



The role of the forestry sector in reducing European emissions: the European Commission starts with a tally

Valentin Bellassen, Mariana Deheza

► To cite this version:

Valentin Bellassen, Mariana Deheza. The role of the forestry sector in reducing European emissions: the European Commission starts with a tally. [Research Report] 17, auto-saisine. 2012, 7 p. hal-01152330

HAL Id: hal-01152330

<https://hal.science/hal-01152330>

Submitted on 15 May 2015

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

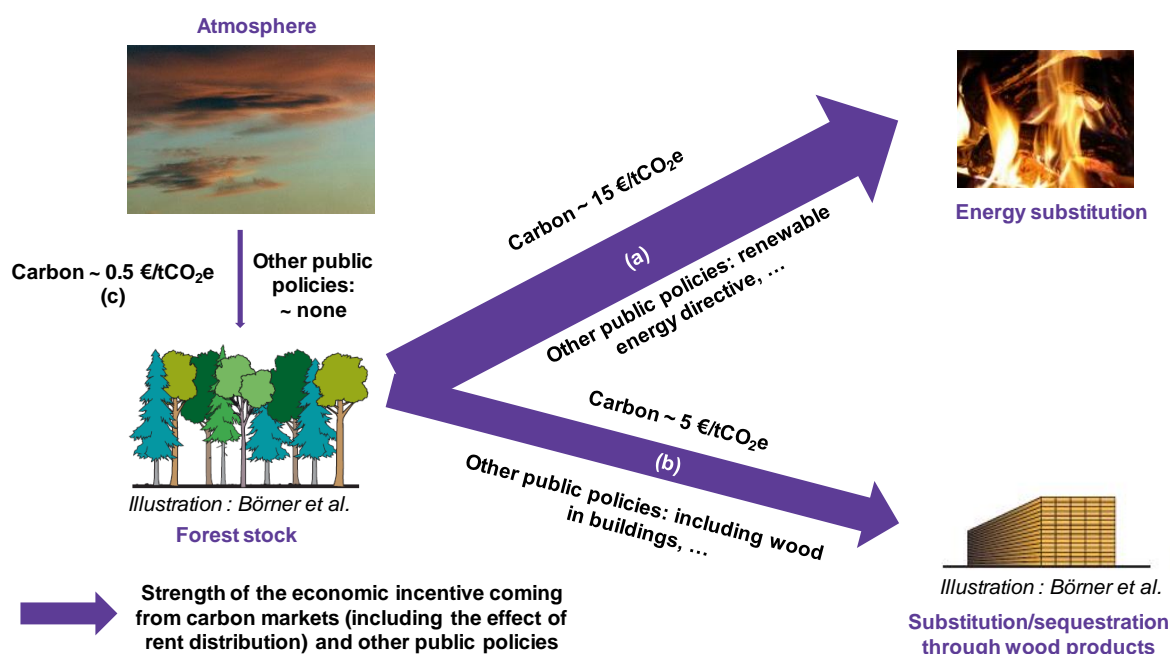
L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

The role of the forestry sector in reducing European emissions: the European Commission starts with a tally

On March 12th 2012, after two years of consultations and reviews, the European Commission published a decision proposal regarding the inclusion of the land use and forestry sector in European climate policy. The aim of this proposal is to impose accounting rules that are consistent with the decisions of the United Nations Framework Convention on Climate Change (UNFCCC), and to harmonise them between Member States. Meanwhile, the issue of economic incentives aimed at guaranteeing the sector's contribution to climate mitigation is postponed until a later date.

Background: an unbalanced set of economic incentives

Figure 1 – Level of the incentives aimed at reducing emissions in the forestry and wood sector



The suggested euro amounts for carbon incentives are an order of magnitude, and are not based on exact calculations. Their sole aim is to illustrate the strength of the incentive. Aside from the incentive for energy substitution (a) granted directly by the EU ETS, these amounts are very approximate, and reflect the complexity of the sector's accounting rules for forest carbon stocks (c), as well as the indirect incentive provided by the EU ETS (via the relative disadvantaging of other materials) for materials substitution (b).

