



Economic Commission for Europe**Committee on Forests and the Forest Industry****Seventy-eight session**

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Item 6(d) of the provisional agenda

Reporting on and implementation of the 2018-2021 Warsaw Integrated Programme of Work and related decisions: Contribution to Global Forest Resources Assessment 2020 (FRA2020) and the pan-European reporting on forests and sustainable forest management process 2020**Forest Resources Assessment 2020 Key Findings: Conditions and significance of forests in the Economic Commission for Europe region****Note by the Secretariat***Summary*

Delegates will be updated on the status and results of the FAO Global Forest Resources Assessment (FRA) 2020 and the joint ECE, FAO and Forest Europe Pan-European reporting on forests and sustainable forest management (SFM) 2020.

Delegates will also be informed about the FAO FRA 2020 global key findings with the focus on the ECE region as well as the means for storage and dissemination of the information collected.

The Committee is invited to:

- (a) Discuss the results of the 2020 cycle of the global and regional reporting on forests and SFM;
- (b) Comment on the processes and procedures of the 2020 cycle of the global and regional reporting on forests and SFM;
- (c) Provide follow up and advise on the dissemination process.



I. Introduction

1. FRA 2020 provides a global overview of the state of forests and forest management trends since 1990. Both FRA 2020 and the joint ECE, FAO and Forest Europe Pan-European reporting on forests and sustainable forest management (SFM) 2020 were carried out in close collaboration between the FAO, UNECE and Forest Europe, with the support of forest-related organizations and processes.
2. This document, which was developed in cooperation with the FAO FRA Secretariat, is based on “Global Forest Resources Assessment 2020 Key Findings” (FAO 2020) which are further related to the trends in the ECE region¹.
3. Countries of the region were organized into following groupings: ECE-West², ECE-Central³, ECE-South East⁴ and the Russian Federation. These groupings were created based on their geographical location and abundance of forest resources. They are not based upon any economic, political or any other criteria.

II. Forest Resources Assessment 2020 Key Findings – Global and Economic Commission for Europe trends

Forests cover nearly one-third of the land globally; over forty percent of the world’s forests are in the ECE region.

4. “The world has a total forest area of 4.06 billion hectares (ha), which is 31 percent (%) of the total land area. This area is equivalent to 0.52 ha per person – although forests are not distributed equally among the world’s peoples or geographically. The tropical domain has the largest proportion of the world’s forests (45 percent), followed by the boreal, temperate and subtropical domains. More than half (54 percent) of the world’s forests is in only five countries – the Russian Federation, Brazil, Canada, the United States of America and China” (FAO 2020).
5. Forests in the ECE region cover 1.71 billion ha (42% of the global total). The region has a higher rate of forest cover (37%) and more forest per person (1.4 ha), than the global average. Boreal forest is the most common (63%) followed by temperate forests (29%), while 7% were classified as sub-tropical forests. The Russian Federation, Canada, and the United States of America account for 86% of the ECE region’s forest area.

The world’s forest area is decreasing, but the rate of forest loss has slowed – the forest area in the ECE region continues to grow, however, at a slower pace.

6. “The world has lost 178 million ha of forest since 1990, which is an area about the size of Libya. The rate of net forest loss decreased substantially over the period 1990–2020 due to a reduction in deforestation in some countries, plus increases in forest area in others through afforestation and the natural expansion of forests. The rate of net forest loss declined from 7.8 million ha per year in the decade 1990–2000 to 5.2 million ha per year in 2000–2010 and 4.7 million ha per year in 2010–2020. The rate of decline of net forest loss slowed in the most recent decade due to a reduction in the rate of forest expansion” (FAO 2020).
7. In contrast to global trends, forest area in the ECE region has increased in the last three decades, growing by about 33.5 million ha. The rate of growth increased from 0.9

¹ Note that numbers may not sum to the totals indicated and percentages may not equal 100 due to rounding. Not all countries reported on all parameters.

² Canada and the United States of America.

³ Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine and the United Kingdom.

⁴ Armenia, Azerbaijan, Cyprus, Georgia, Israel, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Turkmenistan and Uzbekistan.

million ha per year in 1990-2000 to almost 1.8 million ha per year in 2000-2010 but then dropped to 0.6 million ha in 2010-2020. Competition for other land use was the main factor cited for this slowing.

