

A dangerous delusion

Debunking the myths around sustainable forests and the EU's bioenergy policy

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Introduction

How Europe's sustainable forest debate distracts from a failing policy

Over the past few years, power plants and heating installations across Europe – spurred on by government subsidies – have switched from burning coal to burning biomass in order to reduce greenhouse gas emissions and meet clean energy targets.¹

Forests are being cleared for wood which is pulverised into dried pellets



Credit: David J. / Flickr.com / CC

One source of this 'green energy' is the United States,² specifically the South Eastern states of North and South Carolina and Virginia. Forests there are being cleared for wood which is pulverised into dried pellets, then shipped across the Atlantic and burned to generate heat and electricity in homes and businesses across Europe.³

Fern and other NGOs have long sounded the alarm on the destruction this is wreaking.⁴ Now policy makers are taking note.

A recent exhaustive study by the European Commission showed that the EU's seemingly insatiable demand for woody biomass threatens biodiversity, deforestation and forest degradation in South Eastern US forests.

Yet as the evidence of the damage to US forests mounts, the advocates of burning biomass for energy are falling back on another claim to justify the policy: they maintain that while there may be problems with biomass imports from countries with weak forest laws, these problems don't exist with biomass from Europe's forests, where the EU sources most of its biomass, because they are managed sustainably. They argue that there is therefore no need for new strong criteria to ensure bioenergy sustainability.

The Confederation of European Forest Owners (CEPF), Europe's umbrella association of national forest owner organisations, for example states: "European forests are managed with the highest sustainability standards in the world and this needs to be recognised and promoted – not

1 The burning of wood for heat and electricity is at the heart of the European Union's renewable energy policy. On 23 October 2014 the European Council agreed on an overall EU renewable target of 27%; see Council conclusions SN 79/14.

2 In 2015 the EU consumed 18.8 million metric tons of wood pellets, around 74 per cent of the world's total. See: European Biomass Association (AEBIOM) Annual Statistical Report, 2015.

3 The US is the main exporter of wood pellets to the EU. Imports of US wood pellets by the EU have grown from 0.53 million tonnes in 2009 to 3.89 million tonnes in 2014. Source: Environmental implications of increased reliance of the EU on biomass from the South East US (European Commission, 2016)

4 The South Eastern forests of the US are being logged at four times the rate of South America's rainforests.

“There are strikingly diverse understandings of forests and their management [...] among European states”

hampered by additional criteria for solid biomass that creates new burdens.” They’re far from alone in advancing this view.⁵

But as growing demand for biomass intensifies the pressure on European forests,⁶ arguments around how sustainably they’re managed must be countered – and not be used to distract from the wider problems of the EU’s renewable energy policy.

First, we need to see how Sustainable Forest Management (SFM) is defined and how it is applied in the EU.

The [United Nations](#) describes SFM as: “[a] dynamic and evolving concept [that] aims to maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations.” Move beyond the lofty sentiments and commendable goals into the specifics of how it’s applied, and things get more complex.

For a start, sustainability is a broad concept, and SFM means different things to different people. “There are strikingly diverse understandings of forests and their management... among European states,” [argue](#) forest scientists Georg Winkel and Metodi Sotirov, who have immersed themselves in the subject for years.⁷

SFM is determined at the national level by EU Member States, who have all adopted the [FOREST EUROPE](#) voluntary criteria and indicators. These guidelines however, are little more than a useful starting point, since they [lack baselines, benchmarks or target levels](#), as well as key requirements including legality.

In reality, the different understandings and traditions of SFM among Member States, as well as the [critical incoherencies](#) between their forest and land-use policies, means that there are huge disparities in how forests are managed across Europe.

5 Other examples of major EU industry groups arguing that Europe’s forests can cater for its growing demand for biomass because of its Sustainable Forest Management (SFM) practices, and that new robust bioenergy sustainability criteria are unnecessary include: The European State Forest Association (EUSTAFOR): “The high-quality forest management practices in European state forests are based on forest management plans and their high environmental standards have been further confirmed by forest certification. The latest figures reported by EUSTAFOR members show that of the approximately 42 million hectares of certified forests they manage, European state forests have a significant unused resource since only approximately 60% of the yearly growth in state forests is made available for wood supply.” (See: EUSTAFOR becomes an ambassador for the biomass counts campaign, July 2015). The European Biomass Association (AEBIOM): “Forests are already subject to several sets of legislation and to voluntary sustainable forest management (SFM) certifications. The future EU policy should take into account this existing framework.” (See: A sustainable bioenergy policy for the period after 2020, May 2016). The Union of the Electricity Industry (EURELECTRIC): “For forest biomass, well established principles of sustainable forest management (SFM), based on Forest Europe principles, already exist and these principles should form the foundation for a common European set of criteria.” (See: [Post-2020 policy framework for biomass](#), July 2016, the Union of the Electricity Industry, EURELECTRIC.)

