



EU climate policies: friend, foe or bystander to forest restoration and carbon sinks?

EU Climate Governance for restoring degraded forests

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Key messages

Next to steep cuts in greenhouse gas emissions, the removal of CO₂ from the atmosphere is essential to keep average global temperature increases to 1.5°C, and well below 2°C. At this point in time, there is effectively only one realistic and sustainable way to help remove large amounts of CO₂ from the atmosphere: restoring degraded forests. A strong and reliable governance framework is a precondition to restore degraded forests at the necessary scale, but the EU has no serious plans to develop such a framework. The Commission's recent proposal for the Regulation on the Governance of the Energy Union and the LULUCF Regulation are timid first steps in the right direction. But even if adopted, the EU's governance framework would remain insufficient to help remove the required amounts of CO₂ through restoring degraded forests. To this end, relevant EU laws and policies should contain ambitious forest restoration targets for Member States and the EU as a whole, as well as a robust compliance system. Legally binding targets would improve considerably existing EU forest policies which are based on non-binding instruments with little effect on conserving and enhancing Europe's forest sinks.

Summary

Virtually all emission reduction pathways that keep temperature increases to 1.5°C and well below 2°C include the need to remove CO₂ from the atmosphere, so-called **negative emissions**. There are various ways to remove CO₂ from the atmosphere, but practically all of them are still speculative. At this point in time, there is effectively only one realistic, safe and sustainable way to remove large amounts of CO₂ from the atmosphere: restoring degraded forests. A strong and reliable governance framework is a precondition to make this happen.

The **EU is taking the first steps to improve its governance framework for enhancing natural carbon sinks**. The Commission's recent proposal for a Regulation on the Governance of the Energy Union (GR) recognizes, for example, the need for forests and land use to be part of Long Term Climate Strategies (LTS). The recent LULUCF proposal suggests a 'no debit' rule, meaning that sinks must not decline. This is positive. **But even if the EU would adopt these proposals, its governance framework will not help to remove the required amounts of CO₂**. The no-debit rule is not designed to help remove large amounts of CO₂. Both proposals are also silent on restoring degraded forests. Other relevant EU policies, in particular the EU Biodiversity strategy, the Forest Strategy or Rural Development Programmes (RDPs), are equally incapable of addressing these shortcomings. As non-binding policies with a focus on reporting and coordination, they have not driven Member States to scale up the restoration of degraded forests. In fact, the quality of Europe's forests and forest sinks has continued to decline since the adoption of these non-binding strategies. As the EU has only a limited mandate on forest management – measures mostly require unanimous voting in Council – national policies could theoretically close this gap, but Member State policies have not yet restored degraded forests at the required scale.

To address these shortcomings, the EU has various options. The Commission's proposals for the GR and a LULUCF Regulation are options with significant potential. Complementing these laws, improvements to the Biodiversity Strategy, the Forest Strategy and RDPs are other options. In one way or another, these instruments should establish targets for enhancing natural sinks through restoring degraded forests as well as a system to ensure compliance with these targets. The EU Biodiversity Strategy, Sustainable Development Goal 15.3 (Land Degradation Neutrality) and the Aichi Biodiversity Target 15 have demonstrated that quantified restoration targets for degraded ecosystems are practically feasible and politically accepted.

As legally binding instruments, the **GR and the LULUCF Regulation** should be at the centre of reform. There are various options to improve the **GR and/or the LULUCF Regulation** – it is possible to include these improvements in both instruments and / or include cross-references:

- **EU Targets for restoring degraded forests and/or removing CO₂**: Quantitative and legally binding 2050 EU targets for the restoration of degraded forests and/or the removal of CO₂ by natural sinks is a particularly strong option. Non-binding qualitative commitments is another option.

- **Member State targets for restoring degraded forests and/or removing CO₂:** As an international organisation, the EU alone cannot implement EU removal and restoration targets. Implementation depends on Member States. There are various ways the GR can ensure that Member States contribute to an overall EU target. Binding quantitative targets for each Member State is one particularly strong option for holding Member States accountable. This option is legally possible but will probably require unanimous voting in the Council (Article 192.2 TFEU; special legislative procedure). As another option, the GR could include non-binding reference values that Member States must take into account when restoring degraded forests. This system is weaker than binding targets, but it would arguably fall under Article 192.1 which allows for adoption by qualified majority voting in the Council.
- **Qualitative obligations on Member States to restore degraded forests and to remove CO₂ from the atmosphere:** In this option, Member States commit to restore degraded forest to enhance natural sinks and remove CO₂ – as a contribution to meeting the objectives of the Paris Agreement (PA). As a qualitative obligation (contribution to implementing the PA), it would not include quantified targets. This weakens verification and compliance.
- **Member States pledge to restore a certain amount of degraded forests and to remove specific quantities of CO₂:** In contrast to a quantified target set in EU law, Member States could pledge to restore a certain amount of degraded forests or to remove specific quantities of CO₂ from the atmosphere. It is an obligation to make a pledge but Member States have discretion over what and how much to pledge. For coherence and compliance purposes, Member States' discretion should be limited. Pledges could be based on qualitative criteria (similar to Article 4.2 of the GR proposal) or on quantified but non-binding reference values. In the latter case, Member States' discretion would be limited politically, not legally, because reference values are non-binding. This pledge system is weaker than a system based on binding national targets but it has the same logic as the pledge and review system of the GR proposal.
- **Legal requirement for Member States to include quantitative targets for removal, for forest restoration, or for both, in its Long Term Low Emission Strategy (LTS):** In this option, the GR would require Member States to include removal and/or restoration targets in their long term climate strategy (LTS). It would be binding to have a target in the LTS, but the GR would not prescribe content of that target. As the LTS are legally non-binding, the targets would not be legally binding either. This option would align well with the logic of the GR proposal which obliges Member States to produce LTS that include reduction targets.
- **Consistency between short term action and long term obligation:** Interim targets and obligation to make short action compatible with long term obligation support compliance with long-term targets.
- **Compliance:** The design of the compliance system depends on whether Member States are obliged to implement a legally binding target or pledge non-binding contributions. If the EU were to choose binding targets, infringement procedures would apply, which is the EU's most

robust system of compliance. As an alternative to infringement procedures, the Commission proposed a compliance system that is based on pledge and review. This system is considerably weaker but has more support in Council.

Complementing these reforms, the **Biodiversity Policy, the Forest Strategy, or the Rural Development Programmes of the Common Agricultural Policy (CAP)** could include the following amendments:

- **Improved coordination:** Coordination between these policies and the 2020-2030 Energy Union should be improved, so as to streamline and facilitate the implementation of a forest restoration target for climate purposes
- **Review of the Forest Strategy:** The review of the Forest Strategy, expected in 2018, is an opportunity to align the Strategy explicitly with a climate target on forest restoration. This, for example, requires that the restoration of forests as contribution to climate objectives is explicitly integrated under the priority 'Forests in a changing climate'. Clarity is needed on what types of activities count as restoration that can count towards climate goals.
- **Forest Management Plans:** Guidance and requirements are needed for Forest Management Plans to integrate benchmarks and targets relevant for forest restoration.
- **Restoration Prioritisation Frameworks:** Targets on forest restoration and CO₂ removals should be integrated in the Restoration Prioritisation Frameworks which Member States have committed to develop under Action 6 of the Biodiversity Strategy. These can enable systematic identification of priority areas for restoration. Prioritisation of areas for restoration should be a stakeholder based process.
- **Forest Information System:** The Forest Information System should provide baseline information on the state of the forests and the progress in restoration of forest ecosystems
- **LULUCF accounting system:** To stimulate forest restoration and avoid negative impacts on the environment (in particular biodiversity), the LULUCF Regulation Proposal should require Member States to report on their progress towards achieving the forest restoration targets for climate objectives, which in turn requires a clear definition of what counts as restoration of degraded forests under the LULUCF Regulation.

