



# THE EFFORT SHARING DECISION AFTER 2020

## *Ensuring that the EU's largest climate instrument is fit for purpose* *Policy briefing - June 2016*

**To match the ambition of the Paris Agreement the revised ESD for the post-2020 period should:**

1. *Be in line with an overall greenhouse gas emission reduction target of at least -95% by 2050 supported by, at minimum, a 45% reduction in ESD sectors by 2030. Both objectives should be based on an EU carbon budget to stay well below 2°C and to pursue 1.5°C.*
2. *Introduce an automatic mechanism which, every five years, allows for emission cuts to be accelerated as required by the latest science and/or allowed by technological potential, in line with the Paris Agreement's commitments.*
3. *Avoid loopholes which can undermine the EU's 2030 greenhouse gas reduction target, by starting the countdown to the Member States' 2030 climate targets from their actual emissions levels (rather than inadequate 2020 target levels) and by barring the use of EU ETS credits and land use offsets.*
4. *Robustly govern the EU's greenhouse gas emissions by ensuring that Member States produce annual, transparent and enforceable planning, compliance, and reporting documents.*
5. *Strengthen the coherence between sectoral policies by ensuring that emission reduction efforts made under the ESD are fully represented in National Energy and Climate Plans, and by enhancing the synergies between sectoral policies under the ESD.*



## What is the Effort Sharing Decision and why does it matter?

In the Paris Agreement of December 2015, all countries agreed to take action on climate change, in order to limit global temperature increase to well below 2°C and to pursue efforts to limit the temperature rise to 1.5°C.

Europe's contribution to this global effort will be determined, in large part, by its centrepiece climate policy instrument - the Effort Sharing Decision (ESD). The ESD regulates about 60% of the EU's total emissions – those from sectors including transport, agriculture, waste, and the heating and cooling of buildings.

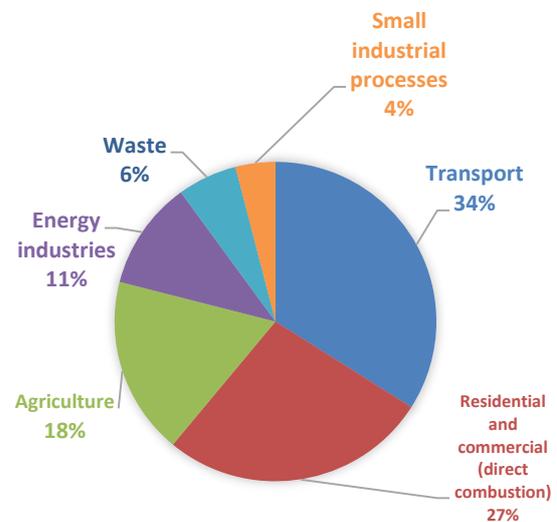
The ESD sets greenhouse gas emission reduction targets for EU Member States based on their GDP. The current ESD targets for 2020 add up to emission reductions of 10% on 2005 levels. Proposals for a revised ESD set a 2030 target of 30% emission cuts from ESD sectors by 2030.

However, these 2020 and 2030 targets are inadequate to deliver the commitments the EU made in the Paris Agreement. As the EU starts the process of agreeing the climate and energy laws that will guide the reduction of its carbon emissions from 2020 to 2030, it must make sure its words in Paris are matched with action in Brussels.

A new and improved, fit-for purpose ESD will bring about multiple benefits. It can drive the transition to a climate friendly economy.

The national and EU measures needed to cut emissions will lead to more liveable cities, cleaner air, reduced energy poverty and more jobs.

ESD emissions by sector (2012)



### **Clarifying EU climate acronyms—ESD & ETS**

*The EU's 2020 climate and energy package includes two laws on greenhouse gas emissions:*

- 1. The Emissions Trading System (ETS) sets emission reduction targets for the power sector, industry and airlines.*
- 2. The Effort Sharing Decision (ESD) sets emission reduction targets for all other sectors, including transport, agriculture, buildings and waste.*

## Recommendation 1 – Aligning the Effort Sharing Decision with the Paris Agreement’s goals

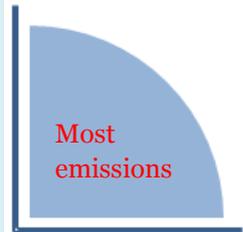
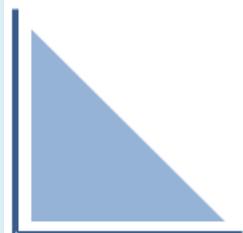
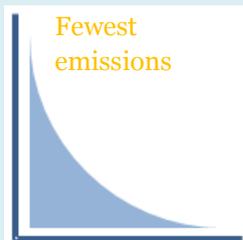
The Paris Agreement strengthens the global and European response to the threat of climate change. Previous agreements (e.g. the Kyoto Protocol) were based on the goal of limiting global temperature increases to a maximum of 2°C.

