

Greenpeace response to the public consultation on a Strategy for long-term EU greenhouse gas emissions reductions

GREENPEACE

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About Greenpeace

Greenpeace is an independent global campaigning organisation that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace. Greenpeace is present in 40 countries across Europe, the Americas, Asia, Africa and the Pacific. To maintain its independence, Greenpeace does not accept donations from governments or corporations but relies on contributions from individual supporters and foundation grants.

Key Messages

- Climate change is an urgent global threat and citizens in Europe and around the world are already suffering its impacts.
- The EU should act without delay to increase its climate ambition to be in line with keeping global temperature increase to 1.5 °C, rather than well below 2 °C.
- The EU must commit to fully decarbonising by 2040 and revise its 2030 climate and energy targets upwards to be in line with the 1.5 °C goal.
- While natural climate solutions, such as enhanced carbon sinks, will need to play a role in reducing Europe's climate impacts, carbon dioxide removal measures must not be allowed to justify weaker efforts to reduce Europe's greenhouse gas emissions at source.
- Europe must dramatically reduce its energy consumption by fully embracing and implementing the efficiency first principle, particularly in the building sector.
- The EU's energy system must be fully powered by renewables by 2040 with coal fully phased out by 2030, nuclear phased out by 2035 and all other fossil fuels phased out by 2040.
- Bioenergy can only play a limited role in a 100 percent renewable energy system and negative emission technologies such as CCS and BECCS should not be promoted or taken into consideration.
- There must be a radical transformation of the EU's transport sector with the end of the sale of petrol and diesel passenger cars by 2028.
- Emissions from all road transport, aviation and shipping sectors must be dramatically cut.
- The EU must phase out all HFCs by 2020 and actively support a global phase out of all production and consumption of HFCs by 2025.
- The EU must shift farm support away from industrial production towards ecological farming methods and must implement demand-side policies to promote sustainable consumption, including less meat and dairy consumption.
- The EU must take action and play a leadership role to halt deforestation and forest degradation and to substantially increase forest restoration and reforestation by 2020. The Commission should urgently publish a proposal for an EU action plan on deforestation and forest degradation.
- The EU's own forests can play a role in providing negative emissions in the form of carbon sinks. The EU should with urgency restore its forests, peatlands and other ecosystems and protect them from further destruction.
- The EU must provide financial and technical assistance to developing countries to support the protection and restoration of forests, peatlands and other natural ecosystems, and the implementation of agroecology.
- The EU must commit to protecting both European and global marine ecosystems in order to protect the ocean from the worst impacts of climate change and to strengthen its natural climate mitigation and adaptation capacity.
- The EU must facilitate a just transition for regional workforces, economies and communities that are heavily reliant on industries that will significantly downsize or disappear entirely.
- The EU should make sure that all public funding is 'climate-proofed' to reallocate investments towards achieving fast and high levels of greenhouse gas emission reductions. The EU must deliver on the funding it has promised under current climate financing agreements under the UNFCCC.
- The EU must prioritise climate change in all discussions with its diplomatic and trade partners.

EU Climate Ambition

Climate change is an urgent global threat and it is already here. Five of the hottest global years on record have happened in this decade¹. The world has already experienced over 1 degree Celsius (°C) of global temperature increase. This summer, Europe experienced a heatwave that was made more likely by climate change. The impacts have been widespread from wildfires to drought, from reduced crop yields to greater health risks to vulnerable people, including the elderly.

Currently, the world is on track for at least 3 °C of global temperature increase, and the EU is failing to deliver its share of global efforts. According to the United Nations Environment Program (UNEP), the global emissions gap to meet the 1.5 °C goal stands at 19 gigatons (Gt) of CO₂ and current commitments put the world on track for approximately 3.2 °C of global temperature rise². The EU's current 2030 and 2050 climate and energy targets and supportive policies are clearly insufficient to avoiding the worst effects of climate change. These targets also fall below what is necessary for the EU to meet its obligations under the Paris climate agreement.

The EU should act without delay to increase its climate ambition. The EU's climate action should take into account the continent's historical carbon emissions and its duty to be a global leader on climate action, which means the EU's ambition should be greater than the global average.

The EU should aim, and encourage all other parties to aim, to keep global temperature increase to 1.5 °C, rather than well below 2 °C. The differences between these two are significant and have been further underlined by the recently released IPCC Special Report on 1.5 °C warming³. For example, 5 million additional people would find their homes underwater⁴, and the probability of extreme and destructive weather events like floods, droughts, storms and heat waves would be much higher^{5 6} in a 2 °C world. Therefore, **Greenpeace believes that the EU must commit to fully decarbonising by 2040** in its long-term greenhouse gas emissions strategy.

