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Acid News

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Low energy vision for the European region

The CLEVER scenario, a Collaborative Low Energy Vision for the European Region, is an energy transition scenario that follows a "sufficiency–efficiency – renewables" approach.

We're facing the climate emergency. In the next 20 years, Europe needs to reduce greenhouse gas emissions by at least twice as much as it did in the past 30 years. This requires phasing out fossil fuels, and the fastest possible development of new low-carbon energy sources such as electrical renewables. But this, together with global sustainability, mostly requires keeping energy demand under control.

Over the past 20 years, successful energy efficiency policies have enabled progress in the performance of appliances, vehicles, or processes. However, as we approach multiple planetary boundaries, it is now becoming increasingly clear that relying solely on efficiency measures, driven by technological innovation to save energy, will not bridge the gap. Indeed, as the "rebound effect" describes, technological improvements in a given sector can paradoxically come with behaviours that increase consumption and therefore emissions, like the rising distances covered at

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Acid News

A newsletter from the Air Pollution & Climate Secretariat, the primary aim of which is to provide information on air pollution and its effects on health and the environment.

Anyone interested in these matters is invited to contact the Secretariat. All requests for information or material will be dealt with to the best of our ability. Acid News is available free of charge.

In order to fulfil the purpose of Acid News, we need information from everywhere, so if you have read or heard about something that might be of general interest, please write or send a copy to:

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The Air Pollution and Climate Secretariat
The Secretariat has a board consisting of one representative from each of the following organisations: Friends of the Earth Sweden, Nature and Youth Sweden, the Swedish Society for Nature Conservation, and the World Wide Fund for Nature (WWF) Sweden.

The essential aim of the Secretariat is to promote awareness of the problems associated with air pollution and climate change, and thus, in part as a result of public pressure, to bring about the needed reductions in the emissions of air pollutants and greenhouse gases. The aim is to have those emissions eventually brought down to levels that man and the environment can tolerate without suffering damage.

In furtherance of these aims, the Secretariat:

- Keeps up observation of political trends and scientific developments.
- Acts as an information centre, primarily for European environmentalist organisations, but also for the media, authorities, and researchers.
- Produces information material.
- Supports environmentalist bodies in other countries in their work towards common ends.
- Participates in the advocacy and campaigning activities of European environmentalist organisations concerning European policy relating to air quality and climate change, as well as in meetings of the Convention on Long-range Transboundary Air Pollution and the UN Framework Convention on Climate Change.

AirClim

Editorial

On 8 September, the UN once again issued a report showing how governments are failing to take adequate action to implement the promises they made in the Paris Agreement. The so-called Synthesis Report on the Technical Dialogue from the First Global Stocktake showed how governments are good at making ambitious collective commitments but fail to take the right action at home to turn these collective pledges into a reality.

"EU's domestic GHG reduction target would need to be around 75 per cent in 2030"

The report stated again that there is a substantial gap between countries' climate pledges (NDCs – Nationally Determined Contributions) and what is needed to limit temperature rise to 1.5°C. And the report therefore strengthened the calls made at previous climate summits in Glasgow (COP25/2021) and Sharm el-Sheikh (COP26/2022) for countries to review and strengthen their 2030 climate targets. This ambition is strongly supported by the EU, as its environment ministers last year indicated in the run up to the Climate Summit in Sharm el-Sheikh:

"HIGHLIGHTS that, collectively, NDCs and their updates, including those announced in, before and after COP26, are insufficient. RECALLS that all Parties have been requested to revisit and strengthen the 2030 targets in their NDCs as necessary to align with the Paris Agreement temperature goal by the end of 2022. CALLS, therefore, on all Parties to come forward with ambitious targets and policies, and URGES in particular major economies to revisit and strengthen their Nationally Determined Contributions (NDCs) in time for COP27 (...). HIGHLIGHTS with serious concern that global ambition must substantially increase in order to keep the 1.5°C objective within reach, in line with the Paris Agreement."

