling and brand building.

While the domestic market is expected to grow in the near future, it appears that there are no significant changes in consumer behaviour: the origin of production tends to be quite an important factor for most Albanian consumers. According to various studies, most consumers choose their products based on origin (domestic versus imports).

Municipalities should take care on the restoration and sustainable collection of non-timber forest products as an important income generation source for local communities.

This analysis of NTFPs has also shown that entrepreneurs are important in the development of innovative marketing of NTFPs along chain through reach to consumers, promotion strategy, etc.

5.2.3 Forestry-based energy products

Fuelwood is the most important source of energy for heating and cooking in rural areas. The demand for pellets is at the moment higher than the supply. Pellets are exported to countries such as Italy, Kosovo, Greece and Macedonia and sold on the market; however, pellet companies are severely impacted by the new forest legislations as they face difficulties in accessing wood, sawdust and other sources of wood biomass for making pellets. Their production is at present lower than the capacity of their plants.

Support to bioenergy development must be carefully considered as it may impact on the primary resource. Although numbers show potential for growth in this field (bioenergy), attention should be placed more on efficiency of the raw resource use. Use of pellets as a substitute for firewood on rural areas seems currently premature since rural families do not have the means (technology) necessary for using pellets effectively (very costly stoves).

CHAPTER 6. LEVEL OF ATTAINMENT OF RELEVANT NATIONAL & EU STANDARDS

6.1 Combating illegal logging

Despite the 10 years moratorium on timber cutting adopted in 2016, illegal logging is still perceived as one of the major issues in relation to forestry in Albania. Indeed, illegality might comprise different aspects: crime, corruption, non-registration of cuttings, or uncontrolled use of abandoned land. Indeed, it is a fact that statistics on wood use and wood production don't comply.

The Law 57/2020 (30.04.2020) "On Forests" mentions the need for implementing the FLEGT and EUTR regulation requirements and foresees that specific legislation (bylaws) should be developed to ensure proper implementation.

The EU Regulation 995/2010 on Timber (EUTR), which prohibits placing of illegally harvested timber and wood products on EU markets and requests Due Diligence from all the EU subjects that place timber and wood products on market for the first time, has an obvious impact for the Albanian forest and wood processing sector.

In order to better address and minimize potential threats to export-oriented wood-processing, potential options for the Albanian forest and wood-processing sector responding to EUTR requirements include, but are not limited to:

- Certification (certificates for sustainable forest management as well as chain of custody) of all forest areas (regardless the ownership), with strengthening initiatives for development of the national forest certification standards.
- Development of a national due diligence system in compliance with EU standards.

The EC Regulation 2173/2005 on the establishment of a FLEGT licensing scheme for imports of timber aims to eliminate illegal timber in international trade and acknowledging the shared responsibility of exporters and importers. A key element of the FLEGT Regulation is a voluntary scheme to ensure that only legally harvested timber is imported into the EU from countries agreeing to take part in this scheme. Once agreed, the Voluntary Partnership Agreements will include commitments and action from both parties to halt trade in illegal timber, notably with a license scheme to verify the legality of timber exported to the EU. The agreements also promote better enforcement of forest law and promote an inclusive approach involving civil society and the private sector.

6.2 Phytosanitary standards and production of forestry seed and seedlings

The State Entity on Seeds and Seedlings is the government institution in charge of developing and implementing phytosanitary standards on reproductive materials used in Albania, including forestry species.

The harmonization of seed and seedling production with EU law on reproductive material and trade is essential to support export to the EU.

Seed stands for the main forest tree species have been established to provide reliable reproductive materials. Produced seedlings are mainly used for afforestation.

Ministry of Tourism and Environment has developed a large forest nursery in the Elbasan area with the support from Turkish International Aid organisation (TIKA), which is now managed under concession contract by a private company.

There are a number of private nurseries which provide forest species seedlings, although their core business (85-90%) is gardening and decoration. The companies are suffering the lack of long term coordinated efforts on afforestation. The most common species used for afforestation are black locust and black pine. There have been some efforts to introduce the use of native species (oak, maple, etc) but these are not preferred since would require special tending and care to survive.

The seedlings they produce are provided with a phytosanitary certificate by the Regional Agriculture Directorate. The certificate is developed according to EU standards.

The businesses complain that forest nurseries are not included in legislation supporting agriculture inputs by reducing VAT.

6.3 Product standards

The process of joining to EU is a significant driver of change in forest policy in Albania. The principles of forest governance are largely embedded into formal forest policy documents but still they are not part of forest management practice. Adjusting national standards with EU standards is a mandatory preparatory step for EU accession and shall be spread to the national forest-based sector stakeholders accordingly.

6.4 Nature protection and conservation

The core of the obligations relevant to the protection of wild fauna and hunting are covered by the Birds and Habitat Directives. The combination of the Habitats Directive and Birds Directive form the cornerstone of Europe's nature conservation policy.

More specifically, the overall objective of the Habitats Directive is to maintain or restore habitats and species of EU conservation concern to Favourable Conservation Status, (FCS), while the Birds Directive aims to achieve good conservation status for all wild bird species naturally occurring in the EU territory of the Member States. Both Directives are similarly designed and structured, requiring not only the conservation of species but also their habitats, through a combination of site and species protection measures, supported by monitoring and research measures. One of the key ways to achieve the objectives has been the establishment of Natura 2000 – a network of areas of high nature value across the EU.

Albania has made progress towards ensuring compliance with EU nature legislation. The current Albanian laws regarding the species protection objective, in relation to its conformity with EU legislation in this field, namely the Birds Directive 2009/147/EC and the Habitats Directive 92/43/EC and CITES Regulations include:

- Law No. 10 006, dated 23/10/2008, On the protection of wild fauna.
- Law No. 41/2013 On some amendments and addenda to the law NO. 10 006, DATED 23/10/2008 “On the protection of wild fauna”, as amended.
- Law No. 10 253, dated 11/03/2010 On hunting.

The objective of this legislation, in compliance with that of the EU, is to contribute to ensuring biodiversity through the conservation of natural habitats and wild fauna and flora in the country.

6.5 Management of forestry protected areas

The history of establishment and management of protected forestry areas in Albania starts with the designation in 1960 of Dajti National Forest Park as the first park ever established in Albania. This was followed in 1966, with the establishment of other 5 National Forest Park (Thethi, Lura, Qafeshtama, LLogara, Bredhi i Drenoves), which for many years formed the bone of the nature protection areas in Albania. The system was completed during the years (till 1990) with a number of forest hunting reserves, which included forest areas primarily managed for game and hunting activities. Over the years the system has evolved and significantly enlarge to represent today almost 18% of the territory of Albania with about 800 protected areas in different management categories according to IUCN classification. The protected area system in Albania has been under the responsibility of the forestry sector till 2014. In 2015, with the establishment of the National Agency for Protected Areas the management of protected forest areas is under this new entity responsible for the management of the whole natural protected areas system in the country.

The Ministry of Tourism and Environment estimates that 8.2 %, or 84,841 ha, of national forests are so called "virgin forest", mostly located in the north of Albania. Currently, there is no law that protects forests as "high-nature-value forests" or "virgin forests" or forests that contain special species or are of any other special kind of importance. According to the Ministry of Tourism and Environment, most high-nature-value forests identified so far are located in the already existing protected areas, which currently cover covering more than 16% of the territory. Protected areas are classified according to IUCN categorization (see Table 26).