The EU must also revise its 2030 climate and energy targets to be in line with the Paris climate agreement. This means adopting an **EU 2030 greenhouse gas emission target**, and accompanying renewable energy and energy efficiency targets, that are in line with the 1.5 °C goal. The EU's 2030 targets must reflect the finding of the IPCC's Special Report on 1.5°C that shows the next decade is critical, and that global carbon emissions must be halved by 2030.

While natural climate solutions, such as enhanced carbon sinks, will need to play a role in reducing Europe's climate impacts, **carbon dioxide removal measures must not be allowed to justify weaker efforts to reduce Europe's greenhouse gas emissions at source.** Greenpeace believes that certain carbon dioxide removal measures should be prioritised, primarily forest and peatland conservation and restoration as well as the restoration of other ecosystems.

¹ NOAA *Global Climate Reports*. Available at: <https://www.ncdc.noaa.gov/sotc/global/201808>

² UNEP (2017) *Emissions Gap Report 2017*. Available at: <https://www.unenvironment.org/resources/emissions-gap-report-2017>

³ IPCC (2018) *Global Warming of 1.5 °C*. Available: <http://www.ipcc.ch/report/sr15/>

⁴ D J Rasmussen et al (2018) *Extreme sea level implications of 1.5 °C, 2.0 °C, and 2.5 °C temperature stabilization targets in the 21st and 22nd centuries*. Environ. Res. Lett. 13 034040. Available at:

<http://iopscience.iop.org/article/10.1088/1748-9326/aaac87/meta>

⁵ EM Fischer & R Knutti (2015) *Anthropogenic contribution to global occurrence of heavy-precipitation and high-temperature extremes* Nature Climate Change 5 (6), 560-564. Available at:

<https://www.nature.com/articles/nclimate2617>

⁶ C.-F. Schleussner et al (2016) *Differential climate impacts for policy-relevant limits to global warming: the case of 1.5 °C and 2 °C* Earth Syst. Dynam., 7, 327-35. Available at: <https://www.earth-syst-dynam.net/7/327/2016/>

Energy and transport

The energy sector currently accounts for approximately 80 percent of Europe's carbon emissions. **Europe must dramatically reduce its energy consumption by fully embracing and implementing the efficiency first principle.** This means prioritising energy efficiency when considering policy proposals and supply-side investments. It also means implementing deep efficiency measures across all sectors, including electricity, transportation, buildings and industry as fast as possible. Ambitious energy efficiency targets to reduce heating and cooling demand would have the added benefit of improving the comfort of households, particularly those at risk from energy poverty.

The elimination of fossil fuels from Europe's energy sector will have to happen very rapidly. This must include a **full phase out of coal power plants, including coal-powered CHP plants, by 2030 at the latest.** There should be no new investments in new coal infrastructure – power plants or mines. **Nuclear power plants in Europe must shut down by 2035 at the latest** not only because of the inherent risks of nuclear accidents, creation of nuclear waste and links to nuclear proliferation but also because inflexible nuclear plants act as a significant blocker in the transition to 100 percent renewables across Europe. As the frequency and intensity of heatwaves increase across Europe, the reliability of nuclear plants will decrease due to the need to shut them down when the temperature of cooling waters becomes too high. Moreover, nuclear plants' reliance on significant volumes of cooling water will contribute to increasing pressures on reduced fresh water supplies.

Gas and oil will also have to be phased out by 2040, leading to an efficient European energy system based on **100 percent renewable sources by 2040.** There should be no new investments in any new gas or oil - conventional or unconventional - infrastructure or activities, including power plants, pipelines, exploration or extraction.

The EU must acknowledge the established body of evidence⁷ that many types of bioenergy, including crop-based biofuels and large-scale forest biomass, can perversely result in increased carbon emissions and contribute to the degradation of natural ecosystems both within and outside Europe. They also perpetuate existing fossil-based infrastructure and block investments in genuinely sustainable energy solutions. **The EU must recognise that bioenergy can only play a limited role in a 100 percent renewable energy system** and must only support bioenergy from waste and residues that results in real and significant carbon savings without threatening the conversion or degradation of natural ecosystems and carbon sinks.

Negative emission technologies, such as CCS and BECCS should not be promoted or taken into consideration as they are entirely unproven and risk creating significant unintended impacts while failing to contribute to decarbonisation efforts. The large-scale deployment of BECCS would take up vast amounts of land and water, threatening food production, wildlife and land rights.