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1 Introduction

To keep temperatures to well below 2 degrees, and to pursue efforts towards 1.5 degrees, which is the fundamental objective of the Paris Agreement, reducing greenhouse gas emissions from all sources will be vital, but not sufficient. Effectively all emission reduction pathways that keep temperature increases to 1.5°C and well below 2°C include the need to remove carbon from the atmosphere.¹ These ‘carbon dioxide removal’ (CDR) strategies are called **negative emissions**.

While numerous **CDR technologies** exist, most are still speculative and risky. Bioenergy with carbon capture and storage (BECCS) is an example that has gained particular attention. BECCS burns biomass or biogas in stationary installations that are equipped with carbon capture and storage abilities. Estimates show that by 2050, BECCS could sequester 10 billion metric tons of industrial CO₂ emissions annually worldwide. But to achieve removals of this scale, BECCS would have to take up vast amounts of land. Direct Air Capture (DAC) is another option to remove CO₂ from the atmosphere, but currently this technology is energy intensive and expensive.²

In light of the theoretical nature of today’s CDR technologies, another option is gaining momentum: **restoring degraded forests**. According to some estimates, the restoration of degraded forests could remove up to 330 Gt from the atmosphere in the course of the century.³ If done right, restoring forests would not only avoid the many problems that mar current CDR technologies, but it would also have important co-benefits for biodiversity, water and soil protection. Although restoring degraded forests alone will probably not be able to keep GHG concentrations below 450 ppm over the course of the century, it is a one of the most promising negative emissions options – provided that all countries integrate the forest and land use sector into their climate plans.

Currently, **EU law contains no obligation to restore degraded forests as a contribution to mitigate climate change**. The Commission’s proposal for Energy Union Governance regulation is the first attempt to change this.⁴ The proposal recognises the need for forests and land use to be part of the Long Term Climate Strategies. The recent proposal for a LULUCF Regulation is another attempt to address this. Article 4 of the proposal suggests a ‘no debit’ rule, meaning that sinks must not decline, but contains no target to enhance forests as a natural sink for CO₂ emissions. The proposal also contains no target for the restoration of degraded forests.

This **discussion paper** aims at starting a debate on the governance aspects of climate mitigation through the restoration of degraded forests in the EU. Within its limited scope, the paper focuses on how the Regulation on the Governance of the Energy Union (GR) could better reflect the central role

¹ UNEP (2016). The Emissions Gap Report 2016. United Nations Environment Programme (UNEP), Nairobi

² Carbon Brief: 10 ways negative emission could slow climate change: <http://www.carbonbrief.org/explainer-10-ways-negative-emissions-could-slow-climate-change>

³ Sivan Kartha, Kate Dooley: The risks of relying on tomorrow’s ‘negative emissions’ to guide today’s mitigation action, <https://www.sei-international.org/mediamanager/documents/Publications/Climate/SEI-WP-2016-08-Negative-emissions.pdf>

⁴ Proposal for a Regulation of the European Parliament and Council on the Governance of the Energy Union, amending Directive 94/22/EC, Directive 98/70/EC, Directive 2009/31/EC, Regulation (EC) No 663/2009, Regulation (EC) No 715/2009, Directive 2009/73/EC, Council Directive 2009/119/EC, Directive 2010/31/EU, Directive 2012/27/EU, Directive 2013/30/EU and Council Directive (EU) 2015/652 and repealing Regulation (EU) No 525/2013, COM(2016) 759 final 2016/0375 (COD): By the time of writing this report, Council and Parliament were negotiating this file.

that forests in EU Member States have to play in limiting warming to well below 2°C. The discussion of the GR concentrates on targets, compliance and review. The paper also discusses EU Biodiversity Policy, the Forest Strategy or the Rural Development Programmes under the Common Agricultural Policy (CAP) as well as the proposal for a LULUCF regulation. The paper does not cover EU support for biomass although it is an important aspect of forest restoration policies. While focusing on these instruments, the paper provides broader lessons for the importance of good governance to unleash the potential of Europe's forests for effective climate action.

EU greenhouse gas emission budget and the need for negative emissions

The EU's greenhouse gas (GHG) emission budget for the rest of the century is small and shrinking rapidly. Depending on the method chosen to determine the EU's share in the global GHG budget, it could be as small as a meagre 50 Gt (in 1.5°C scenarios) or 90 Gt (in 2°C scenarios) for the period 2020 and 2100 – if current trends continue until 2020. With current annual emissions of about 4 Gt, the EU would have used up its budget by about 2032. In 2°C scenarios, the EU budget could be exhausted by around 2042.⁵

To have a reasonable chance to stay within the 1.5°C scenario emission budget, the EU should reduce its GHG emissions by around 60% by 2030 and at least 95% by 2050 (compared to 1990) – if the emission budget is calculated based on least cost considerations. If, instead, the budget were distributed purely on the basis of equity, EU reductions would have to be much higher, amounting to 70% by 2030 and 160% by 2050.⁶ These figures show the need for negative emissions, possibly in very large quantities in the second half of the century.

⁵ Ecologic calculation, partly based on a report by Climate analytics: What does the Paris Agreement mean for Finland and the EU? http://climateanalytics.org/files/ca_paris_agreement_finland_eu.pdf (2016)

⁶ Climate analytics: What does the Paris Agreement mean for Finland and the EU? http://climateanalytics.org/files/ca_paris_agreement_finland_eu.pdf (2016)

2 Commission Proposal for a Regulation on the Governance of the Energy Union

On 30 November 2016, the European Commission published a **proposal for the GR**, alongside a package of other related pieces of legislation, the so-called Winter Package. Various aspects of the GR proposal are relevant for forests and their role in reaching the mitigation goals of the PA:

- Targets for the EU and Member States
- Compliance
- Review and target adjustment.

2.1 EU-wide targets for restoring degraded Forests and removing CO₂ through enhancing natural sinks

Currently, the EU has no overall target for restoring degraded forests or removing CO₂ by sinks. The existing LULUCF decision only sets rules for accounting emissions and removals of greenhouse gases that result from LULUCF activities.⁷ This would hardly change if the EU adopts the European Commission's GR proposal as it stands. Article 14 of the Commission's GR proposal requires Member States to prepare **long-term low emission strategies (LTS)**. Article 14 lists three objectives to which these strategies must contribute, two of which explicitly include enhancing removals by sinks. The first of these objectives is fulfilling the EU's and each MS's obligations under the Paris Agreement (PA). The second includes the enhancements of "removals by sinks in all sectors in line with the Union's objective, in the context of necessary reductions according to the IPCC by developed countries as a group, to reduce emissions by 80 to 95% by 2050 compared to 1990 levels in a cost-effective manner". This provision requires Member States to adopt LTS that contribute to enhancing sinks, but it does not establish an EU removal target, nor does it stipulate an explicit obligation to implement the strategies.