Source: CDC Climat Research.

The Climate & Energy Package encourages substituting wood for fossil fuels

The Climate & Energy Package adopted by the European Union in 2009 focuses on three areas: reducing greenhouse gas (GHG) emissions by 20%; increasing the renewable energies' share of the energy mix to 20%; and improving energy efficiency by 20%, all by 2020. These goals are primarily supported by the introduction of:

- a CO₂ emission trading scheme at the European level (EU ETS), which involves the power generation and heavy industry installations with the highest emissions;
- feed-in tariffs and other kinds of subsidies or regulatory obligations at the Member State level.

The EU ETS sends a CO₂ price signal to economic players, which encourages them to use more wood and less coal. In fact, CO₂ emissions from wood combustion are not recognised, as the resource is considered as renewable. In this Brief, an indicative value of €15 per tCO₂e has been assigned to this incentive, i.e. the average 2011 allowance price (Figure 1a). This type of substitution has been very widely observed in thermal power stations since the system was implemented in 2005. National policies, including incentive-based policies aimed at achieving the target of increasing the renewable energies' share of the energy mix are pushing toward the same direction.

Furthermore, wood is a material with a much less energy-intensive production process than its alternatives, like steel, or concrete for the construction industry, or plastic for furniture, etc. In these sectors, the CO₂ price set by the EU ETS therefore gives wood a comparative advantage, all other things being equal. In practice, the effectiveness of the system is less obvious than for energy, primarily because the manufacturers of other materials have historically been assigned a generous allocation of free allowances (Figure 1b). Other policies on materials supplement the EU ETS at the national level: in France, for instance, there is a mandatory minimum threshold for the use of wood in buildings.

Forest carbon capture is neither recognised nor encouraged by international climate policy

Although the EU ETS provides indirect economic incentives to use more wood, the incentives to replenish the resource upstream of the forestry sector are low. These incentives are quantified at €0.50 per tCO₂e in this Brief (Figure 1c). The reason is simple: forestry is the only sector that is not included in the European Union's GHG reduction target. In theory, foresters who see their sales boosted by substitution incentives ought to invest in forests, in order to muster the resources to supply a growing demand. In reality, however, although the price of a cubic meter of wood may have an influence on the foresters' harvesting decision, it has little influence on their investment choices in a replanting where revenues only materialise between 50 and 100 years later. The imbalance between the incentives shown in Figure 1 therefore risks causing the growth/harvest cycle to seize up by 2016, with a forestry resource that is unable to follow the demand for wood due to lack of investment (Ellison *et al.*, 2012).