6 The European Environmental Agency has warned that growing biomass demand is already increasing pressure on forest ecosystems and biodiversity. See: [European Environmental Agency report \(2015\) Measuring the state of nature in the EU](#). See also EEA report No 5/2016, European Forest ecosystems, state and trends.

7 In their paper, [Whose integration is this?...](#) (2015) Winkel and Sotirov argue that European forest policy is characterised by “a policy (dis)integration paradox”, with SFM a prime example. They found “strong agreement” among all their “environmental interviewees” that it is mostly economic and related bureaucratic interests of the forest sector that stand against better integration of forest policy at the EU level. In particular, large forest producers and the forest product industry are mentioned: being embedded in global competition, they oppose new environmental standards as well as subsidies provided to less competitive forest sectors in other countries. Hence, they lobby against any substantially integrated forest policy involving a social and ecological dimension and respective regulations, while supporting ‘symbolic’ integration under the principle of SFM...”



A clear cut in Dalarna, Sweden. In the background is a threatened forest. Credit: Robert Svensson

In Sweden, for instance, one finds intensive management of boreal forests (with old growth forests being cleared for monoculture plantations). In central Europe more integrated forest management methods prevail (meaning more selective tree cutting is deployed). And in southern Europe, there is a lot of abandoned forest land (which can be good from a biodiversity perspective, but can bring other challenges, relating, for example, to fires or rural development).

This report is only a snapshot of SFM in Europe: but one which vividly illustrates the huge variety of forest rules and the way they are enforced across the EU. It shows that the claim that SFM can be relied upon to protect Europe's forests and help achieve a sustainable bioenergy policy is a fallacy.

Yet it's also vital to note that the harm caused by the EU's renewable energy policy won't end if SFM rules and their implementation are strengthened.

This is because bioenergy sustainability is not solely linked to the way forests are managed. And making SFM the focus of debate is a distraction from the policy's deeper, inherent flaws, which are all related to the scale of bioenergy use. These are:

- That bioenergy subsidies are driving demand for biomass that is additional to existing uses. This means an intensification of harvests, leading to increasing pressure on forests and land.
- Burning biomass to generate heat and electricity can actually increase greenhouse gas emissions and prevents an efficient use of the wood resource.
- If you harvest a tree from a sustainable forest and burn it for energy, it doesn't mean the energy is either sustainable or climate-neutral. The way biomass – a limited resource – is used rather than how forests are managed is the key issue here.

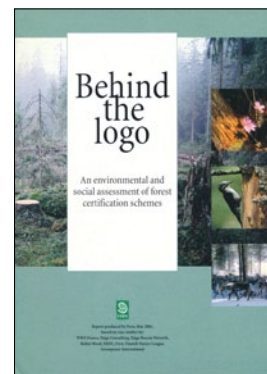
As the writer Bill McKibben puts it, burning biomass for power is the latest in the "parade of false solutions" used to tackle climate change's existential crisis.

Bioenergy is the weak link in the EU's renewables' policy. To protect forests from the increasing demand for biomass and ensure emission savings, the EU needs to limit its use and focus its policy on truly sustainable uses.

Sustainable Forest Management: a brief overview of a shifting concept

Defining and evaluating Sustainable Forest Management (SFM) isn't simple.

In Behind the Logo, a report on forest certification schemes which Fern published 15 years ago, we wrote: "The concept is young and the relevant timescales are long. To assess adequately whether a forest is managed 'sustainably' takes centuries, more time than has passed since these discussions began at the end of the eighties." This is as true today as it was when it was written.



Until the late 1980s, the prevailing view of a sustainable forest was one which maintained its yield – a case notably attributed to the ecologist Duncan Poore in his book, No Timber without Trees. If only governments really understood the economic value of their forests, this argument runs, they would protect them, rather than allowing them to be stripped without consideration for future harvests.