The EU would introduce a removal target if it adopts the Commission's proposal for a LULUCF Regulation. **Article 4 of the LULUCF proposal** stipulates that in each Member State the LULUCF sector must not emit more emissions in total than it removes. This "**no-debit rule**" would commit Member States "to ensure that the LULUCF sector should have no net emissions on their territory" – after the application of the accounting rules specified in the Regulation, and taking into account the flexibilities. In other words, the LULUCF sectors have to be at least GHG-neutral. In principle, the GR could reiterate this obligation.

However, the **no-debit rule is clearly insufficient** to help achieve the objective of staying below 2°C or at 1.5°C, because most 2°C or 1.5°C scenarios rely in part on negative emissions. In fact most scenarios assume large amounts of negative emissions that are not possible without removals by

⁷ Article 1 of the LULUCF decision

natural sinks (see above). This means that removals in the LULUCF sector have to exceed its emissions. At least in the long run, removals from the LULUCF sector have to exceed the total emissions from all other sectors. For this reason, the GR and the LULUCF regulation should both clearly stipulate that removals from LULUCF sectors must exceed emissions from the LULUCF sectors and other sectors. The precise quantity of removals necessary depends on overall emission reductions, i.e., high emission reductions would reduce the need for high amounts of removals – and vice versa.

There are **different ways of designing removal targets for the EU in the LULUCF sector**. In any case, it is critical that the target design helps remove the required quantities of CO₂ from the atmosphere. It is also essential that any target design takes into account sustainability concerns, in particular biodiversity, food security, water quality and soil protection. In the light of these requirements, the restoration of degraded forests is a particularly promising way to heed all these concerns:

- In principle healthy or restored forests store significantly more carbon in trees and in particular soils than degraded forest.⁸ A study on carbon stocks and emissions in the Amazon, for example, found that carbon stocks in degraded forests are approximately 70% lower than in intact forests.⁹
- Healthy or restored forests are much better for biodiversity, food security, water quality and soil protection.
- They are more resilient to climate change, disease and other threats.

For this reason, the GR should define removals **primarily in the form of restoration of degraded forests**.

What does restoration of degraded forests mean?

Restoring degraded forests is a complex process that usually spans over long periods of time. This makes a **definition of restoring degraded forests difficult**. According to a definition provided by the **FAO**, it is “the purpose of forest restoration to restore a degraded forest to its original state – that is, to re-establish the presumed structure, productivity and species diversity of the forest originally present at a site”.¹⁰ Pursuant to the definition of the Commission’s Biodiversity Strategy Impact Assessment, restoration of degraded ecosystems means: “In many cases full restoration would require measures to overcome the long-term impacts of some pressures, [...]”.¹¹ According to other defini-

⁸ Mackey, B., ed. (2008). Green Carbon: The Role of Natural Forests in Carbon Storage. ANU E Press, Canberra, ACT; Achat, L: Forest soil carbon is threatened by intensive biomass harvesting, (2015), <https://www.nature.com/articles/srep15991>

⁹ Asner, Gregory et al: High-resolution forest carbon stocks and emissions in the Amazon (2010). The same study found that forests degradation is an important source of carbon emission: Forest degradation, such as from selective logging, increased carbon emissions by 47% over deforestation alone.

¹⁰ <http://www.fao.org/sustainable-forest-management/toolbox/modules/forest-restoration-and-rehabilitation/basic-knowledge/en/>
According to the FAO, restoring forest is different from forest rehabilitation. The purpose of forest rehabilitation “is to restore the capacity of degraded forest land to deliver forest products and services. Forest rehabilitation re-establishes the original productivity of the forest and some, but not necessarily all, of the plant and animal species thought to be originally present at a site.”

¹¹ European Commission, Impact Assessment Biodiversity Strategy, 3.5.2011 SEC(2011) 540 final

tions, restoring means that a degraded area moves up one level to a better ecologic status, or the restoration of the key species, properties and processes of ecosystems and their functions.¹²

An important aspect of restoration is the requirement of moving beyond the baseline, i.e. restoration “means doing something extra above what is business as usual (the baseline). For this reason, implementing what a sector regards as ‘sustainable use’ can only be counted as restoration where this is a significant enough change from the baseline such that the conditions defining restoration are met”¹³.

Globally, there is a total area of lost and degraded forest lands suitable for restoration of more than a billion hectares – an area greater than that of China.¹⁴ In the EU, 1.5 million km² of habitat is in need of restoration to meet the objectives of the Birds and Habitat Directives, of which 400,000 km² include forests.¹⁵

On this basis, the **options for designing specific EU-wide restoration and removal targets are:**

- **Quantitative and legally binding EU targets for CO₂ removal by natural sinks for 2050 and beyond:** This option would set a binding quantitative target for removing a certain amount of CO₂ from the atmosphere through the enhancement of natural sinks. This may, but does not have to, include restoring degraded forests. This option can be combined with the previous one by setting a sub-target for forest restoration.
- **A quantitative and legally binding EU restoration target for 2050 and beyond:** This option would set a binding quantitative EU target for how much degraded forest has to be restored in the EU by 2050. Reflecting Article 4.1 of the PA (climate neutrality in the second half of the century), the EU target should go beyond 2050. Setting a quantitative and legally binding target for the EU is not new. The EU, for example, adopted a legally binding obligation to increase the share of renewable energy to at least 27% of final energy consumption in the EU as a whole by 2030. In terms of content, this option can build on Target 2 of the Nagoya biodiversity plan and Target 2 of the EU Biodiversity Strategy. These targets state that committed countries shall restore at least 15% of degraded ecosystems by 2020.¹⁶ This option can also build on SDG goal 15.3 (Land Degradation Neutrality) and the Aichi Biodiversity Target 15.¹⁷ These political commitments demonstrate that quantitative targets for restoring ecosys-

¹² Lammerant, Johan; Peters, Richard; Snelthage, Mark; Delbaere, Ben; Dickie, Ian; Whiteley, Guy. (2013) Implementation of 2020 EU Biodiversity Strategy: Priorities for the restoration of ecosystems and their services in the EU. Report to the European Commission. ARCADIS (in cooperation with ECNC and Eftec).

¹³ eftec, ECNC, UAntwerp & CEEWEB (2017) Promotion of ecosystem restoration in the context of the EU biodiversity strategy to 2020. Report to European Commission, DG Environment.

¹⁴ <http://www.forestlandscaperestoration.org/topic/map-and-analyse-restoration-potential>

¹⁵ BIO by Deloitte (2015) Restoration efforts required for achieving the objectives of the Birds and Habitats Directives – Final report prepared for the European Commission (DG ENV), in collaboration University of Kent (DICE), VU University Amsterdam (VU) and Stichting BirdLife Europe.

¹⁶ By 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15% of degraded ecosystems.

¹⁷ Aichi Biodiversity Target 1: “By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15% of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification”.

tems are technically feasible and politically accepted. It should be noted, however, that these targets differ from an EU restoration target because they are not legally binding and have shorter time frames, i.e. a target for 2020.

- **Interim targets:** Interim targets for 2030 and 2040 can support implementation of these long term targets because they help ensure that the EU stays on realistic pathways.
- **Non-binding qualitative commitment:** As another option, the EU commits to enhance sinks in a way that it contributes to keeping temperature increases well below 2°C or even 1.5°C.