The Kyoto rules, 2001 version: no incentives for carbon sequestration in forests

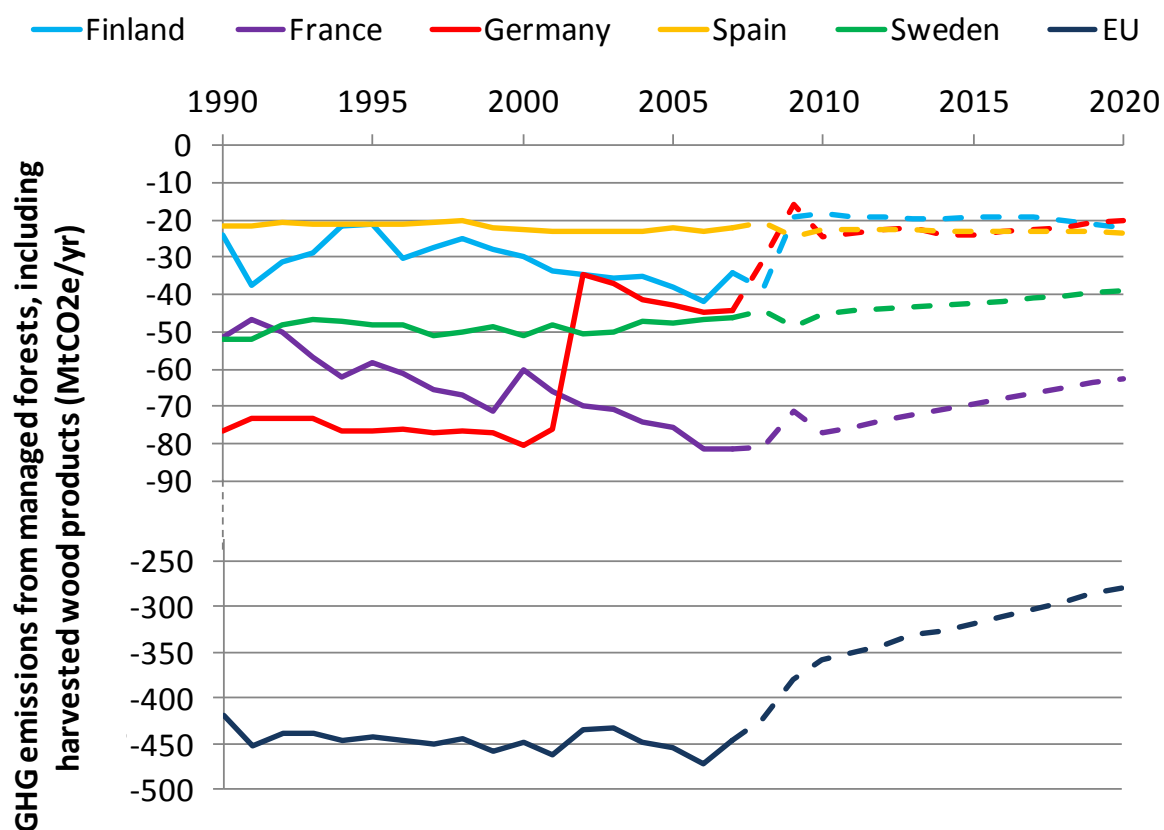
The failure to include the forestry sector in European targets is undoubtedly the result of the accounting rules for the sector during the first Kyoto Protocol commitment period (2008-2012). The complexity of these rules – a credit ceiling that is below the balance for most countries, and the authorisation to carry part of the “forestry management” balance over to the “afforestation & deforestation” balance, etc. – has resulted in an intractable quandary (Bellassen and Deheza, 2009). As a result, policy makers in Annex I countries have done little to incentivize carbon sequestration or stock replenishment in their forests. Only one forestry carbon offset project, in Romania, has been registered as part of Joint

Implementation (JI), while only one country, New Zealand, has partially included the sector in its carbon market (Sartor and Deheza, 2010; UNEP-Risoe, 2012).

The Kyoto rules, 2011 version: submission of a “forest” carbon balance, and reference level review

Since 2010, this conclusion is acknowledged by most negotiators, who are intent on changing the sector recognition rules for the second Kyoto Protocol commitment period. One of the changes envisaged involves no longer referring to the total forest balance, but comparing it to a “business-as-usual” scenario, or reference level. In fact, the Cancun Conference, held in late 2010, required industrialised countries to submit a reference level for their managed forests carbon balance to the UNFCCC, and that reference level to be audited by UNFCCC-accredited forestry experts. The main European countries with large forested areas are expecting a downturn in the amount of carbon captured by their forests for the period between 2008 and 2020, caused by the aforementioned incentives for the use of wood as energy, and to a lesser extent as material, and by a rise in the surface area reaching harvesting age (Figure 2).

Figure 2 – Historical emissions and benchmark levels for the main European countries with large forested areas



In 2000, these five countries were the five main countries with regards forestry in Europe, in terms of surface area and harvests. The unbroken lines show historical emissions and the broken lines show reference levels. Negative emissions correspond to carbon sequestration, in accordance with the UNFCCC convention. Germany's specific profile is explained by a sudden updating of its inventory following the 2002 and 2009 forestry inventory campaigns.

Source: CDC Climat Research based on data from the European Union (2011) and the UNFCCC (2011).