The transport sector continues to be the part of the energy system that shows an upward trend in its carbon emissions. **There must be a radical transformation of the transport sector** with a drastic reduction in the number of privately-owned passenger cars and large-scale modal shift. As car-sharing, active travel and public transport options expand, the need to own a personal car will also reduce.

The EU should commit to **ending the sale of petrol and diesel passenger cars, including conventional hybrids, by 2028,** meaning that all new cars should be electric after this

⁷ For example, Timothy D. Searchinger, Tim Beringer & Asa Strong (2017) *Does the world have low-carbon bioenergy potential from the dedicated use of land?* Energy Policy Volume 110, November 2017, Pages 434-446 Available at: <https://www.sciencedirect.com/science/article/pii/S0301421517305104>

date. Vans and trucks must also rapidly decarbonise so that **all road transport is emission free by 2035**.

The aviation and shipping sectors will also have to significantly reduce emissions and find solutions in the form of improved long-distance rail travel and shifting freight from ships to rail. All subsidies to shipping and aviation should be ended.

As powerful sources of greenhouse gas emissions, fluorinated gases (F-gases) and hydrofluorocarbons (HFCs) in particular must be phased out at the global level as an essential step in our fight to stay below 1.5 °C. **The EU must phase out all HFCs by 2020** in all applications where there are readily available safer and more sustainable alternatives. The EU must also actively support a global phase out of all production and consumption of HFCs by 2025.

Agriculture, Forests and Land use

The level of effort needed to limit global warming extends beyond the energy sector. **Action in the land sector is critical and necessary to achieve the Paris climate agreement's goals.** According to the IPCC, emissions from agriculture, forestry and other land use (AFOLU) account for about 24.5 percent of global emissions in total.⁸

Agriculture alone accounts for 14.5 percent of global greenhouse gas emissions but is expected to represent over half of all greenhouse gas emissions by 2050 on current production, consumption and waste trends.⁹ Agricultural emissions are expected to cover nearly the full 1.5 °C target emissions allowance by 2050 for all sectors, including energy, industry and transport globally.¹⁰ Animal products in particular are currently responsible for approximately 60 percent of food-related climate emissions¹¹, contributing around 12-17 percent of European greenhouse gas emissions.¹² According to the IPCC a reduction in both production and consumption of meat and dairy can cut far more agriculture-related emissions than technical measures, such as improving nutrient management or changing animals' diets.¹³ A 50 percent reduction in meat and dairy production by 2050 relative to current levels will result in reducing greenhouse gas emissions from the agriculture sector by 64 percent compared to projected emissions under the 2050 baseline trajectories.¹⁴

In order to address European agricultural emissions, the **EU must shift farm support, particularly through its Common Agriculture Policy, away from industrial production towards ecological farming methods.** Public money must promote a farming model that raises substantially fewer and better animals and that grows more fruits and vegetables, favouring farming practices which increase the carbon storage in soils and reduce reliance

⁸ IPCC, 2014: Summary for Policymakers. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

⁹ Bajželj, B., et al. 2014. Importance of food-demand management for climate mitigation. *Nature Climate Change*, 4: 924-929

¹⁰ Bajželj, B., et al. 2014. Importance of food-demand management for climate mitigation. *Nature Climate Change*, 4: 924-929. This analysis is for limits between 1.5° and 2° C

¹¹ Globally, three meat companies, JBS, Cargill and Tyson emit as much emissions as the oil and gas giants Exxon, BP and Shell (GRAIN, IATP and Heinrich Böll Foundation, Big Meat And Dairy's Supersized Climate Footprint. [www.grain-5825-big-meat-and-dairy-s-supersized-climate-footprint\(1\).pdf](http://www.grain-5825-big-meat-and-dairy-s-supersized-climate-footprint(1).pdf))

¹² Bellarby J. et al. (2013) Livestock greenhouse gas emissions and mitigation potential in Europe. *Global Change Biology*, 19(1):3-18

¹³ IPCC, 2014: Summary for Policymakers. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

¹⁴ Rööös, E., Patel, M., Spångberg, J., Carlsson, G. & Rydhmer, L. 2016. Limiting livestock production to pasture and by-products in a search for sustainable diets. *Food Policy*, 58: 1-13

on synthetic fertilisers. These changes will help mitigate agriculture-related greenhouse gas emissions and allow European agriculture to become more resilient to climate impacts. At the same time, the **EU must implement demand-side policies to promote sustainable consumption** among citizens and a permanent change in mindsets toward lower meat consumption, including public awareness campaigns and public procurement policies.