The **following table** translates these ideas into amendments to the GR proposal and discusses briefly pros and cons of each option:

	Amendments to GR proposal	Pro	Contra
<p>Quantitative and legally binding EU target for 2050 (plus interim targets for 2030 and 2040)</p> <p>Alternative 1: CO₂ removal target</p> <p>Alternative 2: restoration target</p>	<p>New Article 1.1</p> <p>(c) fulfill a Union target of net zero emissions by 2050 at the latest and a shift to net negative emissions thereafter;</p> <p>(d) enhance removals from sinks within the European Union as early as possible, and at a level consistent with the objective of holding the increase in global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5 degrees above pre-industrial levels.</p> <p>Alternative 1 (sentence 2 of Article 1.1.(d)): To contribute to achieving these objectives, the Union shall remove x Gt CO₂ from the atmosphere by 2050 through enhancing natural sinks and primarily restoring degraded forests. By 2030 and 2040, the Union shall remove x Gt CO₂ from the atmosphere and y Gt CO₂ respectively through enhancing natural sinks and primarily restoring degraded forests.</p> <p>Alternative 2 (sentence 2 of Article 1.1.(c)): For the enhancement of sustainable removals from sinks, the Union shall restore at least x % of degraded forest by 2030, y % by 2040 and z % by 2050.</p>	<ul style="list-style-type: none"> • A legally binding target represents the highest possible political commitment. • In principle, quantitative targets are a solid basis for verification and review. Helps to hold the EU accountable. • Helps implement the global target agreed by Member States and the EU in Nagoya to restore 15% of degraded ecosystems by 2020. • Helps implement target 2 of the EU biodiversity strategy. • Fairly tested system under the biodiversity strategy. • Interim targets important to reach the long-term goal. 	<ul style="list-style-type: none"> • Politically difficult. • Measuring the restoration of degraded forests is methodologically challenging. • Usefulness of removal target depends on the overall emission reductions, which complicates the quantification of the removal target. • Target achievement also depends on natural processes, such as drought, fires or disease, which are difficult to control.

Non-binding qualitative commitment	New Article 1.1.(c): support achieving the Union's target of net zero emissions by 2050 at the latest and enhance sustainable removals from sinks at a sufficient level to limit warming to 1.5 / to well below 2°C degrees from pre-industrial levels by the end of the century.	<ul style="list-style-type: none">• Political feasibility relatively high.	<ul style="list-style-type: none">• Fairly weak accountability.• Hard to measure.
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Are CO₂ removal and/or restoration targets in line with EU law?

The EU competence to take action on climate change derives from **Article 191 - 193 of the Treaty on the Functioning of the European Union (TFEU)**. According to Article 192.1, Parliament and the Council, acting in accordance with the ordinary legislative procedure, take the measures deemed necessary to achieve the EU's environmental objectives. According to Article 192.2, the Council takes measures *unanimously* in accordance with a special legislative procedure and after consultation with Parliament, the Economic and Social Committee and the Committee of the Regions, if these measures affect, for example, country planning or land use.

The Commission based its legislative proposal for the GR and LULUCF regulation on Article 192. It did not specify whether the legal basis is 192.1 or 192.2. As an important tool to combat climate change, an **EU removal target** could be based on Article 192.1. As the EU removal target would only bind the EU, not its Member States, there is an argument that the EU removal target could be based on Article 192.1. In this case, the target would be adopted in the ordinary legislative process where Council and Parliament act as co-legislators. The Council acts by qualified majority. As an additional argument supporting Article 192.1 as the right legal basis, the Commission reasoned in its proposal for a LULUCF regulation that “the choice of action in pursuit of the various objectives related to LULUCF will be up to the Member States, thereby also fully respecting subsidiarity”.

Article 192.2 is the right legal basis if the target affects¹⁸ land use and country planning of Member States. This is more likely the case if the EU were to adopt a **forest restoration target, instead of a CO₂ removal target**. Article 192.2 would also be the likely legal basis if EU law were to set binding removal or restoration for Member States (see below). A focus on protecting biodiversity would strengthen the case for Article 192.1. In either case, the EU has the competency to set restoration and removal targets for itself and/or Member States. In other words, EU targets would not be illegal but they could – depending on the specific designs – require unanimous voting in Council (and only consultation with Parliament).

2.2 National targets or Member State pledges to contribute to EU targets?

The EU alone cannot implement EU removal and restoration targets. Implementation depends on the Member States. There are various ways of how the GR can ensure that Member States contribute to the overall EU target:

¹⁸ It should be noted that the term “affect” argues for a broad scope of Article 192.2. Calliess, Christian and Matthias Ruffert, EUV/AEUV. Das Verfassungsrecht der Europäischen Union mit Europäischer Grundrechtecharta, Article 192

- **Binding quantitative targets for each Member State:** In legal terms, this option is similar to the 2009 Renewable Energy Directive (RED), which obliges Member States legally to meet specific national targets for shares of renewable energies in energy consumption. In this option, an Annex specifies that each Member State removes x Gt by 2050 and/or restore x % of degraded forests by 2050. Interim targets for 2030 and 2040 can support the implementation of the long-term targets.
- **Quantified non-binding reference values for Member States:** The regulation could include quantified non-binding reference values that Member States must take into account when designing their policies for restoring degraded forests or removing CO₂ from the atmosphere. This system would be similar to the 2001 Renewable Energy Directive that guided Member States' policies through non-binding reference values.
- **Qualitative obligations to restore degraded forests and to remove CO₂ from the atmosphere:** Member States have to restore degraded forest to enhance natural sinks – as a contribution to meeting the objectives of the Paris Agreement. Member States could also commit to remove CO₂ through restoring degraded forests – also in light of the Paris Agreement.
- **Member States pledge to restore a certain amount of degraded forests and to remove specific quantities of CO₂:** Member States could pledge to restore a certain amount of degraded forests. They could also pledge to remove specific quantities of CO₂ from the atmosphere. The first option builds on the logic of the so-called “Bonn Challenge”. The Bonn Challenge is a global effort to restore 150 million hectares of the world’s deforested and degraded land by 2020, and 350 million hectares by 2030. To contribute to this objective, several governments, but also private companies and community groups, have publically pledged to restore a certain amount of degraded forests. The Global Partnership on Forest and Landscape Restoration (GPFLR) reviews these pledges on a voluntary basis. Member States can base their pledges on qualitative criteria (similar to Article 4.2 of the GR proposal) or quantified but non-binding reference values.
- **Legal requirement for Member States to include quantitative targets for removal, for forest restoration, or for both, in its Long Term Low Emission Strategy (LTS):** In this option, the GR would require Member States to include a removal and/or restoration target in their long term climate strategy (LTS). It would be binding to *have a target* in the LTS, but the GR does not prescribe the content of that target. As the LTS are legally non-binding, Member States would not accept legal commitment.¹⁹

The following table translates these options into amendments to the GR proposal and discusses pros and cons:

¹⁹ As another option, the GR proposal could also require the EU to include restoration and / or removal targets in an EU LTS but currently does not oblige the EU to adopt a LTS.