The Paris Agreement goes further – aiming to keep any temperature rise to well below 2°C and, more significantly, to pursue efforts to limit the increase to less than 1.5°C. It is imperative that, as a signatory of the Paris Agreement, the EU sets greenhouse gas reduction targets in line with these enhanced long-term goals.

However, the EU’s 2020 climate targets are not even consistent with the efforts needed to keep the global temperature rise to 2°C, let alone 1.5°C<sup>1,2</sup>.

As a minimum, the revised Effort Sharing Decision for 2030 must support actions within the EU to reduce emissions by at least 95% (compared to 1990 levels) by 2050.

This target should be translated into an EU carbon budget setting out the amount of CO<sub>2</sub> that Member States are allowed to emit every year.



### **Why a carbon budget approach matters**

*Climate targets are usually presented as an amount of emission reductions to be achieved by a certain point. However, what matters in addition to the value of this end point is how much pollution is released along the way.*

*Each of the graphs shows a pathway to full decarbonisation over time. However, the amount of pollution released under each pathway, represented by the light blue shape, varies significantly. Once greenhouse gases are in the atmosphere they stay there. The fewer total emissions released, the lower the concentration of carbon, and the smaller the effect on global temperature rise. **It is the carbon budget that defines what happens to the climate.***

*EU policy should strive for a concave emission reduction curve, and at the very least should secure a linear pathway. In order to ensure the linear trajectory remains in line with the latest climate science, it should be complemented by a ratchet up mechanism to allow for accelerated emission cuts.*

- 1 Current policies were designed to achieve an 80% overall reduction target in 2050. These are not enough to maintain temperature increase to below 2°C. See p. 11 of Öko-Institute, 2014. [Working paper. Options for non-ETS target setting in 2030.](#)
- 2 Climate Interactive 2016. [Deeper, Earlier Emissions Cuts Needed. Paris Agreement Pledges Must Be Strengthened in Next Few Years to Limit Warming to 1.5°C or Well Below 2°C.](#)

## Recommendation 2 – Allow for the acceleration of emission reductions

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As part of the Paris Agreement, the EU has committed to review its nationally determined contribution and increase its climate ambition every five years.

With recent research showing that at least 95% emission cuts by 2050 may not be enough to give us a 50% chance of less than 1.5°C of warming by 2100<sup>3</sup>, the EU should adjust its climate targets based on the latest climate science and best available technology and ratchet them up as part of this cycle.

To be in line with 95% cuts by 2050, the current 2030 target of 30% emission cuts in ESD sectors should be increased to at least 45%<sup>4</sup>.

## Recommendation 3 – Delivering the 2030 climate target in reality: closing the loopholes

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Under the proposed target of cutting ESD emissions by 30% by 2030, the total carbon budget for the period 2021 to 2030 is projected to be a maximum of 22.6 billion tonnes of CO<sub>2</sub> equivalent<sup>5</sup>. The Effort Sharing Decision sets each Member State a maximum amount of greenhouse gases they can emit each year. The sum of annual Member State budgets (10 annual budgets for each of the 28 Member States) equals the total EU emissions budget for the period.

However, Member States are allowed to make use of flexibility mechanisms to make it less expensive to meet their annual emissions targets. Unfortunately, some Member States seek to introduce new measures in order to reduce the effort they have to make to cut emissions, and are therefore knowingly pushing for loopholes to be introduced into the legislation. In order to avoid such weaknesses in the ESD, the updated legislation must:

- 1. Start counting from real emissions levels rather than from 2020 target levels, as most Member States will overshoot their 2020 emission reductions goals;**
- 2. Ensure that the oversupply of ETS pollution permits cannot be used to undermine emission reduction efforts under the ESD;**
- 3. Address land and forest carbon removals separately from man-made emissions;**
- 4. Do not carry over surplus ESD pollution permits.**

### 1. Start counting from real emission levels

One of the fundamental failures of the current ESD is that its 2020 climate target was set too low. In the first year of the ESD (2013), Member States had collectively reduced their

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3 Preliminary data from Joeri Rogelj's (IIASA), 2016 modeling results.

