



HOW BIOENERGY HARMS BIODIVERSITY

THE FACTS

Scientists, academics, environmental and social NGOs, and communities living near forests and power plants have all raised concerns about bioenergy, yet the burning of forest wood for energy keeps increasing.

The knock-on effects are dramatic.

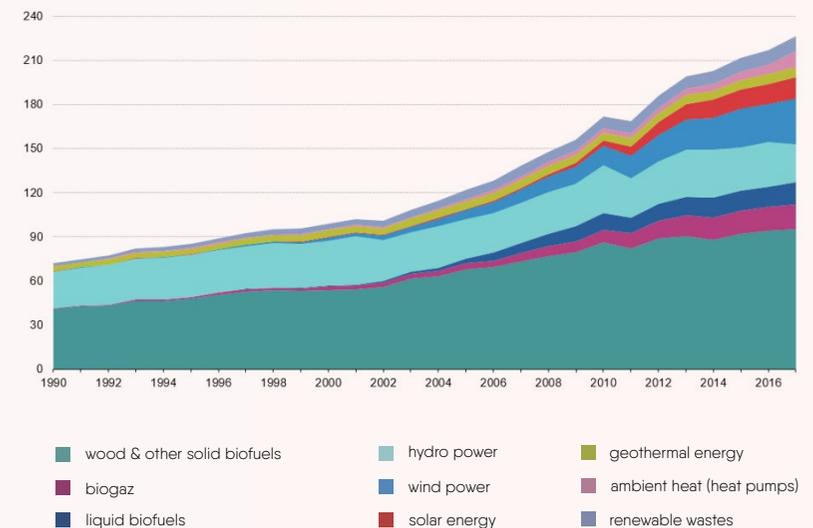
Not only does this increase carbon dioxide in the atmosphere, it also intensifies logging and reduces wildlife habitats. The European Environment Agency's (EEA) 2020 report '[The European Environment: State and Outlook](#)' states that the numbers of common species of birds and butterflies are deteriorating across Europe.

Intensive logging and the removal of essential deadwood are damaging life support systems and forests' ability to withstand [temperature increases, storms, fires, pests and more](#). This factsheet shows the devastating impacts that bioenergy-driven intensive forest management is having on wildlife and biodiversity in the EU.

FACT 1 • BIOENERGY USE IS HIGH AND RISING

The burning of wood and other solid fuels (energy crops, municipal waste) has risen dramatically since 1990. **Between 2000 and 2013, the use of bioenergy increased by 87 %.** The share of primary wood (wood that comes straight out of the forest) used as bioenergy is at an all time high, making up approximately 50 % of all woody biomass.

Source : Eurostat 2019



FACT 2 • INCREASED DEMAND FOR FOREST BIOMASS MEANS MORE INTENSIVE FORESTRY

According to the [European Commission](#): "forestry activities are the second largest pressure category reported for species". The 2020 EEA report reveals that across Member States, **forestry represents 11 % of the pressure being put on habitats**. [This graph](#) shows that clearcutting and removal of old and dead trees are having the most harmful effect on wildlife habitats.

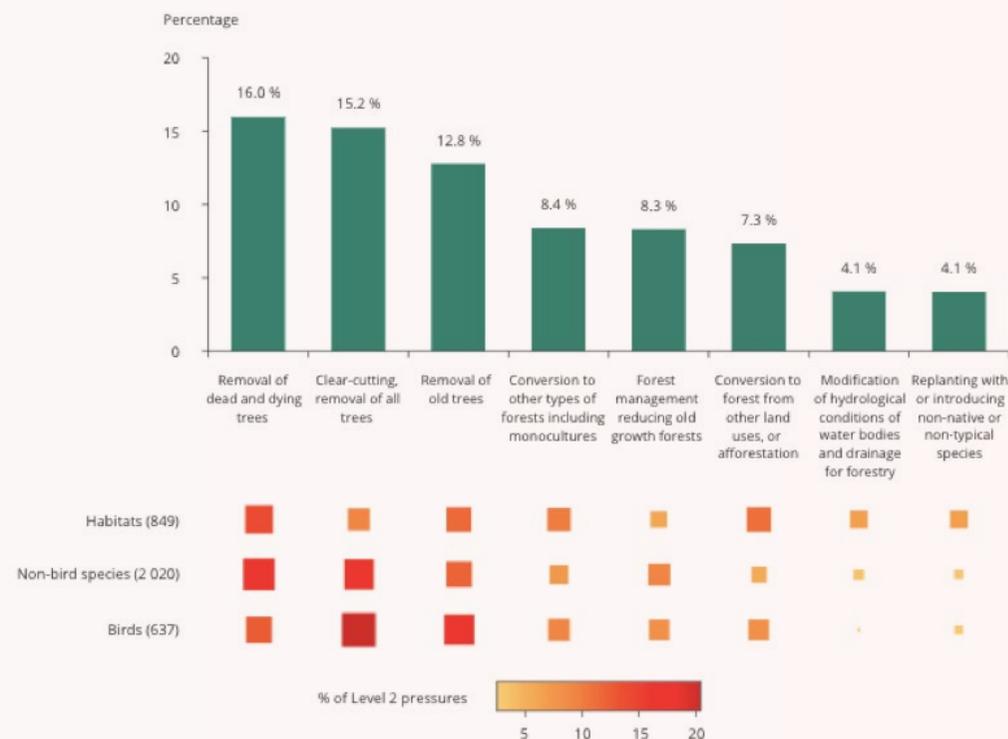
While logging is intensifying, [rotation periods are getting shorter](#). Logged forests are not allowed to regrow properly, meaning that because there are fewer old trees which lose branches or fall naturally, there is [less dead wood on the forest floor](#). Dead wood is essential for the whole food chain as it is a [nutrient for plants, fungi and insects](#). Even when trees are allowed to age enough to drop dead wood, it is [sometimes removed](#).