Africa has the highest net loss of forest area – ECE Central reported the biggest net growth of forest area in the ECE region.

8. “Africa had the largest annual rate of net forest loss in 2010–2020, at 3.9 million ha, followed by South America, at 2.6 million ha. The rate of net forest loss has increased in Africa in each of the three decades since 1990. It has declined substantially in South America, however, to about half the rate in 2010–2020 compared with 2000–2010. Asia had the highest net gain of forest area in 2010–2020, followed by Oceania and Europe. Nevertheless, both Europe and Asia recorded substantially lower rates of net gain in 2010–2020 than in 2000–2010. Oceania experienced net losses of forest area in the decades 1990–2000 and 2000–2010” (FAO 2020).

9. All groupings contributed to the net growth of the forest area. ECE-Central recorded the highest absolute increase to forest area over the last three decades (16.8 million ha), followed by the Russian Federation (6.4 million ha), ECE West (6.0 million ha) and ECE South-East (4.3 million ha). ECE South-East recorded the highest growth as a share of existing forest area - 0.4% by year. While the rate of the forest area growth continued to increase in the ECE South-East over the last three decades, all other groupings recorded lower rates of net gain in 2010-2020 compared not only to 2000-2010 but also to 1990-2000.

Deforestation continues, but at a lower rate – countries of the ECE region also report deforested areas, however outnumbered by forest expansion.

10. “An estimated 420 million ha of forest has been lost worldwide through deforestation since 1990, but the rate of forest loss has declined substantially. In the most recent five-year period (2015–2020), the annual rate of deforestation was estimated at 10 million ha, down from 12 million ha in 2010–2015” (FAO 2020).

11. Deforestation in the ECE region was about 6.4 million ha since 1990 but forest expansion (39.9 million ha) was far greater. Deforestation in the region ranged from 1.5 million ha in 1990-2000 to 3.1 million ha in 2010-2020.

Both globally and in the ECE region, more than 90% of the world’s forests have regenerated naturally.

12. “Ninety-three percent (3.75 billion ha) of the forest area worldwide is composed of naturally regenerating forests and 7 percent (290 million ha) is planted. The area of naturally regenerating forests has decreased since 1990 (at a declining rate of loss), but the area of planted forests has increased by 123 million ha. The rate of increase in the area of planted forest has slowed in the last ten years” (FAO 2020).

13. 93% of forests in the ECE region are naturally regenerating, which was significantly higher before 1990. The area of planted forest (7% of the total) increased by about 44 million ha over the last decade, with most of this growth occurring in the ECE West.

Plantations account for about 3% of the world’s forests – while they stand for only 1% in the ECE region.

14. “Plantation forests cover about 131 million ha, which is 3 percent of the global forest area and 45 percent of the total area of planted forests. The highest share of plantation forest is in South America, where this forest type represents 99 percent of the total planted-forest area and 2 percent of the total forest area. The lowest share of plantation forest is in Europe, where it represents 6 percent of the planted forest estate and 0.4 percent of the total forest area” (FAO 2020).

15. FRA 2020 defines plantations as intensively managed forests, composed of one or two species, even aged, planted with regular spacing, and established mainly for productive purposes. Plantations are about 45% of the total global area of planted forests but only 17%

in the ECE region. Plantation forests cover 21 million ha of the ECE, with a 10 million ha increase from 1990 and most (14 million) are located in ECE West.

More than 700 million ha of forest is in legally established protected areas – 123 million ha of them are in the ECE region.

16. “There is an estimated 726 million ha of forest in protected areas worldwide. Of the six major world regions, South America has the highest share of forests in protected areas, at 31 percent. The area of forest in protected areas globally has increased by 191 million ha since 1990, but the rate of annual increase slowed in 2010–2020” (FAO 2020).

17. There are 123 million ha of forests in protected areas in the ECE region (about 7% of the region’s forest) - significantly lower than the global average. Almost half is located in the ECE-West (61 million ha) but ECE South-East has the highest share of protected forests at 37%. The area of protected forests in the ECE has increased by almost 56 million ha, and has almost doubled in the last three decades, with growth of 3.2% per year in the 2000-2010 period slowing to 0.9% per year the last decade.