4 [Carbon Market Watch, 2014. Tackling the 60% of the EUs climate problem. The Effort Sharing Decision post-2020.](#)

5 Total budget based on a starting point set at the level of the average emissions projected between 2016 to 2018. Data from Öko-Institute, 2016.

emissions by 9.6% compared to 2005 levels<sup>6</sup>. This means that the EU has achieved its 2020 ESD target seven years early. The lack of ambition in the policy will, therefore, fail to drive structural changes that Member States need to make in order to develop decarbonised economies.

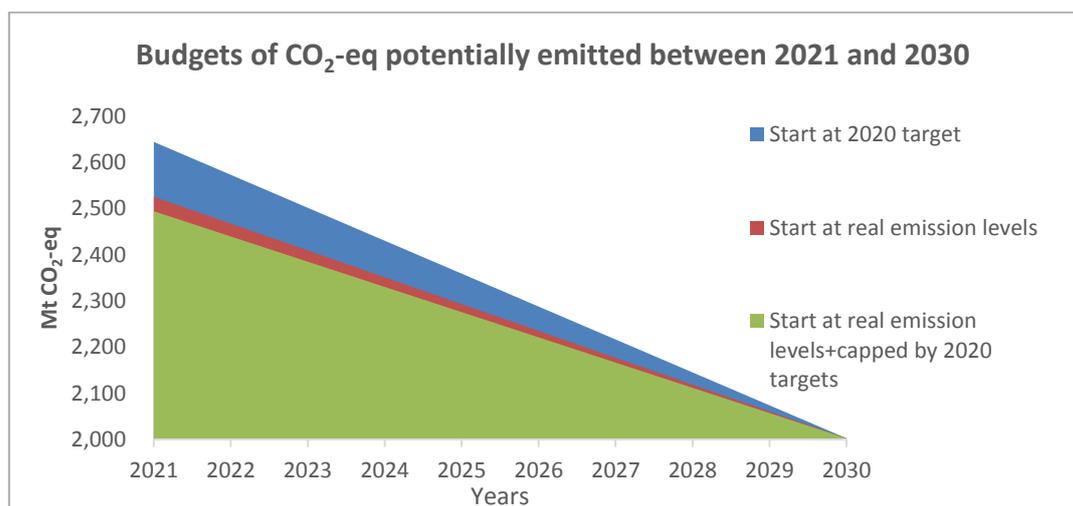
The national carbon budgets for the post-2020 period can be calculated using different starting points:

- a) Start in 2021 at the national 2020 ESD targets.
- b) Start in 2021 at the countries' real emission levels<sup>7</sup>.
- c) A combination of the above - start in 2021 at actual emission levels or at the 2020 target for those few Member States which fail to reach their ESD target.

The third option is the most beneficial for the climate as most Member States are expected to significantly exceed their 2020 targets, which were set above business-as-usual emission levels.

Setting national ESD emissions budgets on the basis of all Member States' 2020 targets would inflate their budgets and allow EU countries to emit more carbon between 2021 and 2030 compared to a trajectory that starts counting from real emissions levels. In those few Member States who fail to reach their 2020 ESD target, however, the 2030 target should be calculated on the basis of their 2020 ESD target level, so as not to 'bail-out' their underachievement.

Allowing Member States to start from their 2020 targets would mean they could **emit an extra 751 million tonnes of CO<sub>2</sub> equivalent**<sup>8</sup>. Setting the starting point for the 2021-2030 period at real emission levels, capped by the 2020 target if the latter is lower, will ensure that the ineffective climate targets of the past do not dilute the EU's future climate efforts and starts to drive emission reductions in Member States.



6 EEA, 2015. [Trends and projections in Europe 2015. Tracking progress towards Europe's climate and energy targets.](#)

7 The starting point based on actual emission levels is calculated using the average between emissions projected for the years 2016, 2017 and 2018. Öko-Institute, 2015. [Enhanced flexibilities for the EU's 2030 Effort Sharing Decision.](#)

8 Data from Öko-Institute 2016, calculated from the projected average emissions between 2016-2018 for the 2021-2030 period.

