

A full-page background image of a forest. A hiker with a large backpack is seen from behind, walking on a mossy log. The forest floor is covered in green moss and fallen leaves. Tall trees with green foliage are visible in the background, with sunlight filtering through the canopy.

# FIVE WAYS

**the EU can ensure  
forests support  
EU climate and  
biodiversity goals**

*March 2021*



**F**orests were once all but forgotten in EU climate discussions, but as the climate crisis forces its way up political priorities, forests' role in storing and sequestering carbon dioxide is increasingly centre stage.

But could this backfire?

Until now, forests have tended to suffer from well-meaning climate interventions because “green solutions” often mean using more and more wood, leaving forests to sequester less and less carbon dioxide. This is not only climatically misguided, it harms ecosystems and communities.

So if the very policies designed to limit global warming are actually worsening it, what needs to change? This paper explores how to ensure that EU legislation, specifically the **Renewable Energy Directive** and the **Land Use, Land Use Change and Forestry Regulation (LULUCF)**, incentivise activities that protect and restore EU forests and ecosystems.

The timing couldn't be better. The EU is heading to the next round of global biodiversity and climate negotiations positioning itself as an international climate and biodiversity leader. These recommendations show what such leadership would need to look like at home to enable forests to reduce and remove carbon dioxide emissions while protecting and restoring nature. ✿



Cover photo: The 'REMOTE Forests' project of the Czech University of Life Sciences in Maramures, Romania, by Ondrej Kameniar. Other photos by Ondrej Kameniar & Matěj Ferenčík, Slovakia; Andrew Hazen/Flickr; and Heikki Siltala/Flickr.

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# THE LULUCF REGULATION

## WHAT NEEDS TO CHANGE



### 1

#### SET EU AND NATIONAL CARBON DIOXIDE REMOVALS TARGETS

To tackle the climate crisis, EU land and forests need to absorb more carbon dioxide, but even today, the [opposite is happening](#). To increase carbon storage, we believe the EU must set a LULUCF target to provide clarity to Member States about what is expected and increase ambition.

In the Impact Assessment for the Climate Target Plan, the European Commission [suggested](#) that, with the right incentives, the LULUCF sector could be absorbing 70-115 million tonnes (Mt) more carbon dioxide per year by 2030 (equivalent to taking 15-25 million cars off the road for one year). The academic consortium behind [EUCalc](#) estimates an even larger potential if incentives were coupled with behavioural and food production changes - in the range of 750 Mt per year in 2050. A recently released assessment from NaturWald Akademie suggested that in 2030, managed forests alone could absorb 593 Mt of carbon dioxide per year. The academic consortium behind EUCalc estimates that

the entire LULUCF sink (including emissions and removals from croplands, grasslands, wetlands and settlements) could absorb around 570Mt per year in 2030 and up to 750 Mt per year in 2050.

Member State targets could be informed by existing [long-term climate strategies](#) where many countries have assessed the future contribution of forests and other lands. This exercise could be informed by the discussion to determine EU Restoration Targets. Member States already account for land-use types individually, so targets could be easily accounted for.

To ensure activities benefit biodiversity as well as the climate, targets and funding must be accompanied by policies to encourage more environment-friendly land-use management. For example, the EU Restoration Targets could be a key tool for promoting activities to increase the LULUCF sink.

### 2

#### END OFFSETTING

While forest carbon sinks can be enhanced, this must not be allowed to delay action towards cutting fossil fuel emissions. Climate action has been [delayed](#) for decades with the excuse that action was happening elsewhere with offsets. For 20 years scientists have been explaining that [increasing removals in the land sector does not cancel out emissions from fossil fuels](#).

LULUCF currently accounts for emissions and removals from forests, croplands, grasslands and, as of 2026, wetlands. In the EU's climate and energy architecture, LULUCF is a separate pillar from the emissions generated by buildings, transport, energy and livestock. This separation must be maintained, and current flexibilities must be reduced, so that efforts to increase carbon sinks do not delay emissions reductions.