Table 276: Protected areas network in Albania ()

Nr.	IUCN category	Number	Total area (ha)	% of PA network	Forest area (ha)	%
1.	Strict Nature Reserve (I)	2	4,800.0	0.95%	4,638	96.6
2.	National Park (II)	14	230,707.2	45.75%	133,144	57.7
3.	Nature Monument (III)	721	1,970.0	0.39%	1,521	77.2
4.	Managed Nature reserve/Nature Park (IV)	24	151,770.4	30.06%	48,779	32.2
5.	Protected Landscape (V)	6	97,333.6	19.28%	31,090	31.9
6.	Protected Area for resource Management (VI)	4	18,245.0	3.61%	8,944	49.0
	TOTAL	771	504,826.3	100.00%	228,116	45.2

Source: NAPA 2019.

Forests cover about 45% of protected areas territory. Protected areas authorities are responsible for the management of about 20% of the forest fund of Albania. Nevertheless, these are the most preserved and the most wonderful forest areas of Albania, including some areas of truly pristine old growth forests. In spite of the positive influence of the PAs on biodiversity, at present they still face various problems and challenges:

- a) habitat degradation from coastal erosion.
- b) illegal logging.
- c) illegal fishing, and poaching.
- d) inefficient management of recreation activities.

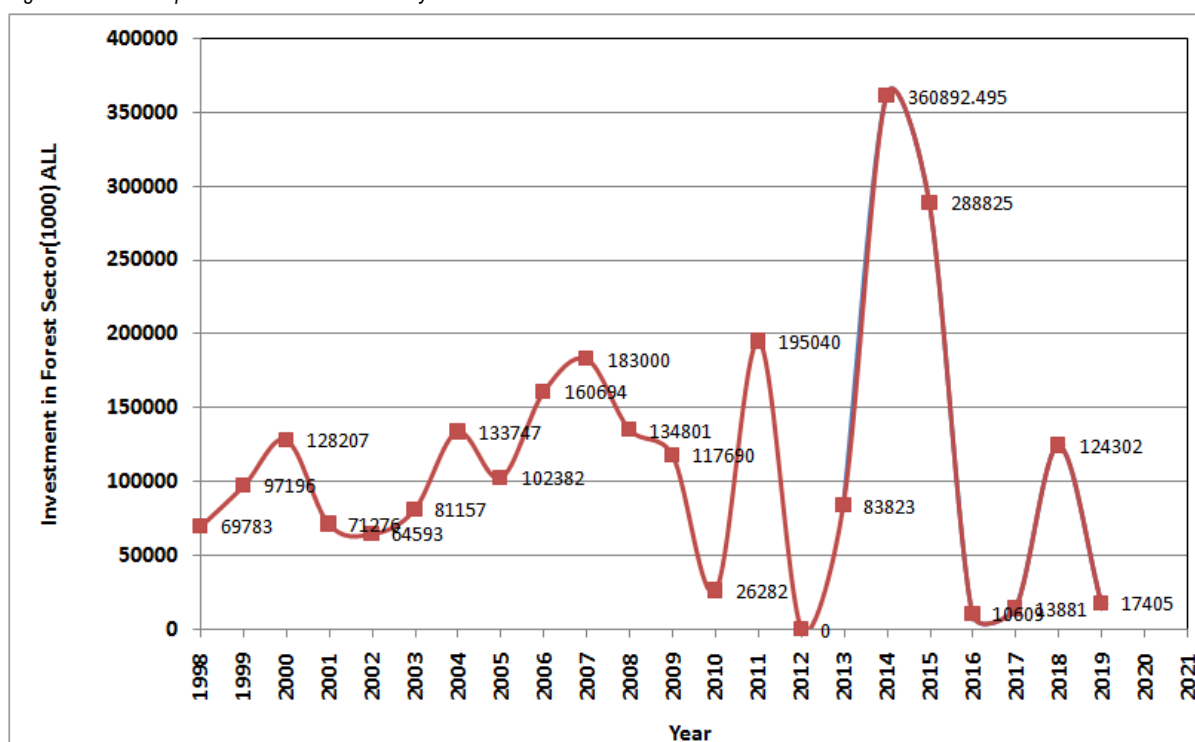
CHAPTER 7. PAST TRENDS AND FUTURE DEVELOPMENTS IN TERMS OF INVESTMENTS

7.1 PAST TRENDS

7.1.1 Forestry and land management

The latest figures about the investment in forest sector indicate that there is a variability in the financial investment among years from 1998 to 2019 (**Error! Reference source not found.**). Public investments in 2019, estimated at **17,405,000 ALL** (INSTAT 2019), were focused mainly on afforestation (4,980,000 ALL), preparation of management plans (12,163,000 ALL) and thinning operations (262,000 ALL). There is no investment in other forestry activities such as; forest tending, nurseries, water point construction, pasture improvement and soil erosion control measures.

Figure 14: Level of public investments in forestry



Source: INSTAT 2019.

7.1.2 Establishment and management of protected forested areas

The implementation of EU directives on nature conservation (Birds and Habitats Directives) requires the establishment of a scientifically based, ecologically representative network of protected areas to conserve habitats and species of relevance to the European Community.

The Directives are built around two pillars: the Natura 2000 Network of protected sites and the strict system of species protection. Natura 2000 is an EU wide network of sites of EU interest from their conservation point of view, established under the Birds and Habitats Directives. The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats.

In this regard, EU has already provided some support to the Ministry of Tourism and Environment in strengthening capacities in nature conservation and preparation for the establishment of the Natura 2000 network in Albania (NaturAI project). For the coming years, the European Commission (IPA III) as well as individual countries (SIDA) are planning to provide some support to the Ministry of Environment on establishing the Natura 2000 network in Albania.

7.1.3 Wood production

Although there is a ban on commercial harvesting of forests, there are a number of companies working under concession contract (initiated with the Ministry of Environment in 2012) with the municipalities. These companies are entitled to commercially harvest timber from mature stands according to dispositions of the management plans. The concession contract requires them to invest in developing the necessary road network for accessing the stands. The cost of this investment is calculated/deducted from the concession fee (contract).

Considering the long-term nature of the concession contracts (10 years), some companies have also invested in equipment and machineries necessary for forest harvesting. However, the overall level of mechanisation is low and the technology/machineries are old. The bad condition of forests road accounts for rapid amortisation of vehicles and machineries and does not allow for investments in modern technology.

7.1.4 Non timber forestry products

Recently there have been few private investments in the non-timber forest products sector. These investments were mainly related to enlarging storage capacities and/or improving basic processing technologies. However, considering uncertainties in the market, private companies are reluctant to invest on long term projects. There are no investments on vocational training and building capacities of key actors in the value chain, particularly collectors.

7.2 THE INVESTMENT CLIMATE

The investments in the forestry sector largely depend on public funding and selected donor support. There are few private investments mostly related to processing technologies and equipment.