The landmark Bruntland Report, named after the former Norwegian Prime Minister Gro Harlem Bruntland, who chaired the UN Commission which led to its publication in 1987, took a broader view.⁸ It popularised the concept of sustainable development and coined what's considered its classic definition ("... development that meets the needs of the present without compromising the ability of future generations to meet their own needs"). It identified sustainable development's three interlinking pillars as: economic growth, environmental protection and social equality.

Consequently, an ecologist, forester and social scientist would all view the sustainability of the same forest through different lenses – and the best way to reach consensus on managing it sustainably is for representatives from all three groups to come together and bridge their divides.

This is the principle behind the Forest Stewardship Council's (FSC) national standards, which have been developed and implemented in the UK and Sweden, among other places.

Around 150 countries have also developed their own ways for determining the key elements of SFM in nine regional processes, with several of these regions – including FOREST EUROPE (building on the Helsinki Process) – developing mechanisms for defining SFM.

Sweden

Saving nature by destroying it?

In Dalarna, Sweden's reputation for protecting nature and promoting sustainable forestry might appear well justified.

Unbroken rows of pine forests, glimmering lakes and jutting mountain ranges dominate a landscape in which bears, lynx and wolverines run wild. Clamber up a rocky trail on Fulufjället mountain in the north-west corner of this sparsely populated central province, and behind a thin rope stands an inauspicious-looking Norwegian spruce. Its root system has been growing for 9,550 years. According to the scientists who tested it in 2004 that makes it the world's oldest known living tree.⁹



The world's oldest individual from a clonal tree, Old Tjikko in the Swedish province of Dalarna. Credit: Mark Olden

Could the permanence of Old Tjikko, as the spruce is known, symbolise the care with which Sweden safeguards the forests which cover more than half the country?

Sadly, the evidence suggests not.

Bengt Oldhammer, an environmentalist and author, has been monitoring Dalarna's forests for around 35 years. In that time he has witnessed an alarming transformation. Looking out across the vista of unspoilt young pines, a layperson might be impressed. Oldhammer despairs. That's because monoculture tree plantations have replaced vast swathes of the boreal old growth and natural forest which has been decimated to feed the country's timber, pulp and paper industries.¹⁰ It is a pattern repeated across Sweden.

"It's all clear cutting," he says gloomily. "It's the same model as in Indonesia and Borneo, where rainforests are cleared for palm oil plantations."

⁹ Old Tjikko is considered the world's oldest individual from a clonal tree.

¹⁰ Sweden is the world's second largest combined exporter of paper, pulp and sawn wood products. Source: [Swedish Forest Industries Federation](#).

“It’s all clear cutting, it’s the same model as in Indonesia and Borneo, where rainforests are cleared for palm oil plantations.”

Author Bengt Oldhammer has been monitoring the forests of Dalarna for around 35 years.
Credit: Bengt Oldhammer



This model can be traced back to Sweden’s first Forestry Act, which came into in force in 1903, and required forest owners to continuously regenerate forests after felling them. Since the 1950s clear cutting has become the default method, with one or more trees planted for every one logged. The industry and many others, call this sustainable forest management.

Sweden’s forest sector promotes its methods internationally as highly sustainable, and some industry representatives even maintain that if the world’s forests were managed along Swedish lines, climate change could be averted.¹¹ The Swedish forestry model’s proponents also point to the modern technology Swedish forest owners use to plan their forest management as evidence of their progressive approach, which includes the e-service run by the Forest Agency full of maps, satellite images and other data.¹²

From an economic perspective, plantation forests may indeed appear to be sustainable: supplying a constant flow of raw materials and maintaining jobs.¹³ Yet their grim consequences for biodiversity, which Oldhammer and other campaigners spend so much of their time highlighting – and which, more broadly, our survival depends on – are incontestable.

“The Swedish forestry industry has turned enormous areas of pristine forests into vast oceans of production landscapes,” said a 2011 report by the Swedish Society for Nature Conservation. “As

11 The website of Skogsindustrierna, the Swedish Forestry industry organisation, states that “the Swedish forestry model is designed for sustainable forest management” and maintains that as much as 25 per cent of Sweden’s forests are protected. Swedish NGO Protect the Forest’s analysis of these areas showed that large parts of the formally protected areas were mountainous and above the tree line – and include lakes, quarries and nature reserves that do not ban logging.