When reading this strong statement, one would assume that the EU would be the first to revisit its own 2030 climate target to reduce greenhouse gas emissions by 55 per cent by 2030, a target the EU adopted in December 2020, well before it agreed to the strong "revisit and strengthen" pledges at COP25 and COP26. Furthermore, the European Commission has calculated that the full implementation of current EU policies and in particular the agreement, pushed by the European Parliament, to limit the use of nature-based removals in the calculation of the overall EU reductions, would lead to actual emissions being on track for a reduction of 57 per cent by 2030. However, despite the strong statements from the Council and the Commission, the current draft review of the NDC does not foresee a change to the 55 per cent reduction target.

Instead, the European Commission and some member states claim that the inclusion of references to specific policies that have been adopted since the previous NDC submission of June 2021 is sufficient to say the EU "strengthened" its NDC. This is a fairly controversial interpretation of the commitments made by the EU in Glasgow and Sharm el-Sheikh. If all (G20) countries were to follow this approach we might indeed reduce the implementation gap, but not reduce the ambition gap, which is the one that most assessments, including the Global Stocktake Synthesis Report focus on.

It seems EU environment ministers might still agree on an increase of the EU NDC to the projected 57 per cent reduction at their meeting of 16 October. Doing so might help the EU to retain its credibility, but a 57 per cent reduction by 2030 is in no way a reflection of the EU's fair share of the global effort to limit temperature rise to 1.5°C. In order to do so the EU's domestic greenhouse gas emissions reduction target would need to be around 75 per cent in 2030, and would need to be complemented by substantial financial support to poorer countries in recognition of the historical responsibility of the EU and its greater capacity to act.

Wendel Trio

How to manage air pollution in a world under pressure?

One important strategy for identifying future challenges and action in air pollution management over the last 20 years has been the Saltsjöbaden Workshops. Held under the Chatham House Rule, over the years these have formed a "marketplace" for informal discussions between policymakers, scientists, experts and other stakeholders. The seventh workshop, held in Gothenburg from 13 to 15 March 2023, was no exception. The report from the Saltsjöbaden VII Workshop has been released and covers conclusions and recommendations from six main discussions. The overarching objective was to clarify if and how international science and policy cooperation can accelerate the transition to a world with less air pollution.

https://norden.diva-portal.org/smash/get/diva2:1796554/FULLTEXT01.pdf

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Millions can be saved on healthcare costs

A recent study from Belgium linked lower air pollution to fewer healthcare visits and higher air pollution to more healthcare visits. This study once again showed that air pollution mitigation is good for health and the economy.

https://www.sciencedirect.com/science/article/pii/S0013935123015177

T&E advocates for higher CO_2 reduction targets for European truckmakers

T&E says that heavy-duty vehicles (HDVs) are responsible for 27% of climate emissions from road transport in Europe, while only accounting for 2% of the vehicles on the road. Trucks and buses have a bigger climate impact than all flights within the EU and would be the 6th largest emitter if they were an EU country. Equipped with diesel engines, they increase global warming and pollute the air, causing serious diseases and premature deaths.

If no action is taken, these emissions will continue to grow. The European Commission expects truck activity in the EU to further increase by 40% between 2019 and 2050, while activity from buses and coaches would grow by 10% over the same period.

To address this, the European Union is proposing targets for truck and busmakers to cut CO_2 emissions from new sales by 45% by 2030 and 90% by 2040. They can do this by increasing the share of zero-emission vehicles (ZEVs) sold, including battery electric (BEVs), fuel cell electric (FCEVs) and hydrogen combustion vehicles.

T&E argues that a climate reduction target of -90% might seem close to full decarbonisation at first sight. But due to a number of shortcomings, the proposal would only reduce emissions from HDVs by 56% by 2050. This falls far short of the EU's climate ambitions and seriously undermines Europe's chance to retain its industrial leadership of the sector.

T&E demands that the European Union must cut CO_2 emissions of new trucks by 65% by 2030 and 100% by 2035. That's what it will take for Europe's truckmakers to win the global competition to reach zero emissions. It's also necessary for the EU to get the last polluting trucks off its roads by 2050. Trucks are driven for 20 years on average.

https://www.transportenvironment.org/challenges/road-freight/trucks/your-heavy-duty/

https://www.transportenvironment.org/challenges/road-freight/trucks/truck-co2-standards/

https://www.transportenvironment.org/discover/truck-co2-europes-chance-to-lead/

Air pollution kills more than 90 babies weekly

UNICEF has published a new study and now urges governments to adopt Air Quality Standards in line with the WHO Air Quality Guidelines, as air pollution is now a prominent cause of death among children across the region.