Investment climate in the forestry sector shows the same issues as overall investment climate in the country. The Albanian legal system ostensibly does not discriminate against foreign investors. Albania has been able to attract increasing levels of foreign direct investment (FDI) in the last decade. Investments are concentrated in the energy sector, extractive industries, banking and insurance, telecommunications, and real estate. To attract FDI and promote domestic investment, Albania approved a Law on Strategic Investments in 2015. The law outlines investment incentives and offers fast-track administrative procedures to strategic foreign and domestic investors, depending on the size of the investment and number of jobs created.

Despite a sound legal framework, foreign investors perceive Albania as a difficult place to do business. They cite corruption, particularly in the judiciary, a lack of transparency in public procurement, and poor enforcement of contracts as continuing problems in Albania. Reports of corruption in government procurement are commonplace. Investors are challenged by corruption and the perpetuation of informal business practices.

Property rights continue to be a challenge in Albania because clear title is difficult to obtain. Overlapping property titles is a serious and common issue. The compensation process for forest land confiscated by the former communist regime continues to be cumbersome, inefficient, and inadequate.

7.3 EXPECTED FUTURE TRENDS

No big changes are expected in the future trends of investments in the forestry sector. Public funding will fluctuate according to priorities and availability of funding.

The completion of the Environmental Services Project will largely reduce the support provided to the forestry sector, particularly on issues related to management planning and operational management of forest resources.

Implementation of the EU Green Deal, and particularly measures foreseen on the Western Balkan Green Agenda, could provide adequate support to the strengthening of the role forestry sector can play in addressing key challenges of sustainable development and nature conservation and climate change.

CHAPTER 8 IDENTIFICATION OF POTENTIALS AND NEEDS OF THE SECTOR

8.1 KEY SECTOR TRENDS

The sector analysis revealed a multitude of aspects relevant for forestry sector development, which potentially need to be addressed. New approaches to forest management are necessary to deal with environmental problems and to meet the current needs of society with regard to the sustainable use of natural resources.

The forestry sector is undergoing a both positive and negative trend that is described in the Table 28 below, showing the expansion and the structural change of the sector.

Table 28: Forestry key development trends²⁴

Sub-sector	Expansion/contraction (1-5 strong shrinking - strong expansion)					Structural change (1-5 stagnant - changing fast)				
	1	2	3	4	5	1	2	3	4	5
Forest management				x					x	
Processing		x						x		
Non-timber forest products					x				x	
Forestry based energy products				x					x	
Education and training			x				x			

Source: Authors elaboration based on field interviews and expert assessment.

Note: Pandemic impact has also been considered.

8.2 SWOT ANALYSIS AND POTENTIAL NEEDS OF THE SECTOR

SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is an instrument of strategic planning which scans internal strengths and weaknesses of sector and illuminates the opportunities and threats of the environment. Furthermore, SWOT provides a framework for deriving strategies based on promising combinations of found strengths, weaknesses, opportunities or threats.

Typically, through SWOT analysis the most important internal and external factors for the business environment are grouped in four categories: strengths, weaknesses, opportunities and threats. Strengths and opportunities are considered positive attributes, while weaknesses and threats negative ones. In strategic planning the aim of SWOT is to formulate and adopt a strategy in good fit between the internal and external factors.

The analysis of the forestry sector is focused on those areas where the highest negative impact to the sector deterioration is currently noted, where the country is seriously deficient, and where medium term expected actions have great potential to improve conditions and contribute to a sustainable economy with the greatest impact on the population and nature protection.

During the analysis exercises, the current situation was assessed in detail, as well as relevant inputs from numerous surveys and reports. A similar robust process was applied in determining strengths and weaknesses as well as opportunities and threats. All these findings were brought together to form an accurate assessment of both internal and external operating environments in which the forest sector could safely and realistically be set. The analysis of internal and external factors classified under the 'strengths', 'weaknesses', 'opportunities' and 'threats' categories provide a basic frame for strategic forest planning towards assessing and monitoring forest management sustainability.

The results of the SWOT analysis provide an insight into priorities for action:

- The richness of forest resources and the role of ecological and product diversity (e.g., NTFP) bears potential for future production and marketing.
- The potential of integrated production solutions such as integrated heating systems based on bioenergy shall be sought.

²⁴Experts and business opinion.

- Pursuing improvement of wood stock, and production of non-wood products can provide opportunities for employment and income support.
- The experience and craft in producing wood products (e.g. furniture) and potential to increase the share of final products in the value chain.
- The important role of the EU accession process and the potential and barriers to EU compliance is one of the key issues for the sector and needs clarification and capacity building.
- The failure of creating the full value in the forest-wood chain needs to be improved in the context of rural development.

8.2.1 Issues highlighted in the SWOT analysis for Timber and Wood Products

Timber and wood products constitute a major share of natural resources of the country and are a major space for biodiversity conservation and management, as well as for welfare provision for the local population of the mountain areas. According to latest data, forests and forest land in Albania encompass a relatively large area of 1.197 million ha, which is around 41 percent of the total country area. In terms of forest ownership, around 97 percent are public forests, and only 3 percent are privately owned.

The forest has recently undergone changing demands in terms of contributing more to protecting and enhancing all important forest functions, ranging from economic viability, to social responsibility and environmental and ecological sustainability. In general, the forest-based sector has faced significant structural changes and needs further modernization and improvements.

In general human-induced impacts are the major source of forest damages. Among others, the trend of forest fires gives reason for alert. Programmes are needed for fire management, awareness campaign for forest fire risks and prevention measures (including tourists). Rural poverty in particular put major pressure on forest land, especially in terms of firewood demand and illegal activities of harvesting and marketing wood resources.

In terms of the axis for the development of the sector, the first aspect targets improvement and development of rural infrastructure. Rural infrastructure is key for any improvement of production, logistics, and marketing in the forest-based sector in Albania. This entails both public infrastructure and infrastructure in enterprises.

Furthermore, know how transfer is required in the forest-based sector in Albania to modernize operation and support compliance with EU and its acquis. This includes the establishment of new training programmes to sustainable forest management in both public and private forests using new forest inventory data.

The most important processes identified in the ‘strengths’ category to be assessed and monitored in the frame of forest management sustainability involve the relatively large forest coverage, the established production of fuelwood and forage, employment of the local rural population in forest works, income generation for mountains population from the forests, as well as the many natural and cultural attractions of the region’s forests.

On the other hand, the most important internal factors under the ‘weaknesses’ category for the forest sector include mainly institutional type of processes, mostly related to the financial limited resources available, such as lack of funds for investments, including lack of funds for forest management plan studies, not fully aligned forest legislation, forest land tenure problems and personnel capacities shortage. Important is also the degraded wood stock. One major constraint on the timber industry is transport difficulties and costs over narrow barely maintained roads. Although forest products production exists in the country, the addition of value through downstream processing is low. Sawn wood and semi-processed parts dominate exports, while final products, such as furniture, have negative trade balances. Efforts to increase competitiveness are occurring, which hopefully will improve production and management technology, increase production efficiency, and create new supply.

The external factors grouped under the ‘opportunities’ category involve processes related to improvement of main strength factors, such as the expansion of forest land and the improvement of wood stock, the development of international/national protection, capacity building, conservation and public awareness projects through the access to EU funds. In general, the availability of new technologies for sustainable forest management is also perceived as an opportunity for the sector.

Finally, the most important external factors grouped under the ‘threats’ category are mainly processes associated with abiotic factors, such as wildfires or plant diseases, which require better risk prevention in sustainable forest

management and land use; or biotic, such as illegal logging, hydropower development, land use change, and as invasive plant species.