Primary forests cover about 1 billion ha – nearly half of them are in the ECE region.

18. “The world still has at least 1.11 billion ha of primary forest – that is, forests composed of native species in which there are no clearly visible indications of human activities and the ecological processes have not been significantly disturbed. Combined, three countries – Brazil, Canada and the Russian Federation – host more than half (61 percent) of the world’s primary forests. The area of primary forests has decreased by 81 million ha since 1990, but the rate of loss more than halved in 2010–2020 compared with the previous decade” (FAO 2020).

19. Nearly half of the world’s primary forests (0.54 billion ha) are found in the ECE region. Two groupings dominate this statistic: ECE West with 0.28 billion ha and the Russian Federation with 0.26 billion ha of primary forests. Three of the groupings (ECE South-East, ECE West and ECE Central), which provided data for the three decades, reported a 5.2 million ha increase of primary forests, mostly the result of the restoration of natural characteristics of these forests.

More than 2 billion ha of forest have management plans – 1.4 billion ha of these forests are in the ECE region.

20. “Most of the forests in Europe have management plans; on the other hand, management plans exist for less than 25 percent of forests in Africa and less than 20 percent in South America. The area of forest under management plans is increasing in all regions – globally, it has increased by 233 million ha since 2000, reaching 2.05 billion ha in 2020” (FAO 2020).

21. Almost 84% of forests in the region (1.4 billion ha), are covered by management/protection plans. The Russian Federation reported that all forests have management plans, ECE South-East (91%) and ECE Central (78%). Despite the already high coverage, the area of forests covered by management plans has continued to increase by 65.7 million ha since 1990, primarily due to the increase reported by countries of the ECE West.

Fire is a prevalent forest disturbance in the tropics – the ECE region struggles with forest damage caused by fires, insects, and diseases.

22. “Forests face many disturbances that can adversely affect their health and vitality and reduce their ability to provide a full range of goods and ecosystem services. About 98 million ha of forest were affected by fire in 2015; this was mainly in the tropical domain, where fire burned about 4 percent of the total forest area in that year. More than two-thirds of the total forest area affected was in Africa and South America. Insects, diseases and severe weather events damaged about 40 million ha of forests in 2015, mainly in the temperate and boreal domains” (FAO 2020).

23. The ECE region reported almost 11 million ha of forests affected by fires in 2015, most of which are from the ECE West subregion (8 million ha). Forest area damaged by fire increased slightly during 2000-2017, with peaks in 2015 and 2017.

24. Forest damaged by insects, diseases, and severe weather events in 2015 were globally 40 million ha, with over 33 million ha in the ECE region. Of those 33 million ha of damaged forest area in the ECE region, over 20 million ha of damage is caused by insects (mostly in the ECE-West); 4.5 million ha by diseases; 3.2 million by extreme weather events, and; 5 million by other causes.

The world's forests are mostly publicly owned, but the share of privately-owned forests has increased since 1990 – the share of publicly owned forests in the ECE region is higher than the global average, but their management is more diverse.

25. “Seventy-three percent of the world's forests is under public ownership, 22 percent is privately owned, and the ownership of the remainder is categorized as either “unknown” or “other” (the latter mainly comprising forests where ownership is disputed or in transition). Public ownership is predominant in all regions and most subregions. Of all regions, Oceania, North and Central America and South America have the highest proportions of private forests. Globally, the share of publicly owned forests has decreased since 1990 and the area of forest under private ownership has increased” (FAO 2020).

26. The share of publicly owned forests in the ECE region (almost 82%) is higher than the global average but this number varies by groupings. Almost all forests of the Russian Federation and ECE South-East are publicly owned, while in the ECE Central, 45% of forests are publicly owned, a decrease of almost 7% since 1990. In absolute values, the area of public and private forests has increased (by 9 and 20 million ha respectively) since 1990.

27. “Public administrations hold management rights to 83 percent of the publicly owned forest area globally. Management by public administrations is particularly predominant in South America, where it accounts for 97 percent of management responsibility in publicly owned forests. The share of public administration management rights has decreased globally since 1990, with an increasing share of publicly owned forests managed by private businesses, entities and institutions and by indigenous and tribal communities” (FAO 2020).