"When it comes to air pollution, the tiniest lungs carry the heaviest burden, wreaking havoc on children's health and development, sometimes costing them their lives," said Regina de Dominicis, UNICEF Regional Director for Europe and Central Asia.

More than 90 babies die every week in Europe and Central Asia from causes associated with air pollution (unicef.org)

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Low energy vision for the European region

Continued from front page

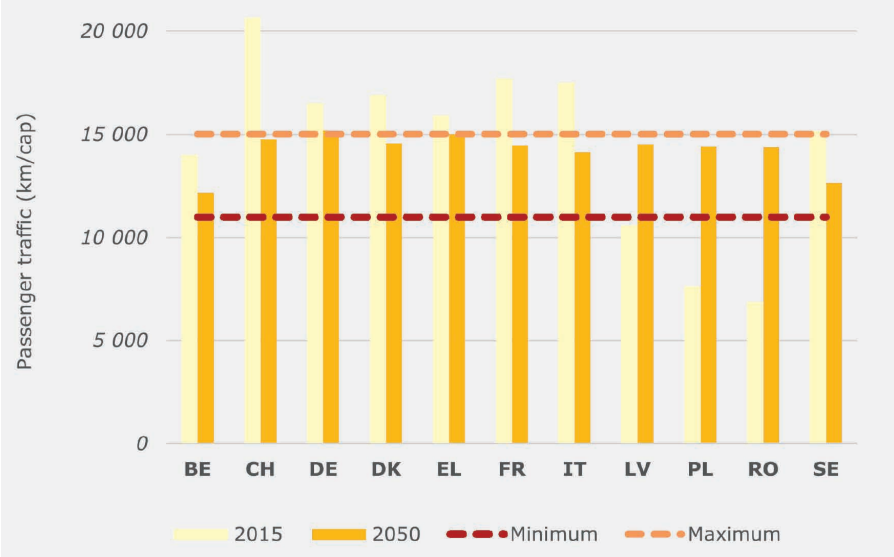
rising speed in increasingly heavy vehicles.

Energy efficiency changes the amount of energy consumed to deliver a given level of service, without questioning that level. It's time to complement it with energy sufficiency, which addresses the nature and level of energy-consuming services. Energy sufficiency responds to the two major challenges of the energy transition: the social and the environmental aspects. It aims to keep consumption between two limits: the satisfaction of a minimum decent level of energy services for all, according to the principle of equity and fair share, and a maximum level that does not endanger the carrying capacity of the Earth.

The CLEVER scenario, a Collaborative Low Energy Vision for the European Region, is an energy transition scenario that responds to these challenges by looking first at the demand side before considering the decarbonisation potential of the energy supply, following a "sufficiency – efficiency – renewables" approach. Starting the modelling of the energy system with an analysis of energy services makes it possible to question the need for these services and to define fair levels. This innovative scenario, published in June 2023, was developed by a network of 26 organisations (think tanks, research institutes, technical universities, civil society organisations, etc.) from 20 European countries, under the leadership of the French association négaWatt.

Its bottom-up construction aggregates national pathways into an integrated European scenario, considering national circumstances and pursuing principles of fair burden sharing and increased equity between and within the countries covered. Indeed, the application of the sufficiency principle makes it possible to redistribute efforts between reducing excessive consumption and catching up with a minimum level of services for all, with consumption levels per capita converging in Europe towards 2050. For example, travel distances per capita, which are twice as long in France as in Poland, are projected to converge in a much narrower corridor. This is facilitated by policies which particularly target the most unsustainable consumption patterns, such as a frequent flyer levy (Figure 1).

Figure 1. Change in the average distance travelled per capita per year in several European countries in the CLEVER scenario.



