



We are in the midst of a biodiversity crisis, with scientists predicting that one million species face extinction, many within decades, primarily due to changes in land and sea use such as forest destruction. Since 1970, the planet has lost 60 percent of its vertebrate wildlife populations.

Birds are among the wildlife facing staggering declines, with nearly 40 percent of bird species throughout the world in decline. Bird populations in the U.S. and Canada have dropped by 29 percent since 1970, signifying 2.9 billion birds lost in almost 50 years.

Chief among the threats to global bird populations is forest loss and degradation, including for wood pellets to create biomass energy. Biomass is derived from chopping down forests to make wood pellets that are then burned in power stations. While some bill it as a 'renewable energy source' and the energy sector counts it as zero emissions because trees regrow, it takes many decades – if not centuries – for trees to regrow enough to recover their original levels of carbon sequestration and ecosystem productivity.

Unfortunately, in 2019, the UK imported 8.5 million metric tons of wood pellets from overseas forests—more than any other country in the world. At the same time, it spent £1.5 billion on bioenergy subsidies, mainly to the UK's largest bioenergy power station, Drax, making it Europe's top subsidiser of bioenergy. Wood pellets entering the UK energy market come from countries including the U.S., Latvia, Lithuania, Estonia, Canada, and Brazil. In doing this, the UK is contributing to biodiversity loss and devastating declines in bird populations.





BIOMASS HARMS BIRDS AND THEIR HOMES

Removing trees, branches, roots, and deadwood (e.g. stumps) from the forest for biomass and other purposes eradicates habitat, including nesting and breeding grounds, for thousands of bird species the world over. These activities also diminish food on which birds rely, such as insects, fish, and aquatic invertebrates.

Yet too often, logging for biomass occurs in some of the planet's most ecologically-diverse forests. These forests contain some of the oldest trees, which are home to countless species and serve as vast carbon sinks.

While the biomass industry often claims that the wood pellets it burns are made of residual products from logging, relying on terms like 'wastes and residues' or 'unmerchantable wood', roughly half of the biomass burned for electricity in the UK comes from whole trees, and whole trees represent upwards of 60 percent of the biomass coming into the UK from its largest supply region: the U.S. Southeast.

Trees going to wood pellet manufacturing facilities are routinely logged using the most unsustainable practices, including clearcutting. Indeed, investigations show that some of the world's largest wood pellet manufacturing companies, including Enviva and Graanul Invest, buy their wood from companies that are clearcutting pristine forests in the U.S. Southeast, Estonia, Latvia, and Canada. Many of these forests are even protected to varying degrees under national and/or regional laws.

UNITED STATES

In the Southeast United States' North American Coastal Plain, where most of the wood for UK biomass is logged, the cutting of hardwood swamps and other native forests – often by clearcutting – is further imperiling declining bird populations. Indeed, at least 30 species of birds dependent on this region's forests are the focus of conservation efforts, including protections under the U.S. Endangered Species Act, like the Wood Stork, the Bachman's Warbler, and the Ivory-billed Woodpecker. Across its range, Cerulean Warblers are declining at one of the fastest rates of any North American songbird, leading the International Union for Conservation of Nature (IUCN) to list it as Near Threatened. The distinct Wayne's subspecies of Black-throated Green Warbler

only occurs in the hardwood and cypress wetland forests in the coastal areas of the Carolinas and Virginia, a target sourcing area for the wood pellet industry. The bottomland hardwood forests of North Carolina, a key sourcing state for wood pellet manufacturer and top Drax supplier Enviva, are home to over 10 percent of the global population of certain bird species including the Prothonotary Warbler, the Yellowthroated Warbler, and the Acadian Flycatcher. Other birds impacted by biomass in this region include the Chimney Swift and Rusty Blackbird, both of which are threatened with extinction per the IUCN.





Black Throated Green Warbler



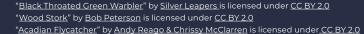
Wood Stork



Acadian Flycatcher



Chimney Swift



CANADA

UK demand for biomass is also damaging Canada's forests, including the boreal the largest intact forest in the world and a stronghold of our planet's bird life, supporting large portions of the global population of many species. Indeed, the North American boreal forest supports more than 50 percent of the global populations of 96 bird species, including land birds (e.g. Connecticut Warbler, Swamp Sparrow, Alder Flycatcher, Northern Waterthrush), waders (e.g. Greater and Lesser Yellowlegs, Spotted Sandpiper, Wandering Tattler, Whimbrel, Hudsonian Godwit, Short-billed Dowitcher, and Rednecked Phalarope), and waterbirds (e.g. Horned Grebe, American Bittern, Yellow Rail, and Mew Gull). Many of these species are of conservation concern, protected under national or regional laws. Scientists have found that many other species will need to shift their ranges due to climate change and will rely on intact boreal habitat. If the habitat is destroyed, they could undergo even steeper population declines.