	Amendment to the GR	Pro	Contra
<p>Legally binding quantitative target for</p> <p>Alternative 1: removing x Gt CO₂</p> <p>Alternative 2: restoring x % of degraded forests by year 2050</p>	<p>New Article 1.1</p> <p>(c) fulfill a Union target of net zero emissions by 2050 at the latest and a shift to net negative emissions thereafter;</p> <p>(d) enhance removals from sinks within the European Union as early as possible, and at a level consistent with the objective of holding the increase in global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5 degrees above pre-industrial levels;</p> <p>Alternative 1 (sentence 2 of Article 1.1. (d)): To contribute to achieving these objectives, the Union aims to remove x Gt CO₂ from the atmosphere by 2050 through enhancing natural sinks and primarily restoring degraded forests. <u>As a contribution to this objective, Member States shall remove CO₂ as set out in Annex X.</u></p> <p>Alternative 2 (sentence 2 of Article 1.1. (d)): For the enhancement of sustainable removals from sinks, the Union aims to restore at least x % of degraded forest by 2040 and y % by 2050. As a contribution to this objective, <u>Member States shall restore degraded for-</u></p>	<ul style="list-style-type: none"> • A legally binding target represents the highest possible political commitment. • Quantitative targets are a solid basis for verification and review. Helps to hold Member States accountable. 	<ul style="list-style-type: none"> • Politically difficult because probable legal basis is Article 192.2, which requires unanimity in Council. • Measuring the restoration of degraded forests is methodologically challenging. • Given the diversity of forested land in Member States, it is methodologically difficult to set national targets.

	ests as specified in Annex X.		
Legally non-binding reference values for MS	<p>As above but with the following variations:</p> <p>Alternative 1 (sentence 2 of Article 1.1.(d)): As a contribution to this objective, <u>Member States aim – in a legally non-binding manner - to remove an specified amount of CO₂ from the atmosphere as indicated in Annex X.</u></p> <p>Alternative 2 (sentence 2 of Article 1.1.(d)): As a contribution to this objective, <u>Member States aim – in a legally non-binding manner - to restore degraded forests as indicated in Annex X.</u></p>	<ul style="list-style-type: none"> • Politically relatively ambitious • Politically less difficult than the previous option because probable legal basis is Article 192.1 which does not require unanimity in Council and involves Parliament as full co-legislator. • Quantitative reference values are a fairly solid basis for verification and review. 	<ul style="list-style-type: none"> • Measuring the restoration of degraded forests is methodologically difficult. • Given the diversity of forested land in Member States, it is methodologically difficult to set national reference values.
Qualitative commitments	<p>New Article 1.1</p> <p>(d) Member States shall enhance removals from sinks – primarily through the restoration of degraded forests – at a sufficient level to limit warming to 1.5 / to well below 2°C from pre-industrial levels by the end of the century.”</p>	<ul style="list-style-type: none"> • Politically less ambitious than the previous options but likely to have more support in Council and Parliament. 	<ul style="list-style-type: none"> • Verifying the restoration of degraded forests is methodologically difficult.
Member State pledges in line with qualitative criteria (similar to the RES pledges under the COM Governance pro-	<p>Article 4</p> <p>When setting their contribution for removing CO₂ from the atmosphere through enhancing natural sinks, Member States shall take into account the following (a)</p>	<ul style="list-style-type: none"> • This option is similar to the pledge and review system of the GR proposal. It is also similar to the system of Paris 	<ul style="list-style-type: none"> • Considerable weaker compliance system than previous option. • Qualitative criteria weaken the

<p>posal).</p>	<p>as regards to the dimension of "Decarbonisation":</p> <p>(1) with respect to greenhouse gas emissions and removals and with a view to contributing to the achievement of the economy wide EU greenhouse gas emissions reduction target:</p> <p>ii. the Member State's commitments pursuant to Regulation [] [LULUCF];</p> <p>iii. the EU-level target;</p> <p>iv. removal capacities;</p> <p>(v) weighted average cost of capital;</p> <p>(vi) GDP evolution and forecast</p>	<p>Agreement.</p> <ul style="list-style-type: none"> • Political support for this option might be higher than for the previous options. 	<p>Commission's ability to challenge pledged contributions.</p> <ul style="list-style-type: none"> • Not tested in practice – in contrast to the system of national targets.
<p>MS to pledge the restoration of a certain amount of degraded forests in line with legally non-binding reference values for MS</p>	<p>Article 5</p> <p>1. When setting their contribution for removing CO₂ from the atmosphere through enhancing the natural sinks, Member States shall take into account the following:</p> <p>(a) the reference values set out in Annex X</p> <p>(b) the EU-level target</p>	<ul style="list-style-type: none"> • Non-binding reference values strengthen MS accountability. • Although reference values might be reminiscent of binding targets, they are fundamentally different from legally binding targets because they are non-binding and non-enforceable. 	<ul style="list-style-type: none"> • Politically difficult. • Measuring the restoration of degraded forests is methodologically difficult.
<p>Qualitative non-binding target for 2050 as a part</p>	<p>Article 14.2.(c)</p>	<ul style="list-style-type: none"> • Embedded in the long term strategies. 	<ul style="list-style-type: none"> • Target would be part of the LTS, a legally non-binding

of EU LTS	The long-term low emission strategies shall cover: (e) a separate target for the removals of CO ₂ from the atmosphere and the restoration of degraded forests whereby removals aim to fill the gap between the emissions reductions and net zero.		document. This weakens the political relevance of the target. • Qualitative target hard to measure and verify.
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2.3 Compliance

The design of the compliance system depends on whether Member States are obliged to implement a legally binding target or pledge contributions – in line with non-binding reference values or qualitative criteria. If the EU were to choose binding targets, **infringement procedures** would apply. A Member State would violate its legal obligations if it did not fulfil a legally binding target. In all other cases – non-binding reference values, or pledge system – infringement procedures would not be possible because infringement requires the violation of a legal obligation (Articles 258 and 259 TFEU).

As an alternative to infringement procedures, the Commission proposed a compliance system that is based on pledge and review. Accordingly, the regulation obliges Member States to pledge contributions to achieving the EU targets for renewable energy and energy efficiency. The Commission assesses whether contributions pledged by Member States are sufficient and whether the EU makes sufficient progress towards implementing the objectives of the Energy Union. On the basis of this assessment, the Commission can issue **recommendations to Member States**. These recommendations are legally non-binding; Member States must “take utmost account” of recommendations from the Commission (Articles 9.3 and 28.2 of the proposal). Member States have to explain how they implemented recommendations.

The following table discusses amendments to the GR proposal as well as pros and cons:

	Amendment to the GR	Pro	Contra
Infringement procedures	No amendment to the GR required.	<ul style="list-style-type: none"> • Commonly used and tested tool for law enforcement in the EU • Infringement procedures are an effective tool for enforcing of EU law.²⁰ 	<ul style="list-style-type: none"> • Infringement proceedings suffer from their considerable length
Recommendations by Commission	No amendments to Article 9, 25-28 necessary because the recommendations issued according to these provisions address the “Energy Union objectives”, which will include removals by sinks (as discussed above)	<ul style="list-style-type: none"> • Fairly high political support 	<ul style="list-style-type: none"> • Commission must base its recommendations on weak criteria. This will provide Member States with many ways to evade or contest the recommendations. • Unlike the process under the Macroeconomic Imbalance Procedure, there is no dedicated process for verification and subsequent consequences for a lack of implementation.

²⁰ According to the 2015 Commission report “Monitoring the application of Union law” “Member States frequently take the necessary measures to comply with the judgment of the Court promptly”.

2.4 Review and target adjustment

Article 38 of the GR proposal establishes a review of the regulation every five years, starting on 28 February 2026. It foresees a report by the Commission to the European Parliament and the Council which assesses the operation of the regulation and its “contribution to the governance of the Energy Union”. The report also assesses the conformity of its planning, reporting and monitoring provision with other EU laws or future decisions relating to the UNFCCC and the PA. In consequence, **the proposed review implicitly covers removals by forest sinks**. Importantly, the Article gives the Commission the mandate to make proposals as deemed appropriate.