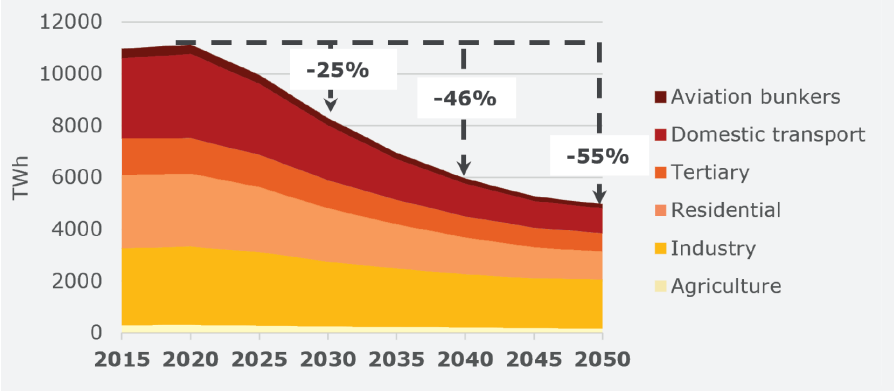
When applied through sectors and services, CLEVER concludes that the adoption of sufficiency policies in the EU could double the energy savings achievable by relying on energy efficiency improvements alone. Overall, EU final energy consumption could (and should) be reduced by 55% by 2050 compared to 2019 (of which between 20% and 30% can be achieved through sufficiency measures compared to 2019 levels, with variations between countries and sectors).

This reduction in energy consumption, combined with an accelerated development of renewable energy, could enable a reduction in net greenhouse gas (GHG) emissions of 65 per cent in 2030 and 93 per cent in 2040, on the way to climate neutrality in 2045. This would allow Europe to remain on a 1.5°C-compatible pathway and to be fully independent from all forms of energy imports in 2050 (including hydrogen or e-fuels).

By reducing the cost and scale of required equipment replacement (e.g. electric cars, heating systems...), renewable installations, electricity network, energy storage and the associated impacts on materials and land use, sufficiency can make the EU targets more likely to reach and maximise their co-benefits and acceptance. It also enables the achievement of an energy system fully based on renewable energy, thus avoiding risky and costly options such as Carbon Capture and Storage or new nuclear.

Finally, sufficiency is a quick and effective response, and therefore also realistic to implement. Indeed, it seems unlikely that the rate of deployment of renewables or electrification could be increased massively without harming important aspects of strong sustainability such as materials depletion, biodiversity, or social acceptance.

Figure 2. Evolution of the final energy consumption for EU27 in the CLEVER scenario.



Hence the need to increase renewables penetration while containing the overall volume of the system (Figure 2).

Some European countries have already implemented sufficiency measures, such as the "climate ticket" in Austria, the 2000 watt target in Zurich, the creation of local agencies for collective housing in Germany, the reduction of the speed limit on motorways to 100 km/h in the Netherlands, or the ban on short-haul flights where there is a 2.5-hour train alternative in France. A research project in Germany has identified more than 330 sufficiency-related policies and measures. The point is not to force people to change their behaviour, but first to develop a democratic debate about the kind of ambition to aim for, then to create the systemic conditions and infrastructure to facilitate and support societal changes.

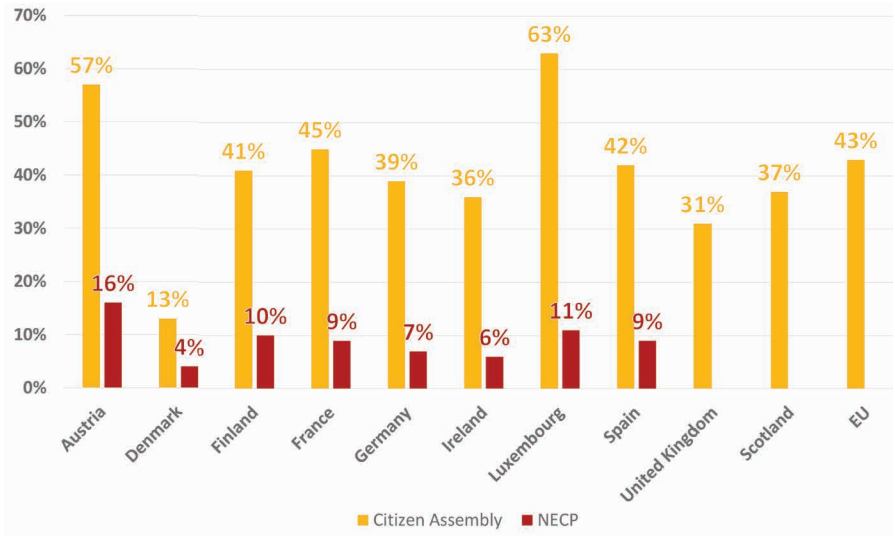
For this to happen, sufficiency needs to be put at the forefront of European policy making. Citizens seem more ready than policymakers tend to think, as shown by the positive response to short-term sufficiency measures driven by last year's energy crisis, or illustrated by recent research findings that EU and national citizen assemblies tend to support sufficiency policies (up to 40–50% of their proposals) much more than government plans (less than 10% in the corresponding countries) (Figure 3).