28. Seventy-eight percent of publicly owned forests are managed by public administration in the ECE region, compared to 96% reported under this category in 1990. This share is highest in the ECE South-East (98%) and the lowest in the Russian Federation, where almost 30% of public forests are managed by private businesses, entities and institutions.

While the world's forest growing stock is declining, it has increased in the ECE region over the last three decades.

29. “The world's total growing stock of trees decreased slightly, from 560 billion m³ in 1990 to 557 billion m³ in 2020, due to a net decrease in forest area. On the other hand, growing stock is increasing per unit area globally and in all regions; it rose from 132 m³ per ha in 1990 to 137 m³ per ha in 2020. Growing stock per unit area is highest in the tropical forests of South and Central America and West and Central Africa. The world's forests contain about 606 gigatonnes of living biomass (above- and below-ground) and 59 gigatonnes of dead wood. The total biomass has decreased slightly since 1990 but biomass per unit area has increased” (FAO 2020).

30. Growing stock has been increasing in the ECE region over the last three decades, primarily because of harvest below the increment and also because forest area increased. The total volume of wood is 206 billion m³ in 2020 (18 billion more than in 1990). Growing stock increased from 111 m³ per ha to almost 120 m³ per ha in the same period. The ECE region contains 31% of the global living biomass (187 gigatonnes) and almost 60% of dead wood (35 gigatonnes), most of which were in ECE West and the Russian Federation.

31. During this same period, almost 39 billion m³ of timber were harvested in the ECE, of which 32.7 billion m³ were used for industrial purposes and 6.3 billion m³ for energy. Most of this harvest came from ECE West (47%), followed by ECE Central (37%). The volume of wood harvested in 2019 is lower than thirty years ago (1.51 billion m³ in 1990).

Total forest carbon stock is decreasing – volume of carbon stored in the forest ecosystems in the ECE region has increased since 1990.

32. “Most forest carbon is found in the living biomass (44 percent) and soil organic matter (45 percent), with the remainder in dead wood and litter. The total carbon stock in forests decreased from 668 gigatonnes in 1990 to 662 gigatonnes in 2020; carbon density increased slightly over the same period, from 159 tonnes to 163 tonnes per ha” (FAO 2020).

33. Almost half of the global forest carbon (311 gigatonnes) originates from forests in the ECE region, with most of the carbon is stored in soil and litter (55% and 10% respectively), while only 24% is sequestered in the living biomass. The total volume of carbon stored, as well as its density, increased in the last three decades (from 174 tonnes to 182 tonnes per ha), primarily because of growth of above ground living biomass.

About 30% of all forests are used primarily for production - most of them are located in the ECE region.

34. “Globally, about 1.15 billion ha of forest is managed primarily for the production of wood and non-wood forest products. In addition, 749 million ha is designated for multiple use, which often includes production. Worldwide, the area of forest designated primarily for production has been relatively stable since 1990 but the area of multiple-use forest has decreased by about 71 million ha” (FAO 2020).

35. In the ECE region, around 0.75 billion ha of forests are managed primarily for the production of wood and non-wood forest products (about 45% of forest area). The majority of forest area designated as multiple use (0.30 billion ha) is located in the ECE West. There has been a slight increase of forest area designated for the production of wood and non-wood products, however, most forest use designations have changed little since 1990.

About ten% of the world’s forests is allocated for biodiversity conservation – a quarter of them in the ECE region.

36. “Globally, 424 million ha of forest is designated primarily for biodiversity conservation. In total, 111 million ha has been so designated since 1990, of which the largest part was allocated between 2000 and 2010. The rate of increase in the area of forest designated primarily for biodiversity conservation has slowed in the last ten years” (FAO 2020).

37. In the ECE region 103 million ha of forests are designated primarily for biodiversity conservation, with an increase of 46 million ha after 1990 (mostly from 2000-2010). Most is located in the ECE-West subregion (59%).

The area of forest designated primarily for soil and water protection is increasing – over half of them are in the ECE region.

38. “An estimated 399 million ha of forest is designated primarily for the protection of soil and water, an increase of 119 million ha since 1990. The rate of increase in the area of forest allocated for this purpose has grown over the entire period but especially in the last ten years” (FAO 2020).