## HOW SHOULD CARBON DIOXIDE REMOVALS BE FUNDED?

This is one of the key questions asked by those who claim offsetting is the only way to fund forest restoration. The European Commission is now considering whether forests should be brought into the EU Emissions Trading System (ETS), despite the fact that the barriers to generating reputable land-use credits remain since the EU agreed to [ban forest offset credits](#). The fossil carbon pool and the atmospheric carbon cycle are separated by geological timespans – carbon released today from fossil fuels will continue to accumulating in the atmosphere for thousands of years. In addition, there are still huge [uncertainties in data](#) around forest sinks, and forest stocks continue to be [impermanent](#).

Instead of reopening old discussions about how to make carbon trading work, the EU could levy funds directly from polluting companies regulated under the Emission Trading System (ETS) or the Common Agricultural Policy (CAP). These could go into a Nature Restoration Fund, which would support projects that focus on climate adaptation and ecosystem resilience rather than carbon, with monies going to those that undertake climate and biodiversity friendly forest management.

Another frequent question is how will Member States be incentivised to increase carbon dioxide removals if they are not allowed to use forest sequestration from LULUCF to meet targets in energy, industry and transport sectors? See our recommendation above to create a regulatory incentive by setting an EU-wide carbon dioxide removals target.

## 3

### IMPROVE FOREST CARBON ACCOUNTING

Despite the fact that the vast majority of carbon dioxide sequestration in the LULUCF sector comes from forests, the current LULUCF Regulation does not penalise those countries planning significant decreases in sinks over the next five years. Across the EU, the forest sink is permitted to absorb as much as 18 per cent less carbon dioxide than levels in the early 2000's.

It is therefore essential that rules about how to set baselines and how to account for emissions from forest activities are easy to understand and verify. The opposite is presently the case.

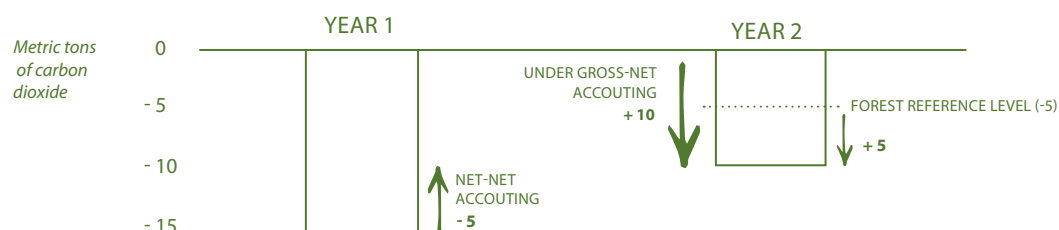
In the next iteration of the LULUCF Regulation, there needs to be a more ambitious target (see recommendation above), and baseline setting should be replaced by real emissions tracking towards a new target. Introducing a 'net-net approach' (see Box: Accounting Rules Explained) would make LULUCF accounting similar to how it is done in other sectors. Because of fluctuations in forestry emissions and removals, results could be averaged over a period of time as is currently done for cropland and managed grasslands.

Improved accounting for emissions and removals from managed forests is particularly important for the biomass sector as current accounting rules allows portions of wood harvests to go [unaccounted](#) for, yet they are treated as producing [zero emissions](#) under the EU ETS. However, even if biomass is better accounted for in future iterations of LULUCF accounting rules, there is still a

risk that EU policy will expand its use and that accounting is not a strong enough tool to protect the forest carbon sink. The increasing price of carbon in for example the energy, steel or plastics sectors could drive an increase in biomass for burning, building materials or packaging since biomass is subsidised instead of penalised financially.

## Accounting Rules explained

There are numerous ways in which forest carbon fluctuations can be accounted for. Below are three examples of the way a country could account for the changes in its forest sink. For all examples the emissions are the same. In year 1, its forests removed 15 Mt of carbon dioxide, but in year 2, only 10Mt.



- **Under net-net accounting**, it would account for the difference between the two years, i.e. -5 Mt of emissions
- **Under gross-net accounting** it would account for the entire sink in the commitment period. If the commitment period was year 2, and it had 10 Mt, it would account for 10 Mt CO<sub>2</sub> of removals, ignoring the fact that the removals had gone down.
- **Under Forest Reference Level (FRL) accounting**, instead of starting from -15 Mt the reference level could be a baseline of (for example) -5 Mt. As the forest actually removed -10 Mt, they can claim an extra 5 Mt of carbon dioxide removals. For the FRL, it does not matter that the sink has declined, all that is counted is that it has removed 5 Mt more than it projected. This is how forest management is currently counted in the LULUCF regulation.