Sufficiency promises multiple co-benefits in terms of health, wellbeing, and social justice. All stakeholders need to be mobilised to enable change and concrete implementation at all levels of governance. This change, together with the necessary

evolution of social standards, will need to be guided and accompanied, and the EU's energy and climate policies must lead the way. The upcoming European elections provide an opportunity that should not be missed to point out the right direction.

Fabien Baudelet
Stephane Bourgeois
Yves Marignac
- négaWatt Association

Figure 3. Share of sufficiency policies in total climate mitigation policies by country (Citizens Assemblies and National Energy and Climate Plans), Lage et al., EU Uni Flensburg/EnSu, 2023.



négaWatt is a French think tank carrying out independent energy prospective work in order to show that an energy transition is not only technically feasible but also desirable for society. Thanks to the complementary nature and field expertise of its members, the association produces energy and climate neutrality scenarios through a systemic approach based on sufficiency, efficiency and renewables (latest in 2021 for France) and proposes policies and measures for a sustainable energy future.

CLEVER supporting documents:

- Final report
- Executive Summary
- Online Data visualisation tool
- Excel extract of some of the detailed assumptions

Benefits from closing coal plants larger than expected

A coal processing plant located near Pittsburgh in the US was closed in 2016. The plant had produced coal-coke for steel-making for about 100 years. The closure immediately reduced air pollution for the local communities. Sulphur dioxide decreased by 90%, arsenic by 66% and particle pollution also improved. A recent study has followed the health effects of the closure and saw an immediate 42% decrease in emergency room visits for heart problems and similar effects for stroke. These effects further declined in the three years that followed, until the end of study, showing that the closure led to long-term health improvements. Two communities that are distant from the plants were used as control populations and did not show similar changes. Prof George Thurston, of New York University Grossman School of Medicine, who led the study, said:

"We found much larger cardiac health benefits from the plant's closure than expected. This provides solid confirmation that fossil fuel-related air pollution is far more toxic than other types of air pollution. Policymakers have been greatly underestimating the local and immediate human health benefits that will occur as we phase out fossil fuel processing and combustion in our cities and towns."

Iopscience, 31 July 2023
https://iopscience.iop.org/article/10.1088/2752-5309/ace4ea

Denmark's bold move to promote plant-based eating

The Danish government allocates around 11 million euros annually to a fund for plant-based foods. Its aim is to make plant-based diets accessible and appealing to everyone.

Denmark is famous for pork production. The number of pigs even outnumbers the human population. It may therefore surprise outsiders that the country is taking steps towards a dietary shift. Earlier this year they launched a fund aimed at promoting plant-based food. The initiative is one of the outcomes of a broad political agreement on "a Green Transition for Danish agriculture" reached in 2021.

Marie-Louise Boisen Lendal, The Chair of the Fund for Plant-based Foods (Plantefonden), is pleased by the fact that "the whole agreement has an overwhelming parliamentary majority behind it. From left to right there is a very singular voice behind this particular effort in the transition, since the law was univocally accepted", and she adds "plant-based foods need to be popular and broadly accepted. The Danish decision-makers have in that matter shown responsibility from right to left."

The agreement states that a shift to more plant production is a central element of the green transition. To support this transition, the parties decided to allocate around 11 million euros annually until 2030 to finance a dedicated fund for plant-based food initiatives. The funding was secured by moving resources from an existing governmental fund with a more general aim to support research and development in the agri-food sector.