The ongoing demographic change and poverty of rural population are also important challenges.

Climate change, in particular, is expected to impact on forest biodiversity and the ability of forests to provide soil and water protection, habitat for species and other ecosystem services.

8.2.2 Issues highlighted in the SWOT analysis for Non-Timber Forestry Products

The SWOT analysis demonstrates that the NTFP are an important aspect of maintaining and strengthening the productive functions of forests and help create a broadened portfolio of forest productivity that shall secure a viable forest management and development of rural areas. For the development and diversification of NTFP economic activities, it is important to highlight that future accession to the European Union might imply stronger competition and compliance pressure to EU standards. IPARD represents a proper instrument for fostering product diversification, niche detection, and brand creation to render rural economies compatible on the international market. Investments in new processing technologies and adequate capacity building activities will provide relevant added value to local products.

The maximal internal “*strengths*” (see

Table 30), are reflected in the great wealth and diversity of the NTFPs, high-quality of raw materials, and competitive prices and quality of products, which have good export potential.

On the other hand, the most important internal factors under the '*weaknesses*' category for the NTFP sector include the high fragmentation of production and ownership issues, a scarcely organised value chain at production and collector level, outdated or lack of equipment and means (insufficient storage facilities, lack of sorting/grading and packaging equipment, lack of integrated/complete processing lines), and insufficient financial inputs for incentives to the rural areas.

It appears quite clear that there are interesting "*opportunities*" for market development and diversification. Small producers can increase their production capacity, while larger producers can diversify it, adding new, high value-added products to their product mix. Furthermore, the opportunities which should be pursued are the increased demand for the NTFPs, investing in processing capacities and increasing the level of processing, better cooperation and improvement of relations of participants in NTFP chain, increase product sales in the domestic market and entering new markets, and the use of pre-accession funds for sustainable use of natural resources. Availability of low-cost labour provides further potential to the expansion of the sub-sector.

Finally, the most important external factors grouped under the '*threats*' category are mainly associated with abiotic factors, such as plant diseases, which may affect the forest and cause grave damages to production, forest fires and climate change, which is expected to impact on forest biodiversity and the ability of forests to provide fruits; or biotic, such as the lack of legislation regulating the sector, and the inappropriate management/collection techniques.

Table 30: Internal and external factors in the sector of NTFPs - SWOT Analysis

		<i>Internal Factors</i>					
		Strength		Weaknesses			
		The great wealth and diversity of the NTFPs		Lack of associations of collectors and skilled workers			
		The quality of raw materials at a high level		Limited processing capacities			
		Acceptance of standardization		Outdated equipment/means, especially storage facilities			
		Competitive prices and quality of products		Products which are categorized as "perishable products"			
				Inadequate system of collection points and transport of the NTFPs			
				Lack of marketing activities			
				High fragmentation of production and ownership issues			
		Opportunities		Threats			
<i>Positive</i>		Availability of chestnuts forests		The existence of a "grey market" and unfair competition	<i>Negative</i>		
		Increased demand for the NTFPs		Variability of yields in nature which influence the volume of purchase and placement			
		Good export potential		Climate change			
		Possibility of investment for strengthening cooperation and relations between participants in the NTFPs chain		Problems in export – Customs Procedures			
		Role of pollination as an ecosystem service		Increasing pressure from tax authorities			
		Renewability of the resource		Endangering of biodiversity			
		The availability of low-cost work force		Strong competition in the international market			
		Increased demand potential for bee products of economic importance such as pollen, propolis, royal jelly, beeswax and swarms		Lack of legislation regulating the sector			
		The increase of the product demand in the domestic market		Plant diseases may affect the forest and cause grave damages to production			
		Potential for conquering of new markets		Forest fires;			
		The availability of new product lines and new products					
		The use of EU pre-accession funds;					
		<i>External Factors</i>					

8.2.2 Issues highlighted in the SWOT analysis for Forestry Based Energy Products

Forestry-based energy products are of great importance as source for heating and cooking, especially in rural Albania.

Wood biomass provides a good source of renewable and low carbon energy if derived from sustainably managed forests. Unfortunately, Albanian forests suffered from poor management, limited protection and/ or forest fires and as a consequence forest resources have become seriously degraded in many areas.

The management of natural forests for the sustainable fuelwood supply in Albania is also very expensive because it involves costly management planning and inventories, and the establishment of forest roads in inhospitable areas to name a few.

The most important processes identified in the 'strengths' category is that the forests consist mainly of low broadleaf forest with beech and oak, which are preferred species for fuelwood.

Furthermore, wood biomass, if derived from sustainably managed forests, constitute a new market opportunity for the forest sector, and a good opportunity for local people to create additional income.

One of the biggest challenges is that the demand for fuelwood is much higher than the potential supply through thinning and sanitary forest operations indicated in forest management plans. As a result, prices for fuelwood increase and people turn to the informal market, which is prospering also because forests institutions lack the capacities/ funds to control/enforce legislation.

This is the most important internal factor under the '*weaknesses*' category for the sector. Another issue is that wood processing companies face difficulties in accessing wood, sawdust and other sources of wood biomass for making pellets, and their production is at present lower than the capacity of their plants.

The external factors grouped under the '*opportunities*' category includes the high demand for wood residues, which are considered as a sustainable feedstock, at least if the wood is removed from forests with a sustainable management and if the wood is not taken away from other more sustainable use options (e.g., for construction or furniture), for heating purposes. Further opportunities involve the availability of energy efficient technologies (use of more efficient stoves (improved stoves/ pellets) and of agricultural waste for heating) and the potential availability of lands to set up tree plantations.

Finally, the most important external factors grouped under the '*threats*' category are mainly associated with the possibility that an increased demand for wood residues could be an incentive for unsustainable forest management practices.

CHAPTER 9. IDENTIFICATION OF TRAINING AND ADVISORY NEEDS FOR THE SECTOR

The offer for professional development in the forest sector in Albania has been traditionally focused on classic methods and systems for forest management. However, the demand has recently undergone changed in terms of contributing more to protecting and enhancing all important forest functions, ranging from economic viability, to social responsibility and environmental and ecological sustainability.

New concepts and holistic approaches in managing economic, ecological, social and cultural sustainability are relatively unknown. The same situation holds true with research in forestry and technical applications.

9.1 TECHNICAL AND VOCATIONAL TRAINING

Technical and vocational training on forestry is provided by the Technical School in Shkodra *Kole Margjini*. It is the only school in the country providing specific forestry related vocational training in Albania. Forestry vocational education follows the 2+2 structure, comprising the profiles of:

- Silviculture
- Forest exploitation
- Floriculture
- Environment protection of forests

9.2 TRAINING TO VALUE CHAIN ACTORS

Although training is considered a major component of capacity building measures that are required in the forest-based sector in Albania to modernize operation and support compliance with EU acquis, practical training, as mechanism for linking educational programs with current issues in forestry-related topics is weak, and there is a clear need to establish a multi-level training programme for forest ecosystem management and rural development to re-educate workforces, and information campaigns within the forest based sector.