## 2. Ensure that the oversupply of ETS pollution permits cannot be used to undermine emission reduction efforts under the ESD

In October 2014, the European Council agreed that some Member States could use a limited number of ETS pollution permits (emission allowances) to meet their ESD targets. This measure would be implemented as a “limited, one-off reduction of ETS allowances” from the respective Member State’s auctioning volumes.

This measure would take advantage of the vast oversupply of ETS pollution permits. This surplus has led to an extremely weak pollution price signal under the ETS.

Rather than extending this failed policy to the ESD by allowing in ETS credits, the ETS oversupply problem should be fixed first within the ongoing ETS legislative reform through permanent removal of surplus emission allowances.

If this flexibility is exploited, Member States would be able to say they are reducing their ESD emissions without actually making any effort to do so, simply by substituting them for cheap excess ETS allowances. Allowing Member States to use ETS allowances in this way will not steer any structural change in the ESD sectors.

At the same time, such transfers would not lead to increased effort to reduce pollution in the ETS sectors because the ETS is likely to remain structurally oversupplied until at least 2030<sup>9</sup>. Rather than genuinely helping EU Member States to cost-effectively meet their climate obligations, this option would simply delay action to cut emissions from ESD sectors and lead to more pollution from the EU up to 2030. Estimates suggest that at its worst, this flexibility could lead to the **additional release of 300 million tonnes of CO<sub>2</sub>** in the 2021-2030 period<sup>10</sup>.

## 3. Address land and forest carbon removals separately from man-made emissions

EU Heads of State agreed in 2014 that carbon emissions and removals related to land use, land use change, and forestry (LULUCF) should be integrated into the EU’s 2030 climate framework. They are currently excluded from the EU’s 2020 climate framework.

In contrast to the other sectors, the LULUCF sector as a whole absorbs more carbon from the atmosphere than it releases - it is therefore known as a ‘net sink’ for carbon.



Some countries want to use carbon removals by forests and land use to reduce climate efforts in sectors such as agriculture, transport or buildings. This could potentially lead to

9 EEA, 2015. Trends and projections in the EU ETS in 2015.

10 This measure could result in the use of over 300 million ETS allowances in the ESD, one allowance giving its holder the right to emit one tonne of CO<sub>2</sub>. Öko-Institute, 2015. [Enhanced flexibilities for the EU’s 2030 Effort Sharing Decision](#).

**additional emissions equal to up to 1,350 million tonnes of CO<sub>2</sub> equivalent** in the ESD (the amount the EU LULUCF sectors could absorb between 2021 and 2030<sup>11</sup>).

However, carbon removals from forestry and land use **cannot compensate** for continuing fossil fuel emissions because for the following reasons:

- **Permanence of forest carbon sinks and storages:** Soils and standing forests can store large amounts of carbon, while growth of trees and soil development also sequester carbon from the atmosphere, forming a carbon sink. These carbon sinks are not permanent since carbon can be released again through deliberate human activities such as intensified forest harvests and changes in land use, as well as natural events such as pests, diseases and forest fires.
- **High data uncertainty:** It is difficult to measure the removal of carbon by forests, due to high levels of data uncertainty, large inter-annual fluctuations, and the uncertainty of attributing carbon removals to man-made or natural fluxes. Each of these uncertainties risks an overestimation of the carbon sink effect of forests. Apparent removals of carbon from forests can also be the result of perverse accounting rules, rather than being real additional removals<sup>12</sup>.

The net carbon removals by forests and land use should therefore be promoted *in addition* to emission reductions in the existing ESD sectors, and not as a replacement for them.

Policies need to distinguish very carefully between natural processes in which carbon is stored and released, and emissions and removals resulting directly from anthropogenic activities.

The accounting reference levels for forest management should exclude policy based anticipations (e.g. increased forest harvest) and promote human-induced changes which reduce greenhouse gas emissions within the sectors.

Land use carbon removals must not be used to reduce efforts to cut emissions in sectors such as transport and buildings through their inclusion in the ESD. Instead, all emission producing sectors, including agriculture, need to reduce their emissions in line with national ESD budgets.