The proposed reviews cover the operation of the regulation and provide for specific deadlines. The fairly broad scope of the review, specific deadlines and reference to the UNFCCC and PA are positive – in principle.

The proposed review, however, suffers from a number of shortcomings:²¹

- **Scope too narrow:** The review does not address whether the current EU targets are sufficient to help ensure the transition to a net zero carbon economy. In the absence of a removal target, it is equally silent on emission removals. The proposed review only covers the operation of the regulation and its “contribution to the governance of the Energy Union”.
- **Scope unclear:** The review assesses the GR’s contribution to the governance of the Energy Union. It is unclear how the GR can contribute to the governance of the Energy Union. The term “governance” is not defined in the GR. It is equally unclear how the GR can contribute to the governance.²² Furthermore, the review assesses the conformity of its planning, reporting and monitoring provisions with “future decisions relating to the UNFCCC and the PA”. It is not clear whether future decisions relating to the UNFCCC and PA are only decisions of the EU that relate to the international climate regime or decisions adopted in the context of the UNFCCC and PA.
- **No dedicated mechanism for ratcheting up of climate targets:** The GR proposal merely states that the Commission may make proposals, if appropriate. This is a standard clause that is common to many other pieces of EU legislation, but it does not contain a dedicated mechanism for scaling-up the EU’s targets and ambition. It is up to the political will of the Commission to propose higher targets – or to make no proposal at all. Given the size of the challenge – emission reductions of at least 95 % (compared to 1990) – and the requirement of the PA to regularly scale up targets (Article 3 and 4.3 of the PA), the new GR should provide for a system that spurs and maintains the continuous increase of EU ambition over time.

²¹ Matthias Duwe, Nils Meyer-Ohlendorf, Katharina Umpfenbach: Governance of the Energy Union, Assessment of the Commission Proposal for a Governance Regulation (2017),

http://ecologic.eu/sites/files/publication/2017/duwe_et_al._2017_assessment_of_governance_regulation_-_ecologic_institute.pdf

²² see Velten, Duwe (2016) Smart Cash for the Climate: Maximising Auctioning Revenues from the EU Emissions Trading System. An analysis of current reporting by Member States and options for improvement. Available online at http://www.maximiser.eu/s/MaxiMiseR-ETS-full-technical-report_FINAL.pdf

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There are various ways in which the GR can address the lack of an adequate review and dedicated ratchet mechanism. Recent Ecologic papers explored options on how EU legislation provide for robust review and ratchet mechanism in detail.²³ As the strongest option, EU legislation should include quantified interim and long-term EU targets for 2040, 2050 and beyond, combined with a robust review system and a mechanism for ratcheting up targets. In line with the PA, these reduction targets should progress over time and reflect the level of ambition the PA requires. As an additional element, the Commission could be required to review whether EU climate targets, including targets for CO₂ removal and forest restoration, constitute an adequate contribution of the EU to global climate action – or not. Based on these reviews, the Commission could be required to propose targets for the EU and Member States. The proposals would start the ordinary legislative process. To ensure high levels of scientific credibility, this process should be based on a preparatory report from the European Environment Agency (EEA) or another independent scientific body.²⁴

²³ Nils Meyer-Ohlendorf EU Climate Policies after 2020: Robust Review and Ratcheting Up Targets, <http://ecologic.eu/sites/files/publication/2017/2120-robust-review-and-ratcheting-up-targets.pdf> and Matthias Duwe, Nils Meyer-Ohlendorf, Katharina Umpfenbach: Governance of the Energy Union, Assessment of the Commission Proposal for a Governance Regulation (2017), http://ecologic.eu/sites/files/publication/2017/duwe_et_al._2017_assessment_of_governance_regulation_-_ecologic_institute.pdf

²⁴ Nils Meyer-Ohlendorf EU Climate Policies after 2020: Robust Review and Ratcheting Up Targets, <http://ecologic.eu/sites/files/publication/2017/2120-robust-review-and-ratcheting-up-targets.pdf> and Matthias Duwe, Nils Meyer-Ohlendorf, Katharina Umpfenbach: Governance of the Energy Union, Assessment of the Commission Proposal for a Governance Regulation (2017), http://ecologic.eu/sites/files/publication/2017/duwe_et_al._2017_assessment_of_governance_regulation_-_ecologic_institute.pdf

3 Forest restoration in existing EU land management policies – Biodiversity Policy, Forest Strategy, Rural Development Programmes, and LULUCF

How do existing EU policies already support restoration of degraded forests? What existing instruments (targets, monitoring, reporting, funding) can be built on to effectively implement a target on the restoration of degraded forests for the purpose of climate mitigation? These questions are briefly examined below in relation to four key land management policies:

- Biodiversity Policy,
- Forest Strategy,
- Rural Development Programmes under the Common Agricultural Policy (CAP), and
- the Proposal for the LULUCF Regulation post 2020.

3.1 Biodiversity Policy

EU biodiversity policy is an important driver for sustainable forest management in Europe, including forest restoration. **EU biodiversity policy** includes legally binding instruments, in particular the Birds and Habitats Directives, and non-binding instruments, such as the Biodiversity Strategy and the LIFE Programme. The Birds and Habitats Directives, which set out legally binding requirements for biodiversity conservation in the EU's Natura 2000 network, are of particular importance for forests since 50% of the Natura 2000 Network is covered with forests. The management of protected areas and achievement of favourable status for bird species also includes the restoration of forest ecosystems. Moreover, as mentioned above, the Biodiversity Strategy's Target 2 explicitly requires the restoration of at least 15% of degraded ecosystems by 2020. The Biodiversity Strategy is not legally binding as such and the Target 2 is a short-term target up to 2020, whereas the Habitats and Birds Directives include a robust and legally binding framework within which forest restoration can take place. Much of restoration work contributing to Birds and Habitats Directive objectives is funded via the LIFE funding programme.

The scale of restoration efforts required to meet the objectives of the Birds and Habitats Directives is significant. According to a recent study, **over 1.5 million km² of habitat in the EU is in need of restoration to meet these objectives, of which 400,000 km² include forests.**²⁵

The forest restoration target within the climate policy framework can therefore build on the objectives, monitoring, reporting and financing framework available for biodiversity conservation in Europe. It would link directly with the Target 2 and with the concept of 'favourable conservation status' under the Birds and Habitats Directives. Forest restoration delivers benefits both for biodiversity and for climate purposes, and there are strong synergies between biodiversity and climate

²⁵ BIO by Deloitte (2015) Restoration efforts required for achieving the objectives of the Birds and Habitats Directives – Final report prepared for the European Commission (DG ENV), in collaboration University of Kent (DICE), VU University Amsterdam (VU) and Stichting BirdLife Europe.

policies. Restoration of biodiversity in forests promotes their resilience against climate change impacts, safeguarding the carbon stored in forests. At the same time, biodiversity restoration also increases carbon storage in forests²⁶.

Moreover, forest restoration also directly contributes to the **implementation of the Water Framework Directive (WFD)** and the legal obligation to reach 'good ecological status.' Sustainable forest management (including restoration aspects) is integrated for the purpose of maintaining and restoring the protective functions of forests, i.e. the protection of soils from soil erosion, protection from flooding by increasing water retention in forests and contributing to the maintenance of water quality downstream.