Fern supports net-net accounting as it allows countries to account for changes in the forest sink and progress towards targets.



# 4

## LINK LULUCF TO THE NATURE RESTORATION TARGETS TO ENSURE JOINT ACTION ON CLIMATE AND BIODIVERSITY

While forest area is increasing in Europe and the number of trees planted across Europe has [grown by 9 nine per cent](#) over the last 30 years, EU forest health and biodiversity is [declining](#), even in EU forests protected by legislation. As such, the LULUCF Regulation needs to go beyond looking at carbon dioxide absorbed by forests and also consider elements crucial for maintaining biodiversity, like dead wood.

The forest reference level is a single number – an amount of CO<sub>2</sub> absorbed by the forest – but a significant amount of data is used to calculate this number. Information on litter and deadwood are used by experts to determine a country's forest reference level, but the trends of these important carbon pools are not tracked with a view to increase biodiversity. As such, information

crucial to understanding forest health is effectively hidden inside forest reference levels that just show carbon.

Dead wood not only increases the carbon stock of a forest, it also increases fungi, insects and other forest life. In getting rid of forest reference levels, the EU should move towards promoting an increase in biomass, litter, deadwood, and soil organic carbon. In order to ensure sustainability of land-use practices a carbon dioxide sequestration target is not enough, the LULUCF regulation should have a direct link to the new legislation on nature restoration targets to ensure that growth in the sink is achieved through biodiversity-friendly management. This will enable LULUCF to be informed by and help achieve the European Green Deal's climate and biodiversity objectives.



Dead wood left on the forest floor.



Forest floor with no dead wood or other litter.

# THE RENEWABLE ENERGY DIRECTIVE

## WHAT NEEDS TO CHANGE



### 5

#### END SUPPORT FOR BURNING FOREST BIOMASS

It is undeniable that EU incentives to burn wood for bioenergy are negatively impacting forests. Since the EU first started incentivising renewable electricity, [bioenergy use has risen by over 100 per cent between 2000 and today](#), surpassing expectations and estimated levels of sustainable supply. An [increasing proportion of wood harvest is now going to energy use](#), meaning that the [proportion of wood going to material use is decreasing](#). Roughly 20 per cent of the EU's Renewable Energy mix now comes from burning primary wood. This has [contributed to](#) a significant decrease in the forest carbon sink. The amount of carbon dioxide removed by EU land and forests is projected to [decrease by 30 per cent](#) by 2030 unless something is done to reverse this.

The Renewable Energy Directive was designed to help the EU meet climate goals, but instead it has vastly increased inefficient wood burning (direct emissions are higher than from coal) and the degradation of forests in Europe and beyond, meaning that forest biodiversity and forests' ability to remove carbon are at an all-time low.

The Renewable Energy Directive recast to 2030 (REDII) does not prevent these negative impacts because:

- The LULUCF forest reference levels still allow increased harvesting (a decrease in the sink)
- The REDII focuses on sustainable production. Even if this was successfully achieved, it would do nothing to deal with the negative impacts on the climate, biodiversity, resource efficiency or air quality.





[In line with recommendations from the Joint Research Centre](#), it is therefore crucial that in the upcoming REDII revision, subsidies are no longer allowed for burning forest biomass, which have the highest associated carbon dioxide emissions. To further disincentivise this wasteful use of wood, energy from burning forest biomass should not count towards the Renewable Energy Directive. In addition, we recommend that the use of solid biomass for power production should not be incentivised and not count towards renewable energy targets, which would ensure this scarce resource is prioritised for use in heating.

Enacting policies to achieve transformative change across sectors could significantly

reduce the EU's reliance on biomass. This includes reducing the need for heating, by increasing ambition in the energy performance of buildings, halting the use of bioenergy in power production by increasing the reliance on wind and solar and specifically incentivising alternative forms of renewable heat, such as heat pumps and geothermal. This combined could go a long way towards reducing the amount of bioenergy needed, thereby meeting GHG targets and renewable targets whilst at the same time reducing pressure on forest ecosystems, biodiversity and restoring the declining forest carbon sink. 🌳

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