Billions of birds, representing more than 300 species, choose Canada's boreal forest as their nesting place and home during the summer months, drawn to the boreal by the prime breeding habitat and abundance of insects and fish that thrive in the area's numerous wetlands, lakes, and rivers.

These include many bird species that qualify as threatened with extinction on the IUCN Red List like the Whooping Crane, Evening Grosbeak, and Rusty Blackbird, the latter of which has declined by ninety percent. After eating their fill and raising their broods in the boreal, in one of the world's largest migrations, 90 percent of the country's total bird population—up to 5 billion birds—leave each fall for wintering grounds in the U.S. and the tropics. Some, like the Solitary Sandpiper and Canada Warbler fly immense distances, traveling from regions as remote as South America and Antarctica.

The boreal also serves as a key migratory stopover point for millions of waders, like the Red Knot, with about 75 percent of all regularly occurring North American wader species using boreal wetlands.



Alder Flycatcher

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"Spotted Sandpiper" by Becky Matsubara is licensed under CC BY 2.0



Spotted Sandpiper





LATVIA, LITHUANIA AND ESTONIA

Demand for biomass in the UK and elsewhere has increased logging in Latvia, Lithuania, and Estonia, harming the countries' forests and the birds that depend on them. Clearcutting is the dominant logging method in these countries, making up 80% of total final felling in Latvia and 95% of total felling in Estonia. Companies like Graanul Invest - Europe's biggest pellet producer and the largest pellet exporter from Latvia – and its subsidiaries, have even clearcut incredibly rare 100-year old forests located in Natura 2000 reserves, which are supposed to be highly protected. Once a forest has been clearcut, it takes many decades - if not centuries – before it can recover its original levels of biodiversity, carbon stores, and productivity.

Outside of the U.S., Latvia is the biggest supplier of wood pellets from part or whole trees to Drax. The country is suffering staggering bird losses, which are exacerbated by logging for biomass. One of Latvia's most charismatic woodland birds – the Black Stork – declined by 60% between 1989 and 2018. Between 2005 and 2018, the Hazel Grouse and the Redwing both faced precipitous declines of 79% and approximately 20%, respectively. Both species are specially protected in the EU and have been included in Annex I of the Birds Directive, meaning

that any actions damaging their habitat must be avoided under EU legislation.

In Estonia, companies are ploughing down some of the country's most sensitive and ecologically-diverse forests for biomass. wreaking havoc on bird populations. Indeed, Estonia's woodland birds are plummeting at a rate of 50,000 breeding pairs a year. As in Latvia, this is occurring in Natura 2000 areas, which are often partially owned by logging companies. For example, investigations show that Valga Puu, a subsidiary of Graanul, has clearcut the equivalent of about 17 football fields in Estonia's Haanja Nature Reserve—a Natura 2000 area. This has further imperiled the area's 29 protected species, including the Black Stork, Lesser-spotted Eagle, and Corncrake. The Black Grouse, Goshawk, Capercaillie, Tree Pipit, and Woodlark are other Estonian bird species highly impacted by logging.

In Lithuania, commercial activity is prohibited in only 1.1 percent of forests, leading logging to nearly double between 1990 and 2016. The Lithuanian Government has even faced criticism from the European Commission for allowing increased logging in regional and national forest parks to satisfy wood pellet demand. For example,

Lithuania allows logging in Labanoras Park, a Natura 2000 area relied on by numerous bird species listed as endangered in Lithuania's Red Data Book like the Pygmy Owl, Whitetailed Eagle, Black Grouse, and White-backed Woodpecker. Punios Šilas Nature Reserve – one of Europe's most important Natura 2000 sites – has also faced increased logging for biomass. The reserve, which includes 40-meter-high ancient forests, is home to more than 50 bird species classified as endangered in Lithuania.



BRAZIL

Drax also imports wood from monoculture tree plantations in Brazil's Rio Grande do Sul region, negatively impacting the area's grasslands and unique birdlife. Monoculture tree plantations in Brazil have also been associated with the displacement of indigenous and traditional communities, deforestation, water and soil depletion, and pollution. Combined with other factors, this has led to the local extinction of several grassland bird species, including the Bearded Tachuri, Ochre-breasted Pipit, and the endemic Tropeiro Seedeater, the latter two of which are threatened with extinction on the IUCN Red List. Other threatened species that may be affected by conversion of grasslands to plantations include Sharp-tailed Grass Tyrant, Bay-capped Wren Spinetail, Buff-breasted Sandpiper, Black-chested Buzzard Eagle, Cinereous Harrier, Chestnut Seedeater, Yellow Cardinal, and Saffron-cowled Blackbird, the last two of which are listed as Endangered on the IUCN Red List.