"In our strategy we have identified a need to support the whole value chain in this shift. We need better-quality plant-based products as an alternative to meat and dairy products. But in particular we need to influence consumers in their everyday choices. So in our first action plan we are targeting projects that in a variety of ways make plant-based foods more attractive for consumers," says Marie-Louise Boisen Lendal when explaining the fund's initial focus. The fund can be used to support various activities, including knowledge transfer, information campaigns, research and development, and participation in quality schemes. At least half of the resources are earmarked for organic projects, in line with Denmark's political objective to double organic farming by 2030.

The first call for proposals was opened in May 2023, and the fund's initial focus will be on three key areas. First, efforts will be made to increase the share of plant-based food in public and private institutional kitchens and food services. Second, the promotion of private consumption of plant-based food among Danes will be prioritised. And finally, the fund aims to boost the demand for Danish plant-based food in export markets. Grants will be awarded to companies, organisations, research institutions, and knowledge dissemination bodies.

Signe Kristine Nørgaard, the project manager for establishing the fund, is satisfied with the response: "The interest was quite overwhelming, we held an applications webinar and the attendance

exceeded the capacity of our online meeting. So we had to ask people to sit in pairs in front of their computers so that everybody could take part."

The deadline for applications was the last day of August 2023. "The number of applications for the first round ended at 97 projects and the total amount applied for exceeds several times the available funds."

The fund's definition of plant-based foods encompasses a broad range of items derived from plants, edible fungi, algae and beneficial microorganisms. This includes both unprocessed and processed raw materials and ingredients, potentially combined with non-animal components suitable for food production. The scope covers various items such as root vegetables, whole plants, stems, buds, flowers, fruits, seeds, mushrooms, yeasts, seaweed, and algae from land-based and marine sources. But it is not always easy to draw the line between what is plant-based and what is not. Signe Kristine Nørgaard explains: "We cannot support the promotion of hybrid products that are only partly plant-based, on the other hand we may support a canteen which serves some meat, but where the goal of the project is to increase the proportion of plants on each plate. The meals could still contain some meat, but that is not the goal of the project."

The launch of this fund shows that even a country with vested interests in the meat industry can work proactively to transform the food system so that it better aligns with our long-term climate and health goals. When asked what European decision-makers can learn from this initiative, Marie-Louise Boisen Lendal wants to see dedicated action on a dietary shift:

"We need a total shift in our food system if it is going to become more sustainable. Plant-based food is the only solution that has the potential to deliver this at large scale. So plant-based food consumption and production need to be a political priority all over Europe. Plant-based food must be available and affordable for every European and not just for the privileged."

"Historically, decision-makers have impacted food-consumption and production many, many times. This is no different. You have to make more plant-based diets attractive and accessible."

Kajsa Pira

The Fund for Plant-based Foods (Plantefonden) is administered by the Danish Board of Agriculture: https://plantefonden.lbst.dk/

This article will be part of a report on sustainable food system policy, which will be published later this autumn.

$18 billion in support for new oil and gas projects

Oil Change International has commented on the approval by Norway's energy ministry in June 2023 of over 18 billion US dollars to support 19 new oil and fossil gas field developments on the Norwegian Continental Shelf in the North Sea:

"Once again, Norway is showing its climate hypocrisy. As wildfires are raging in Canada and heatwaves are taking lives in India, Norway approves 19 new oil and gas field developments. The world's leading climate scientists say we must stop drilling for new oil and fossil gas to secure a liveable future – but despite this Norway keeps drilling. If Prime Minister Jonas Gahr Støre and the rest of the Norwegian government want to be taken seriously on the international climate stage, they need to align Norway's oil and gas policies with a 1.5 degree scenario, and start planning now for a fair, full, and fast phase-out of all fossil fuels." Other Norwegian NGOs, including WWF Norway, Greenpeace Norway and FOE Norway, have also called for a fossil-fuel phase-out.

https://priceofoil.org/2023/06/28/norway-approves-18-billion-in-support-for-new-oil-and-gas-projects/

Approval of oil field highlights UK's Planet Wrecker status

In September 2023 the UK Government approved the development of Equinor's controversial Rosebank oil field. This comes after widespread opposition across the UK and Norway, including 700 scientists, 200 organisations and celebrities, 40 MEPs and MPs from every major political party.