News: a draft EU decision to harmonise forest accounting rules

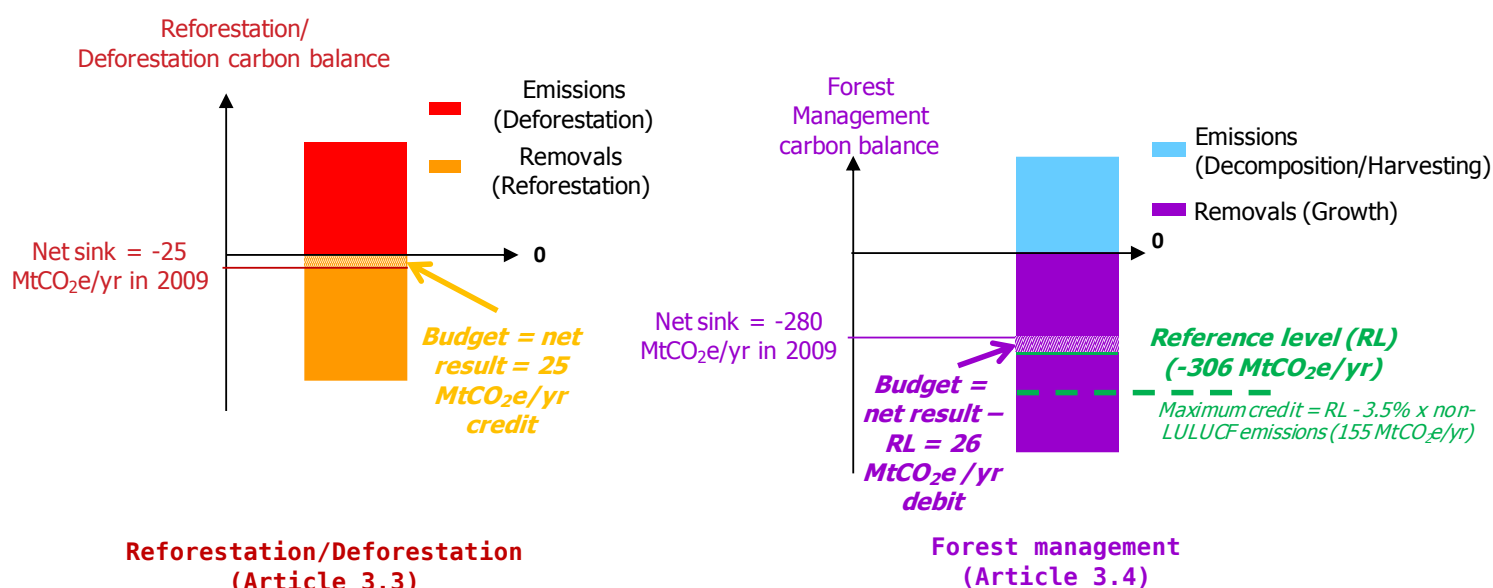
New rules that offer Member States greater incentives...

In 2011, the Durban conference made forestry a sector (almost) like any other

In December 2011, the Durban Conference endorsed the changes to the rules for recognising forests in the second commitment period:

- The accounting of the afforestation and deforestation balance (Article 3.3 of the Kyoto Protocol) **remains mandatory**, and is now supplemented by the accounting of emissions relating to the conversion of natural forests into planted forests. It is the net balance that counts, not the comparison with the 1990 benchmark, as is the case for other emission sources (Figure 3).
- The accounting of the forest management balance **becomes mandatory**, and now includes the carbon stored by the products made from the wood harvested on national land (at the country level). The balance is calculated according to a reference level. However, unlike other emission sources, the benchmark is a “business-as-usual” scenario, and not a historical benchmark. This scenario is audited by accredited UNFCCC experts (see above) and may be adjusted in order to factor in improvements to the inventory’s quality. In addition, the forest management emissions annual debit or credit is limited to 3.5% of national emissions, excluding emissions from land use change and forestry (LULUCF), in 1990 (Figure 3).
- “Force majeure event”: emissions generated by a natural disaster and that exceed a pre-established recurring level by more than two standard deviations may be excluded from the accounting. So far, only Australia has submitted a recurrent level that enables it to make use of this clause. Other countries might not use it, or may wait for the guidelines for establishing this recurring level to be made clearer (UNFCCC, 2011).
- Aside from forestry, the other land use activities in Article 3.4 – inclusion of emissions generated by cropland, the management of grassland, and revegetation – remain optional, as does the rewetting and draining of peat bogs, a new activity for which accounting is possible.