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[&]quot;<u>Black-chested Buzzard Eagle</u>" by <u>Félix Uribe</u> is licensed under <u>CC BY-SA 2.0</u>

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REFERENCES

- · World Wildlife Fund, The Living Planet Report 2018: Aiming Higher, https://www.wwf.org.uk/sites/default/files/2018-10/wwfintl_livingplanet_full.pdf.
- · BirdLife International, State of the World's Birds, 2018, https://www.birdlife.org/sites/default/files/attachments/BL_ReportENG_V11_spreads.pdf.
- Kenneth Rosenberg, et al., "Decline of the North American avifauna," Science 366, no. 6461, October 2019: 120-124, https://science.sciencemag.org/content/366/6461/120.
- Niel Harrison, "UK Wood Pellet Market: Past, Present, and Future," Biomass Magazine, March 21, 2020, http://biomassmagazine.com/articles/16876/ uk-wood-pellet-market-past-present-and-future.
- Cut Carbon Not Forests, BURNOUT 2020: The UK is Now the Top Subsidiser of Bioenergy in Europe, 2020, https://www.cutcarbonnotforests.org/wp-content/uploads/2020/12/BURNOUT-2020_EU-Clean-Energy-Policies-Lead-to-Forest-Destruction.pdf.
- Southern Environmental Law Center (SELC), Burning Trees for Power: The Truth about Woody Biomass, Energy & Wildlife, 2018, https://www.southernenvironment.org/uploads/words_docs/Biomass_Biodiversity_white_paper.pdf.
- Estonian Fund for Nature, Hidden Inside the Wood Pellet: Intensive logging impacts in Estonian and Latvian forests, 2020, https://media.voog.com/0000/0037/1265/files/Biomass report ENG%20 2020.pdf.
- · STAND.earth, Canada's Growing Wood Pellet Export Industry, https://www.stand.earth/sites/stand/files/report-canada-wood-pellet-industry.pdf.
- Audubon North Carolina, BirdLife International, Dogwood Alliance, & SELC, Wood Pellet Industry Destroys Forests and Harms Birds of Conservation Concern, https://www.southernenvironment.org/uploads/words_docs/Wood_Pellets_Birds_of_Conservation_Concern_Handout.pdf.
- Edward Cheskey, Jeffrey Wells & Susan Casey-Leftkowitz, Birds at Risk: The Importance of Canada's Boreal Wetlands and Waterways, Boreal Songbird Initiative, Nature Canada & NRDC, 2011, https://www.nrdc.org/sites/default/files/birdsatrisk.pdf.
- Boreal Songbird Initiative, Boreal Forest Rescue: Conserving North America's Bird Nursery in the Face of Climate Change, 2018, https://www.borealbirds.org/sites/default/files/publications/report-boreal-birds-climate.pdf.
- NRDC, Cutting It Close: How Unsustainable Logging in Canada's Boreal Forest Threatens Indigenous Rights, Wildlife, and the Global Climate, 2018, https://www.nrdc.org/sites/default/files/cutting-it-close-logging-canadas-boreal-report.pdf.
- Hazel Sheffield, "Carbon-neutrality is a fairy tale": how the race for renewables is burning Europe's forests," The Guardian, January 14, 2021, https://www.theguardian.com/world/2021/jan/14/carbon-neutrality-is-a-fairy-tale-how-the-race-for-renewables-is-burning-europes-forests.
- Iveta Varnagirytė-Kabašinskienė, et al. "Lithuanian Forest Biomass Resources: Legal, Economic and Ecological Aspects of Their Use and Potential,"
 Energy, Sustainability and Society 9, no. 41 (2019), https://energsustainsoc.biomedcentral.com/articles/10.1186/s13705-019-0229-9/.
- European Commission, "May Infringements Package, Key Decisions," accessed March 11, 2021, https://ec.europa.eu/commission/presscorner/detail/en/MEMO_18_3446.
- Joseph W. Veldman, et al., "Where Tree Planting and Forest Expansion are Bad for Biodiversity and Ecosystem Services," BioScience 65, no. 10 (September 2015): 1011-1018, https://academic.oup.com/bioscience/article/65/10/1011/245863.
- Luiz Fernando Wurdig Roesch, et al., "The Brazilian Pampa: A Fragile Biome," Diversity 2009, no. 1 (December 2009): 182-198, https://www.researchgate.net/publication/40755353.
- Almuth Ernsting, Sophie Bastable & Oliver Munnion, Biomass: The Chain of Destruction, biofuelwatch, June 11, 2012, https://biofuelwatch.org.uk/wp-content/uploads/Chain-of-Destruction-online.pdf.
- Carla Suertegaray Fontana, et al., "Conservation of Grassland Birds in South Brazil: A Land Management Perspective," Research Letters 14, no. 2 (July –December 2016): 83-87, https://www.sciencedirect.com/science/article/pii/S1679007316300974.

Birders Against Biomass is an initiative of the Cut Carbon Not Forests Coalition.

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