The Biodiversity Policy already supports the restoration of forest ecosystems by setting the legal framework for biodiversity protection. However, the implementation and enforcement of the Birds and Habitats Directives, as well as the Biodiversity Strategy lag behind, and there is clearly need to improve them. To **enhance the contribution of Biodiversity Policy to the forest restoration target for climate objectives**, the following is needed:

- **Improved implementation of the Birds and Habitats Directives:** A climate target for forest restoration would reinforce the need to improve the implementation of Biodiversity Policy.
- **Improved coordination with Energy Union:** The work under the Energy Union should clearly demonstrate how the Biodiversity Strategy is linked to the 2020-2030 climate policy and vice-versa while ensuring that synergies between the policies are built on.
- **Restoration Prioritisation Frameworks:** The GR forest restoration target should be integrated in the Restoration Prioritisation Frameworks that Member States have committed to develop under Action 6 of the Biodiversity Strategy. These can enable systematic identification of priority areas for restoration. Prioritisation of areas for restoration should be a stakeholder-based process.²⁷

3.2 Forest Strategy

The EU has historically provided strategic guidance rather than setting out legislative or prescriptive requirements in relation to forestry. The EU Forest Strategy, adopted in 2013, is the EU's main forestry policy document. The Strategy sets the political goal that by 2020 Member States 'ensure and demonstrate that all forests in the EU are managed according to sustainable forest management principles.' This principles is defined as:

²⁶ <https://www.cbd.int/doc/publications/cbd-ts-43-en.pdf>

²⁷ Lammerant, Johan; Peters, Richard; Snethlage, Mark; Delbaere, Ben; Dickie, Ian; Whiteley, Guy. (2013) Implementation of 2020 EU Biodiversity Strategy: Priorities for the restoration of ecosystems and their services in the EU. Report to the European Commission. ARCADIS (in cooperation with ECNC and Efttec)

“using forests and forest land in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems.” (p3)

To operationalise these principles, the Strategy requires the publication and application of sustainable forest management criteria, which include activities to contribute to the restoration of degraded forest ecosystems.²⁸ However, the **Sustainable Forest Management Criteria remain vague**²⁹. When implemented, the criteria **in most cases do not include targets or thresholds**, such as, for example, on the amount of deadwood or measures to increase it, or the share of forests in N2000 areas with a management plan, or the use of low impact silviculture³⁰. As a consequence, the economic and industrial interests have driven European forest management at the expense of ecological and social functions, resulting in a situation where forest ecosystems are among the most degraded habitats in Europe: 60% of Europe’s forests classify as unfavourable biodiversity conservation status³¹.

Moreover, sustainable forest **management criteria do not lead to restoration**, since restoration requires going beyond the business-as-usual and the baseline state of the forest, even if management here involved sustainability criteria. In this respect, the technical implementation work under the Target 2 of the Biodiversity Strategy provides more clarity on the types of activities that can count as restoration.

Forest Strategy touches on the restoration of ecosystems as well as climate change under the priority area “*Sustainable forest management contributes to major societal objectives*”. The Strategy, however, **does not directly state that restoration of degraded forests is relevant for climate mitigation**, or explicitly make the link on how forest restoration contributes both to biodiversity and mitigation objectives. Priority 3 - “*Protecting forests and enhancing ecosystem services*” - states that: “Protection efforts should aim to maintain, enhance and *restore forest ecosystems’ resilience and multi-functionality* as a core part of the EU’s green infrastructure, providing key environmental services as well as raw materials.” Priority 4 – “*Forests in a changing climate*” - places the emphasis on Member States demonstrating:

- “how they intend to increase their forests’ mitigation potential through increased removals and reduced emissions, including by cascading use of wood, taking into account that the new LIFE+ subprogram for Climate action and Rural Development funding can promote and support new or existing forest management practices that limit emissions or increase net biologi-

²⁸ Standing Forestry Committee ad hoc Working Group on Sustainable Forest Management Criteria & Indicators. Final report. 30/07/2015. https://ec.europa.eu/agriculture/sites/agriculture/files/forest/publications/pdf/sfcci-report_en.pdf

²⁹ European Court of Auditors Special Report N°9/2004 on Forestry Measures within Rural Development Policy.

³⁰ http://www.fern.org/sites/fern.org/files/Forest%20Strategy%20briefing%20for%20EP_Nov%202014.pdf

³¹ <https://www.eea.europa.eu/data-and-maps/figures/conservation-status-of-forest-related-1>

cal productivity (i.e. CO₂ removal). They should do this by mid-2014 and in the context of their information on LULUCF actions;

- how they enhance their forests' adaptive capacities and resilience, building on the actions proposed in the EU Strategy on Adaptation to Climate Change¹⁵ and the Green Paper on Forest Protection and information, such as bridging knowledge gaps and mainstreaming adaptation action in forest policies.”

Priorities 3 and 4 are interlinked; however, it is possible that they are also handled separately by Member States and mitigation related activities do not include restoration measures, or worse, include management focused on carbon sinks at the expense of other ecosystem services (e.g. via eucalyptus plantations). A review of the planned actions reported by Member States in their LULUCF reporting could demonstrate the extent to which MS are planning restoration measures. However, this review is beyond the scope of this paper.

To implement these and other priorities, concrete actions are foreseen in the **Forest Multi-Annual Implementation Plan (Forest MAP)** for 2015 – 2020.³² One of these actions is also to set up the Forest Information System of Europe that is to include various modules, including models on forests and climate change and forest and ecosystem services. Since forests are supposed to deliver multiple objectives, the balancing of these objectives requires a good information basis and the National Forest Inventories are already present in most EU Member States.

The Strategy also promotes the role of **Forest Management Plans (FMPs)** as tools to implement sustainable forest management and also forest restoration. The EU 2020 Biodiversity Strategy, in particular the target 3 of the Biodiversity Strategy – i.e. Increase the role of agriculture and forestry to maintaining and enhancing biodiversity – reasserts the importance of forest management plans for forest biodiversity³³:

Forests: By 2020, forest management plans or equivalent instruments, in line with Sustainable Forest Management (SFM), are in place for all forests that are publicly owned and for forest holdings above a certain size (to be defined by the Member States or regions and communicated in their rural development programmes) that receive funding under the EU rural development policy so as to bring about a measurable improvement³⁴ in the conservation status of species and habitats that depend on or are affected by forestry and in the provision of related ecosystem services as compared to the EU 2010 baseline.

However, the content of Forest Management Plans has so far not been prescribed and can vary strongly between Member States. According to the State of Forest 2015 report, 70% of forests in Europe have a management plan; however there are strong differences in the importance, form, con-

³² COM (2015) Multi-annual Implementation Plan of the new EU Forest Strategy

³³ Lammerant, Johan; Peters, Richard; Snethlage, Mark; Delbaere, Ben; Dickie, Ian; Whiteley, Guy. (2013) Implementation of 2020 EU Biodiversity Strategy: Priorities for the restoration of ecosystems and their services in the EU. Report to the European Commission. ARCADIS (in cooperation with ECNC and Eftec).

³⁴ Improvement is to be measured against the quantified enhancement targets for the conservation status of species and habitats of EU interest in Target 1 and the restoration of degraded ecosystems under Target 2.

tent and the use of these plans.³⁵ The FMPs could potentially be used as tools to operationalise forest restoration targets at national / regional level and demonstrate how forest restoration is being promoted. However, in practice this has largely not been the case. Previous analyses show that the plans have so far predominantly focused on production issues, with biodiversity concerns insufficiently integrated³⁶.