The sink effect of forests and other land use can instead contribute as a way to surpass the EU's 2030 overall climate target to implement the EU's 'at least' 40% emission reduction target.

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11 Öko-Institute, 2015. [Impacts on the EU 2030 climate target of including LULUCF in the climate and energy policy framework](#).

12 This is the case for the way in which afforestation is accounted for, but particularly true for Forest Management. The accounting rules for Forest Management are based on business as usual projections made by the Member States which hide emissions whilst emphasising removals, not reflecting actual emissions. This is also the case for bioenergy, which is the core reason why emissions from bioenergy are currently unaccounted. The rules are less devious in other sub-sectors of LULUCF (such as cropland and grazing land) which are accounted for in line with a base year and so it is easier to keep track of emissions.

#### 4. Do not carry over surplus ESD pollution permits

Almost all EU Member States are expected to over-achieve their 2020 ESD emission reduction targets<sup>13</sup>. In the ongoing (2013-2020) period, this over-achievement will lead to a surplus of carbon permits in the ESD that could add up to more than **1,500 million tonnes of CO<sub>2</sub> equivalent**<sup>14</sup>.

The use of international offsets<sup>15</sup>, allowed in the current ESD period, could increase this surplus even further as Member States can use, in total, the equivalent of **750 million tonnes of CO<sub>2</sub>** of offsets up to 2020<sup>16</sup>.

If carried over, the combination of these two loopholes alone would mean that, collectively, EU Member States would not have to make any actual emission reductions in order to meet their 2030 targets.

The option of carrying over surplus ESD permits from the current period into the 2021-2030 period was explicitly discarded by Member States ahead of the October 2014 European Council meeting. It is essential that this prohibition is maintained.

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13 Overall, 24 Member States are expected to have lower emission levels than what their 2020 targets stipulate. EEA, 2015. [Trends and projections in Europe 2015. Tracking progress towards Europe's climate and energy targets.](#)

14 Member States projections result in a cumulated ESD surplus of 1543m to 1724m AEs, depending on the scenario. See EEA, 2015. [Trends and projections in Europe 2015. Tracking progress towards Europe's climate and energy targets](#)

15 International offsetting programmes, such as the Clean Development Mechanism (CDM), or the Joint Implementation (JI), allow parties to the Kyoto Protocol to implement emission reduction projects in developing countries. Countries can then count emissions carried out abroad towards their emission reduction targets at home.

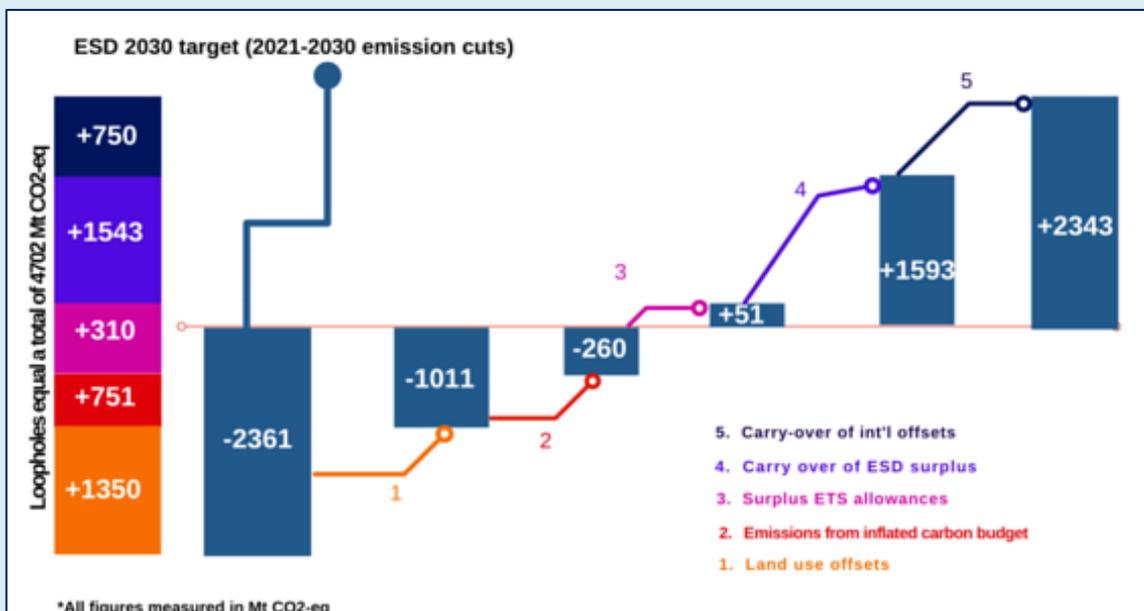
16 Öko-Institute, 2015. [Enhanced flexibilities for the EU's 2030 Effort Sharing Decision.](#)

## The total potential impact of loopholes

As is shown in the graph below, the loopholes presented in this briefing could reverse the EU's climate action by allowing the release of 4,703 million tonnes of CO<sub>2</sub> equivalent more than if the loopholes are prevented.