12 See: State of Europe’s Forests report, FAO, 2015.

13 A more detailed and technical breakdown of these two perspectives on sustainability (which prevail across Europe) are outlined in EU Policy Options for the Protection of European Forests by Winkel and others, (2009). The authors write: “The commodity perspective particularly considers forest vitality (growth) and stability (‘forest health’) as the main preconditions for sustainable timber production. . . This view of forests and forestry highlights forest production and technological and natural science aspects of forest growth and management. In contrast, the amenity perspective emphasises the preservation of forests as naturally dynamic ecosystems as well as fostering forest biodiversity. Threats are regarded as being induced by major trends (e.g. climate change), but also as being caused by forest management itself, e.g., by intensive and production oriented forestry. This view of forests and forestry is closely connected with the biological and ecological sciences.” The case that mixed biodiversity-rich forests are actually better from an economic and social perspective than plantation ones is advanced in A Management Strategy for Multiple Ecosystem Services in Boreal Forests, Stig Olof-Holm and others (2015).

a consequence there is a biodiversity crisis in the Swedish forests.” A huge number of species have been lost or are threatened by Sweden’s forest practices, in particular clear cutting, which is destroying vital habitats and changing ecosystems.¹⁴

Research by the [Swedish Species Information Centre \(Artdatabanken\)](#) starkly underlines this. According to the centre’s latest figures, almost 4300 different plants and animals are on Sweden’s [red list](#), meaning that they are endangered. More than half of them – just under 2300 – are forest species, with the majority of those totally reliant on forests for their survival.¹⁵

The centre says the cause is clear: “The reason that three out of four red-listed forest species are decreasing in population is the conversion of natural forests to production forests and plantations. The methods used in forestry activities, and especially clear cutting, are therefore considered to be the factor that has the strongest negative effect on forest species.”¹⁶

The country’s forest laws appear to offer scant protection against this.

A study by the Swedish Forest Agency in 2013, found that 36 per cent of all logging did not comply with the country’s [Forestry Act](#),¹⁷ the principle domestic legislation to protect its forests. This is despite [more than half](#) of Sweden’s productive forest area being certified by the Forest Stewardship Council (FSC), whose [principles](#) state that all certified forests must comply with national laws and regulations, and which have sustainable forest management at their core.^{18,19}

There are few consequences for breaking the law, say local campaigners. “The forest protection laws are weak and they are not properly abided by,” says Viktor Säfve, of [Protect the Forest \(Skydda Skogen\)](#).

Säfve argues that the pressure on Sweden’s forests – and therefore its biodiversity crisis – is likely to intensify because of the country’s increasing reliance on woody biomass to meet its energy needs.

In 2013, biomass accounted for 23 per cent of Sweden’s energy,²⁰ and forest biomass is already integral to the country’s energy system.²¹

“Politicians, lobbyists from the forest industry, landowners and biotechnology and energy scientists are all lobbying hard for increased use of biomass and biofuels from Swedish forests,” says Säfve.²² “But you cannot save nature by first destroying it.”

14 As well as its effect on biodiversity, Sweden’s forest industry is having a serious climate impact. Scientists from Lund University have made estimates that total of 27 per cent of carbon dioxide emissions in Sweden every year come from clear cuts. A recent study by researchers at the Laboratory of Climate Science and Environment in Gif-sur-Yvette, France, “reconstructed 250 years of forest management history in Europe – and found that the way forests are controlled by humans can lead to far less carbon being stored than would have been the case when nature was in charge.”

15 See, The Swedish Species Information Centre (Artdatabanken).

16 See: The Swedish Species Information Centre (Artdatabanken).

17 See: <http://www.skogsstyrelsen.se/en/forestry/The-Forestry-Act/The-Forestry-Act/Forest-felling/> [http://www.skogsstyrelsen.se/Global/myndigheten/Statistik/Skogsstatistik%20årsbok/02.%202014%20\(Kapitelvis%20-%20Separated%20chapters\)/06%20Skogsvård%20och%20miljöhänsyn.pdf](http://www.skogsstyrelsen.se/Global/myndigheten/Statistik/Skogsstatistik%20årsbok/02.%202014%20(Kapitelvis%20-%20Separated%20chapters)/06%20Skogsvård%20och%20miljöhänsyn.pdf)

18 FSC Principle 6 states: Environmental impact – to maintain or restore the ecosystem, its biodiversity, resources and landscapes.