In the same month the International Energy Agency's 2023 Net Zero Roadmap report reaffirmed that world leaders must not develop new oil, gas, or coal beyond existing fields – and some existing fields and infrastructure will need to be closed early.

According to recent Oil Change International analysis, the UK is among five global north countries that are posed to be responsible for the majority of new oil and gas extraction to 2050. Extracting just the fossil fuels from existing sites globally would result in 140% more carbon pollution than the allowed budget for 1.5°C. If countries like the UK proceed with new extraction, committed carbon pollution from fossil fuel production will be 190% over the 1.5°C budget, risking locking in more than a dangerous 2°C of warming, and an unlivable future for all. Oil Change International said: "The science could not be more clear: there is no room for a single drop of oil from new fields. In our recent report "Planet Wreckers" we showed how the UK is one of the five rich Global North countries responsible for 51% of planned new oil and gas extraction globally to 2050, and blatantly ignoring the calls to rapidly phase out fossil fuels. The fact that the UK Government has approved the biggest undeveloped field in the UK, and coming just one week after the Government's weakening of its net zero policies, is proof positive it is siding with oil and gas giants over a liveable future for all."

https://priceofoil.org/2023/09/27/approval-of-rosebank-oil-field-highlights-uk-planet-wrecker-status/

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Peeking down from space to catch air pollution

When you think about satellites or NASA, you probably think about the universe, black holes, planets, and galaxies far away. But when NASA's new project, MAIA, is launched in collaboration with the Italian Space Agency next year it will be pointed towards us on Mother Earth and the pollution we have created.

The mission of the Multi-Angle Imager for Aerosols (MAIA) is to explore the extent of particle pollution, sometimes known as smog.

"This is breaking new ground," said David Diner, who is based at JPL and is NASA's principal investigator for MAIA. Diner believes MAIA will give policy makers and scientists who study the health effects of particle pollution new tools that will help society breathe easier. "If we can determine which components (of PM) are more harmful than others, then you start to learn ways to help public health, by going after those particles that are more harmful than others," Diner adds in an interview with Pasadena Star News.

It is not the first time that space agencies have looked down at Earth, nor is it the first time to gather pollution and climate data. It is, however, the first time NASA has worked very closely with epidemiologists right from the start of a project and it is the first time this type of instrument has been used to do so. MAIA has a new controllable camera that can look ahead, down and backwards, and uses 14 spectral bands to capture digital images at many angles of particle scattering by the sun's rays at various shortwave frequencies.

"MAIA is a targetable instrument. It can look ahead, down, backward, etc.," Diner says. MAIA's 14 spectral bands can capture digital images of these tiny, aerosol particles scattered by the sun's rays in the air we breathe at many different angles in the ultraviolet, visible, near infrared and the shortwave infrared portions of the electromagnetic spectrum. This method not only reveals particle mass but can identify what it is in the toxic particle soup we are breathing. When this information is linked to health impacts it can help us understand the relative toxicity of various air pollution sources, from tailpipes to dust storms.

NASA is partnering with the Italian space agency Agenzia Spaziale Italiana (ASI) to launch a rocket in 2024 that will carry MAIA and place it into the satellite PLATiNO-2 that will orbit the Earth. MAIA should operate for three years and will primarily target 11 cities: Los Angeles, Atlanta, Boston, Rome, Addis Ababa, Barcelona, Beijing, Johannesburg, New Delhi, Taipei, and Tel Aviv. For some of the countries, such as Ethiopia, it is a large leap in air pollution data, as monitoring has been scarce, US AID has also supported some ground monitoring of air quality. There will also be secondary targets such as Pakistan, which has some of the worst air pollution in the world, as well as scarce air pollution data. One epidemiologist on the MAIA project, Bart Ostro, from the University of California, Davis, has seen officials change their outlook on air pollution once they are presented with an analysis of local data. For example, in the 1990s, Ostro helped health researchers in Chile and Thailand determine that the particulate matter they were measuring was associated with a multitude of health effects.