FACT 3 • MORE INTENSIVE FORESTRY MEANS LESS BIODIVERSITY

- The higher the logging rates, the more **harm is done** to forest **biodiversity**. In 2020, countries including Finland, France, Hungary, Slovenia and Spain reported [a large decrease](#) in threatened forest bird species.
- Many forest-dependent species such as the Lesser Spotted Woodpecker **cannot survive** without [dead and old trees](#).
- **79 % of Member States' assessments of their forest habitats for the period 2013-2018 showed that forests are threatened by forestry activities.**

TABLE OF IMPACTS THAT LOGGING ACTIVITIES HAVE ON BIODIVERSITY

Source: Article 12 and Article 17 Member States' report and assessments.
Graph taken from p.76 of EEA [Report No 10/2020 'State of Nature in the EU'](#)



Notes: The size of the squares and their shade reflect the percentage of pressures for each group: bigger darker squares indicate higher percentages. Total number of reports is given in parentheses.

FACT 4 • PROTECTED AREAS AND PRIMARY FORESTS ARE AT RISK

80 % of EU forests protected under the Habitats Directive are in an 'unfavourable' condition with either 'stable', 'deteriorating' or 'unknown' trend, a further 5 % are in an 'unfavourable' condition with an 'improving' trend, and only 15 % are in a 'favourable' condition.

FACT 5 • BURNING OF WHOLE TREES IS INCREASING

Tree trunks, tree tops, branches and other wood taken directly from the forests (primary woody biomass) makes up at least 37 % of the wood used for EU energy production, though the real figure is closer to 50 %, according to the JRC. The biomass industry claims that large, old trees are sometimes burnt as they are too unevenly shaped to be used by the timber industry. The solution is not to burn them, it is to put in place safeguards so that they are not logged in the first place.

FACT 6 • PLANTATIONS AREN'T FORESTS

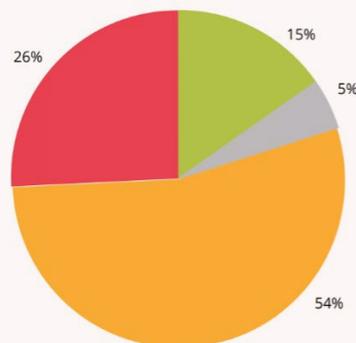
The tree plantations which often replace biodiverse primary forests (14.5 million hectares of Europe is covered in plantations) do not support the same range of wildlife as forests which have trees of different species, ages and dead wood.

CONSERVATION STATUS (LEFT) AND CHANGES IN CONSERVATION STATUS (RIGHT) FOR ANNEX 1 HABITATS ASSOCIATED WITH WOODLAND AND FOREST ECOSYSTEM

Source: EEA, 2015b, Article 17 reports and assessments.

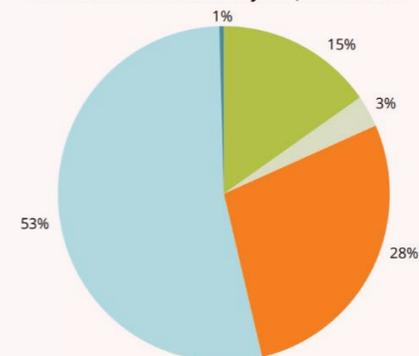
Notes: The total number of assessments is 229.

Conservation status of habitats associated with woodland and forest ecosystem, at EU-27 level



- favorable
- unknown
- unfavorable-inadequate
- unfavorable-bad

Change in conservation status of habitats associated with woodland and forest ecosystem, at EU-27 level



- favorable assessments
- improved assessments
- assessments which have deteriorated
- unfavourable and unknown assessments that did not change
- assessments that became 'unknown'



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