Since Forest Strategy has no legal weight nor mandatory requirements, it cannot provide sufficient drive for Member States to halt forest degradation in context of climate change and economic pressures. Instead **an alternative binding instrument needed in the form of a target for restoring degraded forests and/or removing CO₂**. Such a target would require Member States to put in place measures improve the carbon stocks of forest ecosystems to while also protecting biodiversity of forest ecosystems.

In terms of improvements to the Forest Strategy itself, the following steps are needed:

- The **review of the Forest Strategy**, expected in 2018, should be used to better align the further implementation of the Strategy explicitly with a climate target on forest restoration set out in the Governance Regulation. This, for example, requires that the emphasis on restoration of forests as contribution to climate objectives is explicitly integrated under the priority 'Forests in a changing climate'. Clarity is needed on what types of activities count as restoration that can count towards climate goals, and how the climate benefits from monitoring of restoration (either based on activity-reporting or otherwise).
- Clear **guidance and requirements are needed for Forest Management Plans** to integrate benchmarks and targets relevant for forest restoration.
- Improvements in the **Forest Information System** to provide a baseline information on the state of the forests and progress in restoration of forest ecosystems

3.3 Rural Development Programmes

Rural Development Programmes (RDP) under the Common Agricultural Policy are the main EU funding instrument for forest-related actions and the implementation of the Forestry Strategy. They represent up to **90% of total EU funds spent on forestry**, and the Forest Strategy states that the RDP funds should, among others, prioritise support for "improving the resilience, environmental value and mitigation potential of forest ecosystems; achieving nature and biodiversity objectives; adapting to climate change; conserving genetic resources; forest protection and information; and creating new woodland and agro-forestry systems."³⁷

³⁵ FOREST EUROPE, 2015: State of Europe's Forests 2015

³⁶ <http://www.fern.org/sites/fern.org/files/pubs/reports/cbd/finalcbd.pdf>

³⁷ SWD(2013) 343 final.

One of the six EU-wide strategic priorities set out in the RDP Regulation is **directly focused on the restoration of forest ecosystems**, i.e. Priority 4 - restoring, preserving and enhancing ecosystems related to agriculture and forestry. Moreover, Priority 5 - promoting resource efficiency and supporting the shift toward a low-carbon and climate-resilient economy in the agriculture, food and forestry sectors – also addresses forest management. Forestry activities can be funded via a menu of measures that Member States can choose to use.

Activities directly relevant to restoration are included under measure *M08 - Investments in forest area development and improvement of the viability of forests*. The funding for restoration of forests in this measure is limited and focused on restoration from natural events, rather than degradation due to unsustainable management. Moreover, *M15 - Forest-environmental and climate services and forest conservation* offers payments for management actions that go beyond the mandatory requirements in forest management. The table below shows the actions that Member States can fund under measure M08 and the estimated funds planned for the measure for 2014 - 2020³⁸:

Action	RDP funding 2014 - 2020
Afforestation and creation of woodland	2,2 billion € (564,000ha)
Establishment of agro-forestry systems	N/A
Prevention and restoration of damage to forests from forest fires and natural disasters and catastrophic events	1,5 billion € for prevention, 780 million € for restoration
Investments improving the resilience and environmental value of forest ecosystems	1,5 billion €
Investments in forestry technology and processing, marketing of forest products	830 million €
Total	6,81 billion € (6,8% of total RDP funds)

This shows that the **funding available for the measure M08 is limited** compared to the total funding available for RDPs, and the proportion targeting restoration represents only 780million of 6,81 billion funds available or 11.4% of this funding.

Although RDPs are the most important EU funding instrument for forestry, their limited reach is also reflected in the forest area which is covered by management contracts for environmental purposes. For the period 2014 – 2020 only 11.35% of forest area under management contracts is targeted to support biodiversity, improve soil management or water management.³⁹

³⁸ http://ec.europa.eu/environment/forests/pdf/conf_23_05_2016/Gafo.pdf

³⁹ https://ec.europa.eu/agriculture/sites/agriculture/files/rural-development-2014-2020/country-files/common/rdp-list_en.pdf

Because forestry measures available in RDPs are **not compulsory** for Member States to implement, the degree of support for forests and forest restoration via RDPs also ranges significantly from one Member State to another. As seen from the figures above, even if Member States select to fund forestry measures, this may not include restoration and the potential impact of these measures is limited by the total amount of funding allocated and the area targeted.

The Forest MAP foresees an assessment of the contribution of sustainably managed forests to rural development and the role that forest management has been given in the 2014 – 2020 Rural Development Programmes. Based on such an overview it would be possible to judge better how RDPs 2014 – 2020 are being used for forest restoration and how the design of the Rural Development Programmes would need to be adjusted in order to better support the restoration of degraded forests.

The **main step needed to improve the contribution of RDPs to forest restoration** is to:

- Increase the funding available to support forest restoration via RDPs. Given the many objectives to which RDPs contribute, this would in the first instance require further increase of rural development funds as a whole, and within the RDPs sufficient priority given to restoration, Any economic incentives provided through the RDPs should clearly demonstrate a positive contribution to biodiversity, climate and soil protection. This calls for clear guidelines to guarantee that only improved forestry practices with measurable positive environmental and climate benefits are eligible for support.
- Based on the results of the evaluation of RDPs 2014 – 2020 foreseen by Forest MAP, identify improvements needed for the design of RDP measures so that these effectively support restoration
- The Commission criteria for RDPs' approval should assess whether restoration and protection of forests are adequately included in RDPs.

3.4 Proposal for LULUCF Regulation

The **LULUCF decision** of 2013 (COM 529/2013)⁴⁰ includes the measures “incentivising rewetting and restoration of mires” and “restoration of degraded lands” in Annex IV which gives a list of indicative measure that can be included under LULUCF accounting.⁴¹ This 2013 Decision will be replaced by the new **LULUCF Regulation** from 2020 onwards. The LULUCF Regulation Proposal does not use the term forest restoration, and it is not clear how tracking towards the achievement of forest restoration target would be carried out.

Forest restoration relates to three **land accounting categories**:

⁴⁰ Decision 529/2013/EU of the European Parliament and the Council on accounting rules on greenhouse gas emissions and removals resulting from activities relating to land use, land-use change and forestry, and on information concerning actions relating to those activities

⁴¹ In Annex IV.

- afforested land: land use reported as cropland, grassland, wetlands, settlements, and other land converted to forest land;
- deforested land: land use reported as forest land converted to cropland, grassland, wetlands, settlements, and other land;
- managed forest land: land use reported as forest land remaining forest land.

Forest restoration can involve conversion to afforested land or management within the managed forest land. However, as already mentioned above, the increase in carbon sink through conversion from cropland to afforested land or within managed forests does not necessarily equate restoration. To stimulate forest restoration as well as to avoid negative impacts on the environment (in particular biodiversity), the LULUCF Regulation Proposal should require Member States to demonstrate, as part of their accounting / reporting process, that mitigation actions involving forests have a positive contribution to EU biodiversity objectives as outlined in the Biodiversity Strategy and the Birds and Habitats Directives. Specifically, this would also require an amendment that **Member States need to report on the progress towards achieving the forest restoration target for climate objectives**, which in turn requires a clear definition of what counts as restoration of degraded forests under the LULUCF Regulation.

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