This includes trainings at all levels from continuous education, training in cross-sectoral issues of rural development such as eco-tourism and land management, to a revision of the education of engineers and forest land managers/administrators. The Forests and Pasture User Associations have implemented various trainings in cross-sectoral issues on forest management at the forest user level. Recommendations in this aspect include:

- Awareness rising, training and capacity building within municipalities for sustainable forest management.
- Import of international know-how in wood-based industries, and establishment of new trainee programmes in wood-based industries.

Support for curricula revision and connection to international education programmes.

Establishment of cooperation mechanisms between education institutions and SME.

Technical assistance in terms of technical support in order to improve know-how, technology, and logistics.

9.3 FOREST EDUCATION SCHEMES

Faculty of Forestry Sciences is part of the Agriculture University of Tirana. It is the only institution for high education in the forestry field. The technical school for forestry is situated in Shkodra town. It is another education institution which offer various programs for preparation and education of forest technicians in silviculture, reforestation, forest logging etc.

9.4 POST-EDUCATIONAL TRAININGS AND QUALIFICATION INSTRUMENTS

There are limited opportunities for post educational trainings and qualification in the forestry sector. Few donors funded project provide some capacity building activities, including formal training, exchange visits and/or on job

training events. However, there are no formal programs or instruments available to ensure post educational trainings and qualification in the forestry sector.

9.5 RESEARCH IN THE FOREST SECTOR

Faculty of Forestry Sciences is the only institution of high education which according to the Law of Higher Education is responsible for the scientific research in the forestry field. The mission of this entity is education, scientific research and the expertise in forestry. NEA is also engaged in scientific research activity by means of the Directorate for Technology transfer focused on the monitoring of the forest state and their vitality, biodiversity, soil erosion etc.

CHAPTER 10. ALIGNING TO THE GREEN DEAL

The European Green Deal (EGD) outlines a range of policy initiatives/actions for achieving its objectives, many of which are relevant to rural areas and land use choices, both in terms of the sustainable use and management of rural land and resources, which can have a significant impact on climate change mitigation and help meet the increased ambition foreseen by the EGD, and the economic resilience and social viability of rural communities.

The Regulation “on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry (LULUCF) in the 2030 EU climate and energy framework” lays down new rules for the accounting of the sector's emissions and removals, and for assessing EU Member States' compliance with these. For the first time, this allows the land sector to contribute, at least in part, to the achievement of the EU's climate change mitigation targets.

10.1 EU GREEN DEAL RELEVANCE TO THE SECTOR

The forestry sector can make a significant contribution towards meeting the final objective of having zero net emissions of greenhouse gases by 2050, mainly through the abatement of greenhouse gas emissions (the land sector plays a crucial role in climate change mitigation due to a peculiarity: the sector can either release greenhouse gases into the atmosphere, acting as a source of emissions or, conversely, store carbon and therefore acting as a sink) and expansion of renewable energy objectives. There are three main routes by which the forestry sectors can contribute: biomass energy and green infrastructure and building which are related to forest products, the role of forest resources as carbon sinks, which is related to resources.

10.2 EU GREEN DEAL POTENTIAL ACTIONS AND CAPITAL NEEDS

The role of forest products and forest resource can play in mitigating climate change and contributing to a green deal is linked to the way forests are managed.

The concept of sustainable forest management (SFM) becomes even more critical now that forests are recognized for their crucial role as carbon sinks. This implies *inter alia* that forest resources must be preserved if not developed, protected against excessive exploitation and against other disturbances of a biotic and abiotic nature, the promotion of forest management and conservation of natural pastures in order to ensure biodiversity and ecotourism development; rehabilitation of degraded forests to return the relevant forest stations to optimal condition; and measures for illegal logging.

This is becoming very important as climate change might bring more frequent and intense threats in the form of fires, insect invasions and storms. In this sense, sustainable forest management is also a tool for the forest sector to adapt to climate change.

10.2.1 Improving environmental standards

The forest sector contributes to climate change adaptation, given its various positive externalities, such as its role in water resources protection and many other environmental services.

Certification schemes ensuring the proper management of forest resources are useful tools. However, the cost of certification can be a possible limiting factor for small forest owners who cannot afford certification rates and therefore need positive support through direct financial assistance, and incentives through sustainable public procurement rules, for example by setting building standards that require the inclusion of wood products in green building.

10.2.2 Energy efficiency and clean energy

The wood energy currently represents an important source of bio energy in Albania. Thanks to the implementation of policies aimed at increasing the share of renewable energy, wood energy is seen as a growing opportunity for wood utilization, and the Albanian Government is promoting energy efficiency and renewable energy, including wood energy.

Furthermore, an increased use of renewable biomaterials in infrastructures and buildings can provide a positive contribution to climate change mitigation since their utilization can minimize the use of non-renewable energy. Renewable biomaterials have additional benefit as they sequester carbon during their lifetime.

Investments in renewable energy on sector's holdings could also significantly contribute to poverty alleviation through the reduced cost for electricity. Reduced energy bills provide increased disposable income for households, individuals and enterprises. In addition, investments in energy efficiency are an important part of government's green growth strategies that contributes to reduction of GHG emissions and climate change mitigation.

However, it is the common opinion that support to bioenergy development must be cautious and progress in parallel to a sustainable development of multifunctional forest resources to be realized through the following objectives:

- Continuous protection and rehabilitation of the forests.
- Conservation of forests through the reduction and cessation of illegal logging.
- Preservation and rehabilitation of forest ecosystems and damaged pastures through reforestation and rehabilitation of degraded forests.
- Promotion of sustainable and multifunctional use of forest resources.
- Promotion of social and protective functions of forests.
- Promotion of the production potential for non-timber products.

10.2.3 Contribution to climate change policies, carbon sequestration potential

Despite the progress made in mainstreaming climate change issues, there is a significant need to continue the process of incorporating climate change in national planning and policy. In addition to GHG reduction measures, there is a significant need to address adaptation, mainly in the most vulnerable areas of the country and in the most vulnerable sectors, such as water resources, agriculture and tourism.

The forestry sector both emits greenhouse gases and absorbs CO₂ in its soil and biomass. In total, it has been a significant net sink in the past. However, over recent years the Albania's sink has come under pressure from increased economic use and the adverse effects of climate change. Reversing the current trend requires significant short-term action. This includes improved and enforced forest protection and more sustainable forest management as well as sustainable re- and afforestation and improved soil management including through the restoration of wetlands, peatlands and degraded land. Increased carbon sequestration through afforestation and reforestation of highly degraded land will also lead to enhanced sources of livelihood and incomes in poor rural areas, reduced soil degradation, improved water quality and conservation of biodiversity.

CHAPTER 11. OUTCOME

11.1 KEY FINDINGS AND CONCLUSIONS FROM THE SECTOR ANALYSIS

The analysis of the forest sector study revealed various critical aspects that might potentially render the forest sector relevant for rural development, and therefore possibly addressed by a future IPARD implementation in Albania.