If the worst case scenario is allowed, and all five loopholes were fully incorporated into the revised ESD, the EU could end up increasing emissions after 2020 rather than cutting them.

Without loopholes, the EU will need to reduce emissions in ESD sectors by 2,361 million tonnes of CO<sub>2</sub> equivalent in order to meet the proposed 2030 target. However, if the almost five million tonnes worth of loopholes highlighted in this paper were to be introduced, Member States would be allowed to release more than 2,300 million extra tonnes of CO<sub>2</sub> equivalent<sup>17</sup>.



17 Data from Öko Institute, May 2016.

## Recommendation 4 – Governing the EU’s greenhouse gas emissions in a robust manner

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Effective governance measures, applicable to all ESD sectors, will be instrumental in making sure the ESD delivers actual emission reductions. Retaining and strengthening important elements of the current ESD will help to ensure that countries continue to achieve or exceed their targets. These include:

1. *Planning and reporting requirements;*
2. *Annual compliance checks; and*
3. *Corrective action.*

### 1. Planning and Reporting

Currently, Member States are required to submit annual reports to the European Environment Agency (EEA) on their greenhouse gas emissions, use of credits from project activities, and information on national policies and measures including policies and measures that go beyond the ESD.

Other legislation under the EU 2020 climate and energy package requires Member States to produce National Renewable Energy Action Plans and National Energy Efficiency Action Plans. Current ideas for the 2021-2030 climate and energy framework emphasise the need to simplify and streamline these separate planning and reporting streams, through consolidated national energy and climate plans (NECPs).

In order to ensure that planning and reporting on ESD emission reductions through NECPs is effective it must be based on binding templates and binding timetables for producing the plans and reporting on them. These requirements should help maintain and enhance the ESD’s compliance mechanisms. Planning and reporting for the ESD should also be embedded within ESD legislation, be consistent with all relevant EU climate and energy legislation, and should operate on three mutually reinforcing levels:

- **Political commitments:** including binding national targets on renewable energy, energy efficiency, greenhouse gas emission reductions, and other objectives of the EU environmental protection acquis;
- **Energy transition plans:** setting out credible and concrete energy transition plans that are consistent with both the policies to deliver the 2030 targets, and the EU’s 2050 climate and energy goals.
- **Detailed 2030 projections, policies, and measures:** covering the national climate and energy plans that EU Member States will put in place in each ESD sector, in order to both deliver, and also to monitor progress towards their 2030 targets – in conjunction with sectoral legislation.

## **2. Annual compliance checks**

The current ESD, in combination with the Monitoring Mechanism Regulation (MMR), establishes annual reporting and compliance cycles that require Member States to report on their annual emissions and their use of international carbon offsets. Reports must also cover projected progress towards meeting future annual ESD budgets, as well as information on planned additional national policies and measures. The first annual review of Member State emission inventories will be carried out in 2016 for Member States' inventories for the year 2013.

Annual reporting and compliance checks, and biennial submission of projections are an essential part of maintaining the transparency of the system and they must be maintained. They allow the European Commission to make sure that non-compliant Member States take corrective action early on, so as to make sure that they are able to meet their targets by the end of the period.

## **3. Corrective action**

Corrective measures are central to helping underachieving Member States get back on track towards meeting their targets. The ESD currently includes measures to address the inability of any Member State to meet its annual emissions allocation for non-ETS sectors. This corrective action includes penalties for underachievement, which take into account the environmental cost of delaying emission reductions, whereby excess emissions are multiplied by a factor of 1.08 and removed from the following year's budget so that the target becomes more stringent.