As a major consumer market and financial and trade power, **the EU is also part of the global problem of deforestation and forest degradation**, as recent Commission-funded studies pointed out.¹⁵ This has led to severe environmental and social impacts, including climate impacts. Specific drivers include in particular the EU's consumption of products and commodities linked to deforestation and forest degradation, its high level of meat consumption and dependence on imported animal feed, its policy on biofuels and bioenergy, and the inadequacy of controls on finance and investments flows.

The EU must take action and play a leadership role to halt deforestation and forest degradation and to substantially increase forest restoration and reforestation by 2020, while respecting and supporting the rights of indigenous peoples and local communities. This would allow the EU to meet the UN's Sustainable Development Goals, to honour its climate and biodiversity commitments and to uphold its human rights obligations.

In particular, **the Commission should urgently publish a proposal for an EU action plan on deforestation and forest degradation**, as requested under the 7th EU Environment Action Programme agreed in 2013. This action plan should include a comprehensive set of measures to eliminate the EU's negative impact on the world's forests and to support global efforts to safeguard and restore them. This should include new laws which will guarantee that neither the products placed on the EU market nor the financial sector, cause adverse environmental and social impacts, in particular deforestation, forest degradation, conversion or degradation of other ecosystems, breach of indigenous peoples' rights or other human rights violations.

In addition, **the EU must provide financial and technical assistance to developing countries** to support the protection and restoration of forests, peatlands and other natural ecosystems, and the implementation of agroecology as part of its strategy to mitigate and adapt to climate change.

Finally, the EU's own forests can play a role in providing negative emissions in the form of carbon sinks. They currently sequester approximately 400 million tonnes of CO₂ annually¹⁶ and it is important to maintain and enhance this sink. A recent Greenpeace report¹⁷ shows significant potential for enhanced carbon sink capacities, using the example of Germany's forests through changes in forest management practices, while a recent major scientific study ranked the EU's carbon sink potential from reforestation third after Brazil and China.¹⁸ **The EU should with urgency restore its forests, peatlands and other ecosystems and protect them from further destruction**, including from fires, which in a hotter and drier world will increasingly become a risk factor in the erosion of the land's carbon sink capacity.

¹⁵ VITO, IIASA, HIVA, IUCN NL (2013) The impact of EU consumption on deforestation: Comprehensive analysis of the impact of EU consumption on deforestation. Technical report 2013 – 063. European Commission, DG ENV.

Ecofys, Milieu, & COWI. (2018). Feasibility study on options to step up EU Action against Deforestation.

¹⁶ Grassi, G. (2017) Robust and credible accounting rules for forests, Joint Research Centre, European Commission, Public Hearing on "Meeting the EU's 2030 emission reduction targets: the role of the land use and forestry sectors (LULUCF)" Bruxelles, 30 January 2017, European Parliament

<http://forest.jrc.ec.europa.eu/activities/lulucf/presentations/>

¹⁷ Greenpeace (2018) Wenn Wälder wieder wachsen, Greenpeace Germany, February 28, 2018

<https://www.greenpeace.de/presse/publikationen/wenn-waelder-wieder-wachsen>

¹⁸ Griscom, Bronson W., Justin Adams, Peter W. Ellis, Richard A. Houghton, Guy Lomax, Daniela A. Miteva, William H. Schlesinger, et al. 2017 "Natural Climate Solutions." *Proceedings of the National Academy of Sciences* 114, no. 44 (October 31, 2017): 11645–50. <https://doi.org/10.1073/pnas.1710465114>.

Oceans

Healthy, functioning global marine ecosystems are essential to maintain a stable, liveable climate. However, they are already suffering the impacts of climate change. Seawater has so far absorbed around 30 percent of the carbon that has been emitted by the burning of fossil fuels but **the build-up of CO₂ in seawater accelerates ocean acidification**. Surface ocean acidity has already increased by around 30 percent since pre-industrial times.

In conjunction with climate change impacts, such as ocean warming and sea level rise, acidification is causing great harm to marine life. These changes have dire consequences for coastal communities, often the ones mostly impacted by climate change already. For example, precious ecosystems such as coral reefs that provide food and livelihoods for millions of people and a home to thousands of species have been severely degraded or lost forever.