In summary, the following aspects would need to be addressed:

Forest Sector Performances

- The forest resources in Albania play an important and positive role as renewable natural energy/heating resource; however, the increasing demand could be an incentive for unsustainable forest management and boost illegal practices.
- Sustainable forest management is a key factor for rural development but needs implementation in forest policy and forest management. The publishing of new forest inventory data is indispensable for achieving a more accurate planning.
- Sustainable forests management practices are not commonly adopted: there is need to be introduced to make a correct use of forests potential role in both, biodiversity maintenance, but also wood production.
- Among forest damages, human-induced impacts forms are most relevant. Forest fires are of increasing abundance and require specific fire management responses.
- NTFP are a widely used resource contributing to sustaining livelihood in rural areas, however marketing of NTFP needs to be substantially improved to increase access to national and international markets.
- Municipalities manage around 80 percent of the forests in Albania but widely lack capacities and resources to properly manage their forests.
- With the exception of fuelwood, the commercial forest harvesting activities have been reduced since 2016 as a consequence of 10-year ban on logging (Moratorium Decision No 5, Feb 4, 2016).

Land Use and Land Use Change

- Decrease of population and emigration cause land abandonment, which represent a major obstacle to rural development and prevention of forest degradation.
- Urbanization tendencies, especially around cities, lead to loss of natural and semi-natural habitats.
- Land mining (quarry and dumping sites) contamination is still a relevant factor also for land use change in Albania.
- Land ownership issues continue to exist in rural areas.
- Rural poverty leads to high pressure on forest land in terms of firewood demand and illegal logging activities.

Forest-based sector products, services and value chains

- Albania is a net importer of primary and secondary forest products. The import of wood products shows increasing trends while exports stagnate because of the moratorium, which provides a negative trade balance to the country.
- Production and sales of firewood is by far the most important product category in Albania; wood manufacturing and furniture production play also a significant role, and there is further potential to generate domestic value-adding in the furniture production industry.
- The NTFP sub-sector is currently underestimated and not properly documented.
- Value-adding steps on NTFP processing and brand creation can create new market opportunities.

- The traditional business of low-cost furniture for low-income customers in small and medium-sized enterprises remains an important asset of the domestic wood-sector in Albania.
- Wood pellet production and biomass-based heat production can be major areas for future investment but needs respective strategic planning of resource and capacity needs, infrastructure and logistics.

Level of attainment of relevant EU standards

- Combat of illegal logging is one of the relevant objectives for rural development. This embraces the fighting of corruption and poverty, better presence of controlling, and awareness-rising among population.
- Adjusting national standards with EU standards is a mandatory step toward EU accession and shall be spread to the national forest-based sector stakeholders accordingly.

11.2 PRIORITY INVESTMENTS IN FORESTRY MANAGEMENT AND PRODUCTION

Priorities for action are based on the findings of the forest sector study and are pinpointed according to the major elements of the IPARD III programme. The nature of investment needs entails technological, structural and institutional measures to be potentially addressed by IPARD intervention.

Forest sector management

Sustainable and reliable ways of managing forest are crucial for the protection of the environment and of the health of citizens and can have positive impacts on tourism. This is essential for the green perspectives of the country and safeguarding the health and welfare of its people.

One of the major issues for future investment will be in human resources. If public sector forestry is to change and to deliver on its full potential, it will have to invest significantly in its human resources through the provision of additional skills in some key areas of forest management and administration, public awareness and communication.

Proper forest management planning is also needed to have a basis for the preparation of annual operational plans. These forest management plans should be multi-objective and take into account fuelwood needs and not only focus on the production of timber.

Some activities can be directly linked to IPARD III programme:

- Support institutional mechanisms for combating illegal logging, and enforcement of a controlling and safeguarding system of illegal logging activities.
- Capacity building for EU standard implementation and information campaigns within the forest-based sector.
- Establish fire management concepts and systems: this includes means for both fire prevention (e.g., Fuel management, awareness rising campaigns) and firefighting (logistics, machinery, international cooperation).

Forest sector products

Wood furniture industry is a rather important production sector of the Albanian economy, which mainly responds to the domestic demand.

There is potential for improving the performance of the wood processing industry in the following areas: composition of the industry structure, added value to products, increased operational efficiency, and decreased import of wood products, as well as increased marketing activities and in improved business relationship.

The wood-processing industry need restructuring and continue to increase the added value of its products, increase net export and improve business relationship. Expected investments in this sub-sector include:

- Establishment of a web-based information platform on the forest-based sector for furniture producers, traders, manufacturers, and the public.
- Facilitation and exchange programmes for import of international know-how in wood-based industries.

- Establishment of new trainee programmes in wood-based industries.

Bioenergy offers the possibility to reduce greenhouse gas emissions per produced energy unit, reducing fossil fuel dependence for the energy supply of the population. Furthermore, biomass production offers possibilities for promotion of sustainable management of natural resources, advancement of rural development and opening of new jobs.

The formation of an industrial biomass sector is among the most promising fields for investments. In the light of enhanced biomass demand offered by the energy strategy, entering this field of business could safeguard a higher domestic value generation as compared to lower value products such firewood and charcoal.

In the focus of interest for future investment are particularly wood pellet production and biomass- based heat production.

The bioenergy sector is currently only at early stage of development and needs sincere start-up investment for bio-energy concepts, integrated heating concepts etc., including:

- Feasibility studies for best locations and investment opportunities in the bioenergy sector.
- Feasibility studies for best locations and investment opportunities in wood pellet production, integrated heating systems, local and distant heating systems, use of wood waste.
- Support an innovation programme with calls for pilot and demonstration projects for value adding wood processing and manufacture.

11.2.1. Types of investments

The IPARD III programme of the European Commission will support *Measure 11: Establishment and protection of forests*. Although at the moment this sector study is being developed it has not yet been decided which will be the set of eligible activities (methods of support) under the measure 11, it is expected that the specific objectives of the measure be the following:

- increase the forest cover, or expanding the area of other wooded land, whether on agricultural, degraded or other land in order to provide environmental services.
- foster the agroforestry practices.
- prevent damage to forests from forest fires.
- restore forests damaged by forest fires.
- improve the resilience and environmental value of forest ecosystems through conversion of degraded forest stands, structurally degraded forest stands per tree species, and forest cultures into mixed high forest stands of indigenous tree species.

All the five objectives pursue an ecological approach and would be applicable to address parts of the identified priority segment/area of intervention. While afforestation has rather gravity in a country like Albania with several areas of severe degraded forest areas and/or abandoned lands, which can be used for the establishment of tree plantations; and agro-forestry systems in which trees and agricultural crops are combined on the same piece of land could also be promoted. The measure of fire prevention and restoration is a highly recommended means to implement some of the key findings of this study. Also, measures for improving the resilience and environmental value find their counterpart in the recommendations.

The analysis of the sector reveals the crucial issues which should be targeted by future investments and actions. In addition, the results of the SWOT analysis give insight into priorities for action:

- The relatively large coverage of forests offer potential for fuelwood and forage production and provide an opportunity for employment of local population in forest management works, which need to be further exploited.
- The assets of forests for eco-tourism and marketing of ecosystem services as future market potential shall be examined and fostered.

- The richness of forest resources and the role of ecological and product diversity (e.g., the great wealth and diversity of the NTFPs), and the competitive work force costs bears potential for future production and marketing, which should be further exploited.
- The important role of the EU accession process and the potential and barriers to EU compliance is one of the sector's key issues, which requires the building and further strengthening of institutional and human capacities.
- The development potential of the forestry-based energy products to increase the share in the energy market should be sought.
- The experience in producing wood products, especially furniture and potential to increase the quality and share of final products in the value chain should be further developed.
- The failure of creating the full value in the forest-wood chain needs to be overcome in the context of compliance with international markets.
- Educational shortcomings to respond to new demands on forest management and planning hamper further development of rural development.
- The weak implementation of forest policy and failure in fighting illegal practices within the sector needs to be overcome to make the sector competitive and compliant with EU *acquis*.
- Lacking investment in infrastructure, technology and human capacities in the sector is a main obstacle for a viable forest-based sector.