19 For further detail see the Swedish Society for Nature Conservation’s report, *Credibility at Stake – How FSC Sweden fails to safeguard biodiversity*: http://www.naturskyddsforeningen.se/sites/default/files/dokument-media/rapporter/2013_engelsk_rapport_skog_credibility_at_stake.pdf

20 For the increased use of biomass to meet Sweden’s energy needs, see: *The introduction and expansion of biomass use in Swedish district heating systems* Karin Ericsson, Sven Werner (2016). Also: *SEA Energy in Sweden*, Swedish Energy Agency (2015) and *Energy Policies of IEA Countries*, International Energy Agency (2013)

21 See: *Bioenergy policy and market development in Sweden and Finland*, Ericsson and others (2004).

22 In a recent article in *Euractiv*, for instance, leading Swedish industry figures called for the EU to increase its use of biomass for energy, claiming that the “knowledge and experience of bioenergy and sustainable forestry in Sweden and other Nordic countries could be useful and serve as an inspiration to others.” *How Nordic countries can inspire the EU’s bioenergy policies*, Carina Håkansson, Gustav Melin, Pernilla Winnhed, August 16, 2016.

Romania

Illegality and corruption have festered



Credit: Cristian Bortes / Flickr.com / CC

Romania's forests have provided refuge for those fleeing persecution and conflict from medieval to modern times. The peoples' bond with their forests is displayed in numerous poems and folk songs, as well as the old saying: "Romanians are brothers to the forest".

The country contains some of the last expanses of Europe's ancient old growth forest, which is exceptionally rich in biodiversity. For centuries Romania's forests were protected by traditional low-intensity management methods. Yet since the end of communism, vast swathes of them have been destroyed. Illegal logging and corruption are behind much of it.²³

23 In recent years the pressure on Romania's forests has increased because of the demand for biomass, which supplies 70 per cent of the Romania's renewable energy.

The Romanian Court of Auditors has stated that roughly six per cent of the country's forested area has been illegally logged since 1990 (resulting in financial losses of €5 billion), and last year the Environmental Investigation Agency (EIA) exposed how the biggest forest products company operating in Romania was accepting illegally harvested timber.²⁴

Illegality and corruption have festered in Romania's forest industry because of a lack of transparency and accountability, as well as weak enforcement of forest rules.²⁵

Unsurprisingly, this has helped create "substantial problems in terms of sustainable forest management", according to the Swiss Agency for Development and Co-operation (SDC).²⁶ A World Bank study last year reiterated this, stating that SFM in Romania "is challenged by fragmented [forest] ownership and insufficient financial resources".²⁷

The hope is that recent changes in the country's forest rules – reflecting an apparent urgency on behalf of the authorities to act – will see Romanian forests managed more sustainably in the future.

The government has passed a new Forest Code, initiated a bill making illegal logging of more than one hectare a threat to national security, and technology is being deployed to map threatened woodlands and create a database to help guarantee their protection.

It's an issue which generates real public anger. In Spring 2015 thousands of Romanians took to the streets across the country to protest at the destruction of their forests: if these new measures don't succeed, they and many others will no doubt hold their government to account.

24 The company denied complicity in any illegality.

25 Bourriad, L. and Marzano, M. (2014) Conservation, extraction and corruption: Is sustainable forest management possible in Romania?

26 See for instance, Swiss Agency for Development and Co-operation (SDC), and State Secretariat for Economic Affairs project in Romania, Strengthening the Capacities for Forest Owners Associations for Sustainable Forest Management.

27 The World Bank study says: "Romania's transition to a market economy generated significant changes in the forest sector. The restitution process for forest land modified the structure of forest land ownership. Holdings are now predominantly small, and the forest system is fragmented, making the task of sustainable forest management challenging. There is no cadaster of forest lands, and the parcels' ownership, as well as the boundaries between forest parcels, is often unclear to forest authorities. Incentives are not aligned for owners of small private holdings to comply with the forest regulatory framework. This explains the poor performance of afforestation programs in properly compensating the owners. Limited road accessibility is another constraint to forest management and, as a result, harvesting levels in inaccessible areas are below the recommendations of forest management plans." Romania – Toward a low carbon and climate resilient economy : forestry sector analysis. (2015)

Germany

Past meets present

More than 500 years ago, farmers in Germany's Black Forest began using a highly sustainable forest management method known as Plenterwald. It was a system driven by economics but which brought environmental benefits.²⁸ They carefully selected individual trees to harvest. This kept permanent forest cover, helped preserve biodiversity and enabled young trees to develop roots beneath the cover of mature trees.²⁹