The ocean can provide some natural climate mitigation and adaptation capacity. For example, marine ecosystems found in shallow coastal waters such as mangrove forests and tidal salt marshes can continue to store greater amounts of carbon as sediments accumulate. These ecosystems may be adding as much carbon to their ‘soils’ each year as all terrestrial forests put together add to their soils¹⁹. However, climate change impacts such as acidification, ocean warming and sea-level rise are adding to overexploitation, marine pollution and habitat destruction that seriously impede the ocean’s ability to cope with and help mitigate climate change.

To protect the ocean from the worst impacts of climate change and to strengthen its natural climate mitigation and adaptation capacity, the **EU must commit to protecting both European and global marine ecosystems**. This means the full and timely implementation of Goal 14 of the Sustainable Development Goals and the Convention on Biological Biodiversity’s Aichi Biodiversity Targets as well as support for the target set by IUCN Resolution to effectively protect 30 percent of the ocean through the creation of a network highly protected areas by 2030. It also means EU championing negotiations for the conclusion of a strong and legally binding Ocean Treaty under UNCLOS for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction (ABNJ) by no later than 2020. It is critical that the Treaty sets a global process for the designation and management of large marine reserves, and a comprehensive process for the conduct of environmental impact assessments to assess the cumulative impact of human activities and climate change on species and habitats in ABNJ.

Marine protection commitments must also be integrated into EU and national climate mitigation and adaptation strategies and the EU must commit to international funding that will ensure the protection and proper management of marine and coastal ecosystems and their contributions to a safe climate.

Greenpeace is opposed to all climate geoengineering as a distraction from implementing real climate solutions. We **therefore strongly oppose any attempts to artificially enhance the ocean’s capacity to capture and store carbon** on the grounds that it is entirely unproven and risks creating unpredictable, uncontrollable and adverse impacts.

Just Transition

Large parts of Europe’s workforce will face significant changes and challenges as a result of large and rapid shifts away from carbon-intensive and polluting industries towards cleaner, renewable-based industries. Likewise, the necessary reduction in the production of livestock requires a just transition for small and medium-sized farms to raise fewer but

¹⁹ Mcleod et al. (2011) *A blueprint for blue carbon: toward an improved understanding of the role of vegetated coastal habitats in sequestering CO₂* (Front Ecol Environ 2011; 9(10): 552–560, doi:10.1890/110004)

better-quality animals and grow more fruits, vegetables and plant protein crops in an ecological manner without threatening their livelihoods.

A just transition means that the revolutions in energy and food production, as well as all industries that will be impacted by climate policies, are inclusive and allow workers and communities to design their own future. It should also envisage decentralised and more democratic energy and food system that allows millions of citizens and communities to produce and manage their own energy and food. This can also be part of the solution to address energy access and energy poverty, including in remote areas.

It's important to recognise that relying only on market-based solutions will not solve the complex challenges that workers and communities face when breaking free from decades-long dependence on carbon-intensive and polluting industries. **The EU must facilitate this shift and support regional development and clear regional plans and pathways that encourage new jobs for regional workforces, economies and communities** that are heavily reliant on industries that will significantly downsize or disappear entirely. To ensure just transition initiatives and funding focus on genuine projects, any form of EU structural or financial support must be connected with a concrete transition plan that is consistent with the EU's commitments under the Paris climate agreement.

Green Finance

The EU should make sure that **all public funding, including the EU budget, and spending by EU financial institutions is 'climate-proofed'** to reallocate investments towards achieving fast and high levels of greenhouse gas emission reductions. This means the immediate end of all financing for fossil fuel projects and subsidies. Beyond public financing, private funds should receive the correct signals from public policy to fully and speedily divest from fossil fuels.

The EU must **deliver on the funding it has promised under current climate financing agreements under the UNFCCC**. It should also significantly ramp up financial support to poor and vulnerable countries, both for mitigation but also for adaptation and loss and damages, which has not received the necessary attention in recent years. This financial support is a key part of the EU's fair share of global climate action efforts.

Climate Diplomacy

If the EU is to become a true leader in the global fight against climate change, **it must prioritise climate change in all discussions with its diplomatic partners**. This also means that EU trade and investment agreements fully uphold international agreements such as the Paris climate agreement, rather than undermine or ignore it. EU trade and investment agreements should explicitly recognise social and environmental regulations as necessary protection measures, not as barriers to trade. If EU trade and investment agreements encourage the harmonisation of existing and future environmental standards, this must be done in a democratic and transparent manner and in a way that ensures the increase of such standards.

EU trade and investment agreements must reinforce fair and equal access to justice and legal protection. This entails business entities having no greater rights than others, and investment disputes being settled before domestic courts. Investors should not be allowed to challenge laws and policies made in the public interest to achieve climate goals.