Against the identified issues of concern in the forest sector in Albania, a range of priorities for action (and related measures) can be identified as follows:

11.2.1.1 Priority Action 1: Improving sector's performances and capacity to implement EU standards

The goal is to ensure that sector institutions are equipped to address the challenges of climate change, renewable energy and conserving biodiversity; this includes measures to:

- Support sustainable forest management planning.
- Establish fire management concepts and systems.
- Identify win-win areas and forest management techniques where biodiversity, wood supply and carbon sequestration can be combined, and then implement measures to promote these practices.
- Support the sharing of knowledge and experience between countries on strategies to increase resilience of forests to climate change, promote the preparation of guidance for municipalities/forest types.
- Establish platforms to discuss strategic options for increasing contribution of wood to renewable energy, identifying constraints, and developing precisely targeted legislative and policy instruments.
- Support Albanian Municipalities in progressive alignment to EU rules, standards, policies and practices with a view to EU membership.
- Support economic, social and territorial development, with a view to a smart, sustainable and inclusive growth, through the development of physical capital.
- Address the challenges of climate change by promoting resource efficiency.
- Capacity building for EU standard implementation and public awareness campaigns.

11.2.1.2 Priority Action 2: Support innovation and competitiveness

The goal is to increase productivity and competitiveness by technological improvement to comply with EU standards of environmental protection, and mitigation of the climate change. This includes measures to:

- Support new mechanisation and new technology.
- Improve competitiveness of local producers and to adjust to the demands of domestic and foreign market.
- Share innovative ideas and approaches in forest management (establishment of formal structure, periodic forums and exchanges).
- Support modern communication technologies and web-access infrastructure in rural areas;

11.2.1.3 Priority Action 3: Improvement and development of forest sector's infrastructure

Rural infrastructure is key for any improvement of production, logistics, and marketing in the forest-based sector in Albania. This include both public infrastructure measures (roads, water supply etc.) and private (e.g., industry holdings and logistic):

- Support to firefighting initiatives (logistics, machinery and equipment).
- Support investments in renewable energy for self-consumption.
- Strengthen the production chain.

11.2.2. Proposed eligibility criteria and size thresholds

It is proposed that the final recipients of these measures be legal persons, physical persons, associations and municipalities, holder of forests and agricultural land. It is further proposed that the measures identified will only support investments fulfilling the following criteria:

- The proposed interventions should be in line with the local Forest and Pasture Management Plan.
- The proposed intervention is in line with National standards, and relevant EU standards, as regards environmental protection and climate neutrality, have to be respected.
- The land and/or the holdings must be suitable for the intervention.
- Applicants should have proven sector's experience and competences.
- All supplies purchased under this measure shall originate from an eligible country.
- Only investments made after the signature of the contract can be considered eligible for reimbursement. Goods procured for the implementation of approved intervention will be reimbursed against regular invoices.
- The applicant has to prove the economic viability of the intervention through a business plan at the end of investment period.
- The applicant has in-house expertise and good management competencies.
- The construction or improvement of immovable property shall not exceed the market value of the assets.
- The purchase of new machinery and equipment, including computer software, shall not exceed market value of the asset.
- Planting of forest seedlings is enriched by planting other native tree and/or shrub species (including fruit trees) as follows:

Eligible plant species:

- Forest tree species: Native tree species, provenances and varieties or ecotypes that are well adapted to site conditions and defined in the Forest and pasture management plan.
- Planting of fruit trees: Applicable shrub and tree species are listed as follows: Walnut (*Juglans regia*), Chestnut (*Castanea spp.*), Hazelnut (*Corylus avellana*), Plum (*Prunus spp.*), Cherry (*Prunus avium*), Apple (*Malus spp.*), Pear (*Pyrus spp.*), Grapes (*Vitis vinifera*), Dogwoods (*Cornus mas*), Pomegranate (*Punica granatum*), Quince (*Cydonia oblonga*), Olive (*Olea europaea*), Almonds (*Prunus dulcis*).

Planting density:

- Minimum 80 trees/ha or 250 scrubs/ha
- Maximum 250 trees/ha or 500 scrubs/ha

11.3 SPECIFIC INVESTMENTS ISSUES

The measure "Establishment and protection of forests" is new, as it has not been implemented under IPARD II Programme; however, support was financed by donors and national funds.

The measure is potentially linked with measures:

- 4 - Agri-environment-climate and organic farming measure in the field of per-hectare payments for agricultural land, and
- 10 - Advisory services in the field of use of advisory services for forestry with regards to preparation of projects.

This will be clearly demarcated from the activities, supported under this measure and controlled through the administrative procedure.

The measure is based on the Albanian Forest Policy and Law on Forests, which takes into account the commitments made in the Ministerial Conferences on the Protection of Forests in Europe²⁵, contributing to the implementation of the EU Forest Strategy: for forests and the forest-based sector.

11.3.1 Investments requiring intervention on the external context to become feasible

The forests are in majority owned by municipalities and managed through the drawing up and implementation of Forest and Pasture Management Plans, prepared by municipalities, and approved by the Minister of Environment (to ensure revenue stability and ecologically and socially responsible forest management while preserving and enhancing biodiversity, forest functions for the public benefit and the long-term economic value of forest ecosystems will be ensured. The majority (90%) of municipalities have outdated Forest and Pasture Management Plans developed for the former communes, which need to be updated. This represents a problem due to lack of available funds and capacities at municipality level. The support provided to the development of Municipality Forest and Pasture Management Plans will greatly benefit the implementation of IPARD measures.

11.3.2 Investments and supports required to increase effectiveness and impact of the programme

Investments in forestry have many desirable features. Under certain conditions, forestry investments can contribute substantially to the economic, social and environmental development of the country.

Good governance, including control over illegal activities, will contribute the most to foster responsible investments and improve their contribution to social and economic development.

Improving an investment effectiveness goes hand in hand with enhancing human capital. Increased funds and modern technology will not improve the performances of a Municipality that lacks sound management capacities. Inadequate management skills of workers are a serious obstacle to forest operations. To be able to participate in international donor support activities, many Municipality will need assistance in strengthening their skills and capacities on sustainable forest management.