But in the early 19th century things changed. Deforestation was thought to be threatening the supply of timber, which at the time was generating massive profits through exports to Holland and elsewhere. Powerful public and private forces united to stop both uncontrolled deforestation and the Plenterwald method. A law was passed in Baden forbidding selective tree felling as "an uneconomical method that violated all the rules of forestry".³⁰

Local farmers were angry at this perceived threat to their livelihoods and targeted government and forestry officials with violence, while ignoring the law and continuing selective felling. The authorities turned a blind eye – although, remarkably, the law against selective cutting remained on Baden's statutes until 1976 (without being enforced).³¹

Today, foresters in the Black Forest still practice Plenterwald forestry – and their selective logging is deemed both economically and environmentally profitable.³²

This enduring connection to the past is a thread running through the history of forest management in Germany. The story of the Plenterwald method is one of a clash between different forest management systems, and one which underlines the "very distinct and often conflicting demands" that characterise Germany's forest policy and management to this day.³³

Germany is among Europe's most densely wooded countries, with a third of its territory – around 11 million hectares – covered by forest. Responsibility for formulating and implementing forest policy largely rests with the Länder (the country's federal states), with the Federal government simply setting the policy framework.³⁴

Reconciling "the trade-offs between timber production, recreation and biodiversity conservation" has been the central debate in forest policy at both the Federal and Länder level for decades.³⁵

28 According to Dr Georg Winkel: "At that time farmers adopted the Plenterwald system because it served their demands for various types of wood – big dimensions for construction and for sale, smaller dimensions for fuelwood. So it was economic rationality that created an environmentally interesting management model. And it's the economic rationality that also keeps it alive today – once in place, it's a low investment system that is quite resilient and profitable."

29 The Forests Handbook, Volume 2, Applying Forest Science for Sustainable Management, Julian Evans (Editor), 2001 (Wiley-Blackwell)

30 The Forests Handbook, Volume 2, Applying Forest Science for Sustainable Management, Julian Evans (Editor), 2001 (Wiley-Blackwell)

31 The Forests Handbook, Volume 2, Applying Forest Science for Sustainable Management, Julian Evans (Editor), 2001 (Wiley-Blackwell)

32 University College Dublin Forestry Excursion, The Black Forest, Germany, March 29 – April 3, 2010

33 Lessons for REDDplus: A comparative analysis of the German discourse on forest functions and the global ecosystem services debate, Till Pistorious, Georg Winkel, 2012

34 German Forests, Nature and Economic Factor, Federal Ministry of Food, Agriculture and Consumer Protection, 2011

35 Lessons for REDDplus: A comparative analysis of the German discourse on forest functions and the global ecosystem services debate, Till Pistorious, Georg Winkel, 2012



Black Forest. Responsibility for formulating and implementing forest policy largely rests with the country's federal states. Credit: Michael Figiel / Flickr.com / CC

Today German forest policy is squeezed by very different pressures. Forest scientists Dr Georg Lander and Till Pistorious see these conflicting forces as: “a timber industry which demands market-oriented reforms... and an intensification of management practices – and an environmental movement promoting more conservation-oriented forest management practices”, with foresters often trying to balance both demands.³⁶

How successfully these different demands are integrated varies. Consequently, there are examples of well and poorly managed forests across Germany.

It's a debate which has echoes of the dispute involving the farmers of the Black Forest in the 19th century – and is a microcosm of the wider discussions about SFM in the EU.

Latvia

Not so green gold

Timber is Latvia's "green gold", according to the country's forestry sector.³⁷

This isn't industry hype. The country's remarkable economic success following the fall of communism was largely founded on its forests. Today timber generates around €2 billion a year for Latvia's economy, and the nation's prosperity is said to rely on forests more than any country in Europe.³⁸

But there has been a cost: the industrial logging methods used in this sparsely populated, but heavily forested land have damaged biological diversity and destabilised rural life.³⁹

This harm, according to researchers and campaigners, has increased in recent years. In response to the global crisis which began in 2007-08 the Latvian government raised the total amount of harvesting allowed in state-owned forests – which constitute approximately half of Latvia's total – while weakening the State Forest Service's ability to police implementation of the country's forest laws.