Any Member State that does not reduce its emissions in line with its annual budget is also barred from trading emission permits with other Member States, and is required to submit a corrective action plan to the Commission that includes a list of domestic actions the country will take to meet its obligations. However, the Commission is only able to provide a non-binding opinion on the plan and has no power to compel Member State changes to the plan in the event that it is considered inadequate.

The revised ESD should maintain and improve these corrective measures by introducing a process whereby a Member State and the Commission have to jointly agree such corrective action plans. The revised ESD should also ensure that Member States who exceed their ESD budgets face a financial penalty, in line with the polluter-pays principle. To be effective in encouraging Member States to abide by their legal obligations, any such penalty should be at least equal to the monetary fine set in the EU ETS (€100 per tonne of CO<sub>2</sub> equivalent).

## Recommendation 5 – Strengthening coherence between sectoral policies

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The ESD's annual national emission budgets drive emission reductions that are actually delivered through policies and measures in other pieces of legislation. There is, therefore, a risk of inconsistency between these sectoral policies which are, to a greater or lesser extent, developed and implemented independently of each other. This risk of inconsistency could be reduced through effective use of the upcoming National Energy and Climate Plans. By being fully integrated, these consolidated plans should ensure that each sector's emission reduction actions are both in line with those of other sectors and with the overarching ESD.

Beyond ensuring coherence between sectoral decarbonisation policies, the effective use of integrated National Energy and Climate Plans could also make it easier to identify the most cost-effective emission reductions because decarbonisation activities in different sectors would be based on common data – making them more directly

comparable. The increased ability to identify the most cost effective actions should, in turn, lead to the increased uptake of such actions. To legitimise national plans, they need to be produced following wide-ranging and effective stakeholder consultation which would also increase much needed investor confidence in their delivery by demonstrating that they have broad societal support.

This is particularly important for the key parts of the EU climate and energy laws which are being reviewed and updated for the 2020-2030 period, including those related to:

1. *Energy efficiency;*
2. *Renewable energy;*
3. *Transport;*
4. *Agriculture;*
5. *Waste.*

### 1. Putting Efficiency First

Scientific literature published in Nature Climate Change concludes that for the world to be on track to limiting temperature increases to 1.5°C<sup>18</sup>, a significant increase in energy efficiency is required - particularly in the buildings and transport sectors. A further study

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18 Rogelj et al, 2015, "Energy system transformations for limiting end-of-century warming to below 1.5 °C", Nature Climate Change, doi:10.1038/nclimate2572. Available here: <http://www.nature.com/nclimate/journal/v5/n6/full/nclimate2572.html>

from ECOFYS<sup>19</sup>, determines that higher energy efficiency targets could contribute to cutting Europe's greenhouse gas emissions by 50%, by 2030.

The ESD should help to ensure that each Member State delivers on their share of energy savings in all sectors by explicitly recognising energy efficiency as an energy resource in its own right and by highlighting the principle of putting efficiency first within Article 4 of the ESD. The revised ESD should also include provisions to ensure that each Member State takes the actions needed to deliver the EU's energy efficiency target, similar to the provisions in the Energy Efficiency Directive (EED) and the Energy Performance of Buildings Directive (EPBD).

## **2. Bolstering renewable energy**

The proposals for EU renewable energy policy from 2020 to 2030 differs from the legislation up to 2020 in a crucial respect - it does not break the EU level target into nationally binding targets. This means that, as things stand, the ESD will be the only part of the EU's 2030 climate and energy legislation that includes national targets.

National renewable energy targets should be maintained after 2020. However, in their absence, the revised ESD could help to ensure that each Member State delivers an adequate amount of renewable energy. This can be achieved by including provisions requiring National Energy and Climate Plans to detail how much renewable energy Member State plans to deliver, and how they will do so.

These renewables plans should be broken down by economic sector and type of renewable energy. Such ESD provisions should complement the revised Renewable Energy Directive and related processes to ensure that the EU's 2030 renewable energy target is delivered and, if possible, surpassed.

## **3. Reducing emissions from transport**

Any comprehensive climate policy must include sustainable transport measures. The most cost-effective emission reductions in the transport sector are achieved by increasing the efficiency of vehicles and fuels.

The revised ESD should help ensure that EU transport measures, such as CO<sub>2</sub> standards for vehicles, fuel quality regulations, and road tolling legislation, all deliver the emission reductions required to meet and surpass the EU's 2030 targets.