11.4 RECOMMENDATIONS FOR COMPLEMENTARY INTERVENTIONS

Based on the information available and on the discussion presented in the report, the following recommendations for future interventions can be done:

Timber and Wood Products	Non-Timber Forestry Products	Forestry Based Energy Products
<p>Increasing awareness of the importance of forest sector.</p> <p>Develop awareness policies and procedures that enhance reasonable fire prevention measures.</p> <p>Fostering of carbon capture and sequestration in agriculture and forestry.</p> <p>Charging on ecosystem services, polluters etc.</p> <p>Improve the stability, structure, resilience and health condition of forests, which will improve their capacity for carbon capture and sequestration.</p>	<p>Investment in processing capacities and increment of the level of processing.</p> <p>Strengthen marketing activities and access to financial mean for investment.</p> <p>Improve information on market opportunities.</p> <p>Provision of financial inputs for incentives to the rural areas.</p> <p>Provision of financial inputs for formation of associations of small entrepreneurs and production in accordance with the EU standards.</p> <p>Integrate work among local stakeholders and develop a collaborative social learning</p>	<p>Improving framework conditions and gradually build up investment to support local manufacturers on product development.</p> <p>Increase awareness, toward low emissions combustion systems.</p> <p>Increase in biomass utilization for heating.</p> <p>Adopt technical standardization and certification of heating appliances, and awareness raising of manufacturers and consumers.</p> <p>Unregistered logging must be addressed to prevent deforestation.</p>

²⁵ Albania is a signatory country in The Pan-European Ministerial Conference on the Protection of Forests in Europe https://foresteurope.org/wp-content/uploads/2016/11/Commitments_all.pdf, State of forest Europe 2015 www.foresteurope.org/docs/fullsoef2015.pdf

<p>Increase the growing stock by the afforestation of the abandoned agricultural land.</p> <p>Establish an efficient system of forest protection against the harmful biotic and abiotic factors, illegal felling, illegal occupation, illegal building and other unlawful actions.</p> <p>Establish a system for monitoring the forest health condition and viability pursuant to EU methodology.</p> <p>Upgrading knowledge and skills relevant for forest management at municipalities:</p> <ul style="list-style-type: none"> – Development of forestry training centre. – Encourage creation of a think tank of the forest sector. <p>Attracting investments, to develop brands and market placement, and to increase the proportion of finalized high quality product.</p> <p>Stimulating the application of new technologies and innovation.</p> <p>Improvement of technical capacities.</p> <p>Improve of control of timber and wood products trade.</p> <p>Improve the sustainability and competitiveness of forest enterprises.</p>	<p>with the aim of empowering local communities to steer sector development.</p> <p>Develop new policy instruments to promote sustainable use of NTFPs.</p> <p>Develop awareness policies and procedures that enhance reasonable fire prevention measures.</p>	<p>Promote thinning of forests to facilitate the growth of high value wood and increase biomass supply with the resulting residue.</p>
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Annex 1: Wood products and timber balance trade

Table 31 gives a summary overview of production and sales in Albania. It can be shown that both production data indicate no positive growth trend, which can be explained with the adoption in 2016 of the moratoria on logging.

In Table 32 the timber balance trade is provided

Table 32: Production of wood products 2010 – 2019 (FAOSTAT)

Item	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Roundwood	430.000	1.180.000	1.180.000	1.180.010	1.180.010	1.180.010	1.180.010	1.180.010	1.180.010	1.180.010
Wood fuel	350.000	1.100.000	1.100.000	1.100.000	1.100.000	1.100.000	1.100.000	1.100.000	1.100.000	1.100.000
Industrial round-wood	80.000	80.000	80.000	80.010	80.010	80.010	80.010	80.010	80.010	80.010
Sawlogs and veneer logs	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000
Other industrial round-wood	65.000	65.000	65.000	65.010	65.010	65.010	65.010	65.010	65.010	65.010
Wood chips, particles and residues	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
Wood pellets and other agglomerates			1.200	4.900	14.900	14.900	35.000	42.000	42.000	42.000
Sawn wood	8.000	8.000	8.000	8.000	8.000	8.000	8.000	8.000	8.000	8.000
Wood-based panels	11.000	11.000	11.000	11.000	11.000	11.000	11.000	11.000	11.000	11.000
Total (m ³)	964.000	2.464.000	2.465.200	2.468.930	2.478.930	2.478.930	2.499.030	2.506.030	2.506.030	2.506.030
Wood charcoal	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000
Total fibre furnishes				4.000	8.000	9.000	13.000	15.000	15.000	15.000
Recovered paper				4.000	8.000	9.000	13.000	15.000	15.000	15.000
Total (ton)	60.000	60.000	60.000	68.000	76.000	78.000	86.000	90.000	90.000	90.000

Table 33: Timber balance trade 2012-2019

	2012			2013			2014			2015			2016			2017			2018			2019			
	export	import	balance	export	import	balance	export	import	balance	export	import	balance	export	import	balance	export	import	balance	export	import	balance	export	import	balance	
Fuelwood	81.974	794	81.180	78.448	5.352	73.096	66.527	8.453	58.074	85.575	3.597	81.978	45.334	19.714	25.620	53.302	27.407	25.895	58.461	29.310	29.151	52.812	21.662	31.150	
Charcoal	1.802	15	1.787	2.213	11	2.202	831	12	819		125	-125		433	-433		31	-31	2	134	-132		106	-106	
Raw wood	2.564	4.506	-1.942	51	4.438	-4.387		24.614	-24.614		39.932	-39.932		69.834	-69.834		13.876	-13.876		26.645	-26.645		19.455	-19.455	
Wood cut into slices	357	99	258	9	56	-47			37	-37		24	-24	226	54	172		31	-31	120	145	-25		13	-13
Wood wool		0	0		0	0		0	0		0	0		0	0		0	0		2.367	-2.367		0	0	
Wooden beams for railways or trams	137	433	-296	464	660	-196		1.135	-1.135		714	-714		1.711	-1.711		497	-497		819	-819		1.109	-1.109	
Sawn timber	6.055	42.592	-36.537	5.246	42.328	-37.082	1.820	43.963	-42.143	532	40.726	-40.194	1.422	70.833	-69.411	1.634	74.623	-72.989	1.312	76.014	-74.702		89.711	-89.711	
Sheet for rhyming	171	941	-770	490	663	-173	143	895	-752		495	-495		621	-621		321	-321	16	620	-604		411	-411	
Profiled wood	395	390	5	7	1.047	-1.040	46	1.458	-1.412	84	1.442	-1.358	366	1.348	-982		1.564	-1.564	70	2.018	-1.948	241	2.079	-1.838	
Wooden plates	13	51.130	-51.117	2	39.178	-39.176	192	55.543	-55.351	740	46.649	-45.909	1.032	51.497	-50.465	11	50.184	-50.173	1.596	68.468	-66.872	1.526	58.569	-57.043	
Wood fibre panels	611	35.631	-35.020	290	32.120	-31.830	232	38.928	-38.696	1.067	37.248	-36.181	456	41.195	-40.739	470	36.580	-36.110	618	41.168	-40.550	640	46.054	-45.414	
Plywood, veneer panels		1.110	-1.110	26	1.036	-1.010	3.365	1.371	1.994	26	1.603	-1.577	35	2.564	-2.529	26	1.698	-1.672	6	3.551	-3.545	104	3.892	-3.788	
Densified wood	1.576	420	1.156	1.205	843	362	175	602	-427	4.627	174	4.453	3.374	177	3.197	3.431	34	3.397	5.436	135	5.301	5.191	118	5.073	
Wooden frames for paintings	273	138	135	144	79	65	9.282	79	9.203	182	44	138	240	73	167		90	-90	430	80	350	786	62	724	
Total export/import	95.928	138.199	-42.271	88.595	127.811	-39.216	82.613	177.090	-94.477	92.833	172.773	-79.940	52.485	260.054	-207.569	58.874	206.936	-148.062	68.067	251.474	-183.407	61.300	243.241	-181.941	