Figure 3 – New accounting rules: application to the European Union



The amounts shown as examples correspond to the European Union balance for 2009. In particular, they do not amount to a forecast of the likely balance.

Source: CDC Climat Research.

These new rules make forestry a sector that is almost similar to other sectors in terms of the accounting of CO₂ emissions, and offer much greater incentives for Member States: an increase in sequestered carbon will be rewarded by the allocation of more credits, without having to worry about complex carry-over rules and ceilings. The only set limit is relatively generous: a maximum of 3.5% of national 1990 emissions, excluding emissions from land use change and forestry (LULUCF), is authorised as a debit or credit for the “forest management” balance. This limit is unlikely to be reached in most countries, and should therefore not act as a drag on countries’ motivation to optimise their forest management from a carbon standpoint.

The European “bonus”: harmonisation and reporting

The draft decision published by the Commission (European Commission, 2012a) incorporates these new accounting rules. However, it imposes two additional requirements:

- Harmonisation over a wide scope: the accounting of cropland and grassland management would become mandatory, making it easier to compare Member States’ inventories. Including both these types of land use, the accounting of changes in the carbon stored in agricultural soil becomes unavoidable. Furthermore, by adding forests, the accounting of which is already mandatory, around 80% of the European Union’s territory will be covered.
- Action plans: each Member State would also have to submit an action plan aimed at optimising the carbon balance relating to land use by 2013. This action plan shall be submitted to a broad stakeholder consultation, and shall be assessed by the Commission. An interim report and a final report setting out the progress made in implementing the action plan will also need to be submitted to, and assessed by the Commission over the period between 2013 and 2020.

... but other texts will be necessary to transfer these incentives to economic players

These new accounting rules are undoubtedly a step in the right direction for rebalancing the carbon incentive in a way that promotes investment to rebuild the “wood” resource in forests.

However, there is still no practical system for transferring the national incentive to economic players. In this sense, the introduction to the text explains that it is only a first step towards the goal set by the Energy & Climate Package, which is to include the forestry sector in the EU's emission reduction commitments.

During the 2010 public consultation, four options for potentially including the sector in the EU's commitments were suggested:

- including the sector in the EU ETS;
- including the sector in the Effort Sharing Decision, which distributes emissions reductions targets for sectors that are not governed by the EU ETS;
- setting up a specific framework for land use and forestry;
- not including the sector in the EU's target.

The conclusion of this consultation process was that the second and third options were twice as popular as the others. In addition, most respondents shared the conclusion set out in Figure 1 that current policies were insufficient for guaranteeing the sector's contribution to reducing emissions. In this respect, rebalancing the incentive provided by the CO₂ price without including the sector in the EU ETS will be complicated. An indirect link, via domestic offset projects that generate credits, which can be used by the installations covered by the EU ETS, is one option, although it is politically as difficult as inclusion, as it would require lifting the current ban on forest credits use within the EU ETS.

The Commission expressed its preference for creating a specific framework for this sector, and indicates that two conditions are necessary from its viewpoint before moving further forward in rebalancing incentives (European Commission, 2012b): 1) the implementation of the rigorous and harmonized accounting framework outlined in its draft decision, and 2) the increase of the European emissions reductions target deeper than the current 20%. Accordingly, and unless a new political momentum is provided, the next steps toward rebalancing carbon incentives in the forestry and wood sector do not seem imminent.

Potential benefits for carbon offset projects

Notwithstanding the ban on using the credits within the EU ETS, voluntary forest carbon offset projects have recently seen the light in European countries like France, Italy, the United Kingdom, the Netherlands, and Poland (Kebe *et al.*, 2011; Peters-Stanley, 2012). From a double-counting risk standpoint, these were usually made possible by the subtlety of the accounting rules¹: more carbon could be stored in forests without affecting the amount of forestry credits received by the host country.