39. Over half of all forests designated primarily for soil and water protection are in the ECE region (206 million ha), most (149 million ha) are located in the Russian Federation. The area of protective forests has grown by almost 92% since 1990, with 2010-2020 growing the most.

More than 180 million ha of forest is used mainly for social services – 39 million ha of them are in the ECE region.

40. “An area of 186 million ha of forest worldwide is allocated for social services such as recreation, tourism, education research and the conservation of cultural and spiritual sites. The area designated for this forest use has increased at a rate of 186 000 ha per year since 2010” (FAO 2020).

41. The ECE region has only about 39 million ha of forests being managed primarily for the provision of social services; decreasing slightly since 1990.

III. The process

42. FAO has been monitoring the world's forests in five to ten-year intervals since 1946. Recent Global Forest Resources Assessments (FRA) have been produced every five years to monitor the state of world's forests. Since the beginning of this process, the ECE and FAO have been cooperating on forest reporting to support the countries of the ECE region.

43. The cooperation between FAO and ECE successfully continued during the 2020 cycle, as the FRA reporting was complemented by the Joint Forest Europe/ECE/FAO reporting on forests and SFM in the pan-European region. All data collection processes were carried out in a coordinated way and jointly undertaken by the FAO FRA Secretariat, the Forest Europe Liaison Unit Bratislava and the Joint ECE/FAO Forestry and Timber Section.

44. The ECE, FAO and Forest Europe worked together on the development of reporting formats, terms, definitions, classifications and guidelines for the 2020 reporting, which reduced inconsistencies between these two processes to the minimum.

45. To reduce the reporting burden, the data for both processes were collected simultaneously through a common platform, which was also used to provide feedback. However, two different data entry interfaces were used (due to technical and organizational issues). National correspondents provided data for both processes, assisted by experts designated by ECE, FAO and Forest Europe.

46. The Joint Section actively supported the FRA Secretariat and member States in the preparation and the organization of two global events:

- "Expert Consultation on FRA" (June 2017 in Joensuu, Finland), which laid the basis for the 2020 global reporting, and
- "FRA 2020 Technical meeting of National Correspondents and CFRQ partners" (March 2018 in Toluca de Lerdo, Mexico), where FRA 2020 was launched.

47. The global events were followed by regional capacity building activities:

- Forest Resource Assessment (FRA) 2020 Regional Workshop for countries of Europe, the Caucasus and Central Asia (April 2018 in Geneva, Switzerland), organized by ECE, FAO and Forest Europe;
- Technical Workshop for experts from the Caucasus and Central Asia (Tbilisi, Georgia, December 2018), organized by ECE and FAO.

48. The UNECE/FAO Team of Specialists on Monitoring SFM played a substantial role in the development, communication and implementation of the integrated reporting (as national correspondents, authors, reviewers) and during the meetings held during the 2020 reporting cycle in:

- Tromsø, Norway, in May 2017;
- Tbilisi, Georgia, in February 2018;
- Vienna, Austria, in November 2018;
- Copenhagen, Denmark, in December 2019.

49. In addition, the Joint Section took part in the FAO FRA Advisory Group and Forest Europe's Advisory Group on the State of Europe's Forests 2020.

50. The data collection process was completed in mid-2019, with 50 out of 56 ECE countries providing FRA reports (the highest rate ever and eight more than during the 2015 cycle). Desk studies were prepared to cover the countries that had not reported.

51. Regional data will be made available through a dedicated interactive platform together with the global database, streamlining the storage and dissemination of global and regional

forest information. The integrated database is a key step towards a fully integrated data collection (subject to the approval by member States).

52. The Joint Section would like to express its gratitude to the FAO FRA Secretariat, the Forest Europe Liaison Unit Bratislava, national and international experts involved in the process for their cooperation on this joint reporting, as well as to the Russian Federation and the Swiss Confederation for their financial support.

IV. Points for consideration

53. The Committee may wish to:

- (a) Discuss the results of the 2020 cycle of the global and regional reporting on forests and SFM in the ECE region;
 - (b) Comment on the processes and procedures of the 2020 cycle of the global and regional reporting on forests and SFM;
 - (c) Provide follow up and advise on the dissemination process.
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