To ensure alignment to the Paris Agreement and its medium-term climate and energy goals, the revised ESD should, as a minimum, commit the European Commission to regularly reviewing EU car and van efficiency standards, and by introducing new fuel efficiency legislation for trucks.

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<sup>19</sup> Terlouw, W., van Breevoort, P., & Blok, K., 2016, "[Higher EU energy efficiency and renewable energy targets enable greenhouse gas emissions reductions of more than 50% in 2030. An assessment of greenhouse gas emissions in 2030 associated with a 30% renewable energy target and 30-40% energy efficiency targets](#)", ECOFYS

Ambitious vehicle efficiency policies could contribute significantly to achieving the ESD target – reducing emissions by 118 million tonnes of CO<sub>2</sub> equivalent in 2030<sup>20</sup>. Estimates of vehicle efficiency improvements for cars, vans and trucks could account for 36-93% of the emission reductions that Member States are required to make in the transport sector over the ten-year period to 2030<sup>21</sup>.

#### 4. Reducing emissions from agriculture

The main greenhouse gases emitted from the agricultural sector, methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O), are linked to the livestock sector and to the application of synthetic fertilizers.

Reductions of agricultural emissions can be achieved by switching to agricultural practices that reduce livestock numbers and do not rely on the use of synthetic nitrogen fertilizers<sup>22,23</sup>. These emissions can also



be reduced through a move to agro-ecological practices. Such agricultural practices should also contribute to the preservation of biodiversity and water quality and avoid negative trade-offs.

The subsidies from the Common Agricultural Policy (CAP) to the agricultural sector currently provide €408 312.0520 billion (37.7 % of the EU budget for the period 2014-2020)<sup>24</sup>, and should, hence, promote agricultural practices that reduce emissions.

#### 5. Reducing emissions from the waste sector

Synergies between the ESD and waste legislation could also be exploited to achieve emission reductions, including through measures designed to achieve a circular economy through reuse, repair, and remanufacturing<sup>25</sup>. More ambitious targets<sup>26</sup> for the recycling and reuse of waste could deliver a reduction of 443 million tonnes of greenhouse gas emissions in the 2014-2030 period<sup>27</sup>.

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20 This figure is the difference between the 2015 Business as Usual scenario, and the “Vehicle standards (high)” scenario from Ricardo Energy & Environment, 2016. [SULTAN modelling to explore the wider potential impacts of transport GHG reduction policies in 2030](#).

21 Transport and Environment, 2015. [Road to 2030: how EU vehicle efficiency standards help member states meet climate targets. Transport emission reductions in the context of the 2030 Effort Sharing Decision](#)

22 See also [IFOAM and EU FiBL, 2015](#). Mitigating the impact of agriculture on air quality and climate change.

23 [AEA, 2012](#). Next phase of the European Climate Change Programme: Analysis of Member States actions to implement the Effort Sharing Decision and options for further communitywide measures. A report for DG Climate Action.

24 [Multiannual Financial Framework 2014 – 2020 Technical Adjustment for 2016](#).

25 [Eunomia, 2015](#). The Potential Contribution of Waste Management to a Low Carbon Economy.

26 In the Directive on waste, Directive on packaging, Directive on landfills

27 [Environmental Impact Assessment of the Circular Economy Package, 2014](#).

## Main recommendations

The Effort Sharing Directive is a crucial part of the EU climate and energy legislation. If delivered effectively, in line with this report's recommendations, it has the potential to drive the EU's emission reductions in a way that reflects the region's global commitments to fight climate change.

EU policymakers have a critical task ahead of them to avoid weakening the ESD to the point that it allows more pollution rather than less. They have a once-in a decade opportunity to get it right and the credibility of the EU's whole climate and energy programme is at stake. Now is the time.

To match the ambition of the Paris Agreement and make sure EU climate policy is fit for purpose, the revised ESD for the post-2020 period should:

1. Be in line with an overall greenhouse gas emission reduction target of at least -95% by 2050 supported by, at minimum, a 45% reduction in ESD sectors by 2030. Both objectives should be based on an EU carbon budget to stay well below 2°C and to pursue 1.5°C.
2. Introduce an automatic mechanism which, every five years, allows for emission cuts to be accelerated as required by the latest science and/or allowed by technological potential, in line with the Paris Agreement's commitments.
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