The new accounting rules therefore present both an opportunity and a challenge for voluntary carbon offset projects. They present a challenge because the amount of forestry credits received by the host country will be affected from now on. Projects will therefore need to fall within the compliance market framework, which requires the introduction of a "domestic offset project" regulatory framework by the host country. Conversely, these rules also represent an opportunity, because the compliance markets offer more diversified outlets than the voluntary market, as well as an enhanced image, due to recognition by the host country.

Timetable

- June 11th 2012: consultation debate on the Environment Council's decision
- June 19th 2012: European Parliament ENVI committee draft report on LULUCF decision

¹ Double-counting consists in allocating credits to a project developer, without cancelling national allowances (AAUs) in the Member State's accounts at the same time. See Kebe *et al.* (2011) for further details on this issue.

- Autumn 2012: trilogue between Parliament, Council and Commission
- Winter 2012: adoption of the decision
- January 2013: beginning of the accounting period
- Mid-2013: submission by Member States of their action plans for land use and forestry
- April 2015: submission by Member States of the first national GHG inventory applying the decision's provisions – which corresponds to 2013 emissions.

To find out more ...

Bellassen, V., Deheza, M., 2009. Conciliating national caps and incentives for projects (No. 15), Climatsphere. CDC Climat Research, Paris.

Ellison, D., Petersson, H., Lundblad, M., Wikberg, P.-E., 2012. Harvesting Durban: The Opportunities and Challenges for Central and Eastern Europe.

European Commission, 2012a. Proposal for a decision of the European Parliament and of the Council on accounting rules and action plans on greenhouse gas emissions and removals resulting from activities related to land use, land use change and forestry.

European Commission, 2012b. Executive summary of the impact assessment on the role of land use, land use change and forestry (LULUCF) in the EU's climate change commitments, SWD(2012) 40 final.

European Union, 2011. Submission of information on forest management reference levels by the European Union as requested by Decision 2/CMP.6. Brussels.

Kebe, A., Bellassen, V., Leseur, A., 2011. Voluntary carbon offsetting by local authorities: practices and lessons (Climate Report No. 29). CDC Climat Research, Paris.

Peters-Stanley, M., 2012. Bringing it Home: Taking Stock of Government Engagement with the Voluntary Carbon Market. Ecosystem Marketplace, Washington, D.C.

Sartor, O., Deheza, M., 2010. Good shepherd or black sheep? Tackling forestry & agriculture emissions in New Zealand's new carbon market (No. 26), Climate Report. CDC Climat Research, Paris.

UNEP-Risoe, 2012. JI pipeline.

UNFCCC, 2011. Synthesis report of the technical assessments of the forest management reference level submissions.

Managing editor : Benoît Leguet

To receive regular updates on our publications, send your contact information to research@cdcclimat.com

Press contact : Maria Scolan - +33 1 58 50 32 48 – maria.scolan@cdcclimat.com

Disclaimer

This publication is fully-funded by "Caisse des Dépôts", a public institution. CDC Climat does not contribute to the financing of this research. Caisse des Dépôts is not liable under any circumstances for the content of this publication.

This publication is not a financial analysis as defined by current regulations. The dissemination of this document does not amount to (i) the provision of investment or financial advice of any kind, (ii) or of an investment or financial service, (iii) or to an investment or financial proposal of any kind. There are specific risks linked to the markets and assets treated in this document. Persons to whom this document is directed are advised to request appropriate advice (including financial, legal, and/or tax advice) before making any decision to invest in said markets.

The research presented in this publication was carried out by CDC Climat Research on an independent basis. Organisational measures implemented at CDC Climat have strengthened the operational and financial independence of the research department. The opinions expressed in this publication are therefore those of the employees of CDC Climat Research alone, and are independent of CDC Climat's other departments, and its subsidiaries. The findings of this research are in no way binding upon, nor do they reflect, the decisions taken by CDC Climat's operational investment and broking services teams, or by its subsidiaries. CDC Climat is not a provider of investment or financial services.