This attracted international attention five years ago when an Al-Jazeera documentary revealed how the dramatic increase in clear cuts and indiscriminate logging was hurting wildlife and destroying rare ecosystems.

The documentary – as well as a number of researchers⁴⁰ – pointed the finger at the state-owned timber company, *Latvijas valsts meži* (LVM). Despite Latvia having a number of strong laws to protect its species, as well being party to the EU's Habitats Directive, they criticised LVM's system for protecting important habitats, and the lack of knowledge over where they are located.⁴¹

While Latvia has been praised for some of its environmental initiatives in the past few years, including its reforestation efforts, the pressure on its forests is growing because of renewable energy demands: Latvia is the EU's leading exporter of wood pellets, and has trebled its exports in just six years.⁴²

37 See for instance: *Latvia's Forests During 20 years of Independence*, a brochure by the forest sector published in 2011.

38 See for instance *Forest Certification in Latvia*, by Ansis Actiņš and Mara Kore, published by Yale School of Forestry and Environmental Sciences.

39 The population of Latvia is 2.35 million. There are 2.9 million hectares of forestland in Latvia (or about 44 percent of the total land area), of which approximately one half is owned by the State. Please see: *Forest Certification in Latvia*, by Ansis Actiņš and Mara Kore, published by Yale School of Forestry and Environmental Sciences. With regard to destabilising the life of some rural Latvians, see the Al-Jazeera documentary, *Latvia's Pulp Fiction*, 2011.

40 See: *Economic slowdown leads to the pulping of Latvia's forests*, Mongabay, 2012.

41 Since 2003 Latvia's state-owned forests have been certified by the Forest Stewardship Council (FSC). During 2009 and 2010, the FSC-certified Latvian state logging company doubled the area of forest logged from 15,000 hectares to 30,000 hectares each year. Rainforest Alliance, the FSC certifying body, carried out an audit in June 2010, and found that "the harvesting level in 2009/2010 far exceed the long term sustainable level." See: *Economic slowdown leads to the pulping of Latvia's forests*, Mongabay, 2012.

42 See: *UK and EU Trade of Wood Pellets, 2015*, UK government, "In 2014, Latvia was the EU's leading [wood pellet] exporter, with exports trebling from 433 thousand tonnes in 2008 to a record 1,277 thousand tonnes. Latvia's exports exceeded that of Germany – the EU's largest wood pellet exporter between 2008 and 2011 – for the first time in 2012. This increase more than doubled Latvia's share of total EU wood pellet exports, from nine to 20 percent."

Recommendations

In the course of 2016, the European Commission is expected to publish proposals for a post 2020 renewable energy policy and a bioenergy sustainability policy. In the light of these policy developments, Fern recommends that the EU:

- **Focuses climate and energy policies on reducing energy demand, improving energy efficiency, and developing renewables such as wind, solar and thermal.** This would reduce the use of biomass for energy thereby allowing more carbon to be stored in forests and wood products and reducing atmospheric emissions.⁴³
- **Introduces an EU wide volume limit on the amount of bioenergy that can be counted towards the EU 2030 renewable energy and climate targets.** This would limit the amount of biomass extracted from the terrestrial carbon stock and ensure bioenergy demand does not reduce carbon sinks.
- **Excludes the use of biomass sources that have a high risk of releasing substantial emissions; leading to indirect land use change; or displacing existing uses.** These would include crops from agricultural land, roundwood and stumps.
- **Introduces a minimum threshold for the efficiency of energy production systems.** This threshold should exclude co-firing of biomass in coal plants and biomass in electricity only installations. It would direct limited biomass resources towards the most efficient energy applications.
- **Conserves and enhances forests carbon stocks through the restoration and regeneration of degraded forests.** This would restore the health of forests across the EU, many of which are presently in a poor state. As well as increasing the carbon they sequester and store, this would lead to other benefits for the environment and society and improve our chances of achieving the Paris Agreement.⁴⁴

43 Forest Research, Robert Matthews, et al. (2015) 'Carbon impacts of biomass consumed in the EU: quantitative assessment' provided that a scenario of unconstrained use of biomass could result in 168 MtCO₂-eq higher than a scenario restricting the use of biomass (phasing out large scale biomass technology / imports) considering a sum of fossil and bioenergy emissions combined.

44 Sivan Kartha, Kate Dooley (2016), The risks of relying on tomorrow's 'negative emissions' to guide today's mitigation action



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