"I was told later that [this research] had had a very important role in awakening scientists and politicians to the air pollution issue in these countries," Ostro says. "Conducting studies in people's own countries can really be a wake-up call."

Ebba Malmqvist

JPL readies new orbiting observatory to study Earth's worst kind of air pollution – Pasadena Star News

Breaking New Ground: Space Agencies and Epidemiologists Partner Up on Particulates | Environmental Health Perspectives | Vol. 131, No. 3 (nih.gov)

Arsenic in air, cancer risks and background levels

Humans are exposed to inorganic arsenic in drinking water, soil and the air, and to organic arsenic compounds, especially in fish and shellfish. Arsenic occurs in the air bound to particles, mainly in the fine particle fraction, and consists almost exclusively of the more toxic form of inorganic arsenic (As III and As V).

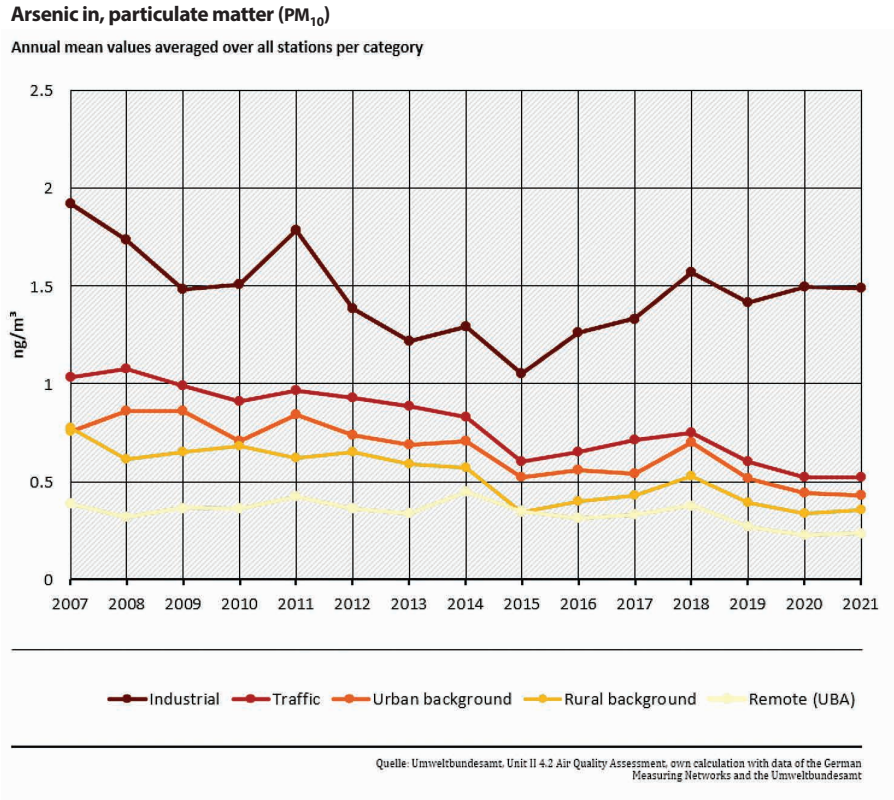
Arsenic enters the air mainly due to smelters (of non-ferrous metals) and in the combustion of coal containing high arsenic levels (WHO, 2000). The reasons for regulating the concentrations of arsenic in ambient air are the effects that emissions to air can have on human health and the environment. Research on arsenic and lung cancer began in Sweden, where workers at Boliden Rönnskärsverket smelting plant were found to have a five times higher risk of dying from lung cancer.

Arsenic in ambient air is now a known carcinogenic (IARC Group I), after extensive research (IARC, 2012), and it has not been possible to establish a threshold for adverse effects on human health (WHO, 2000). If there does not seem to be a threshold value (i.e., a value below which no effect has been found with sufficient evidence), a so-called level of protection must instead be calculated with the accepted number of extra cancer cases in the event of lifelong exposure. Target levels can then be set, such as one extra cancer case per 100,000 or one million inhabitants in the event of lifelong exposure. The WHO has estimated that the lifetime excess risk of lung cancer is one per million at an airborne arsenic content of 0.7 (0.66) ng/m^3 based on a traditional linear extrapolation from occupational studies (including Boliden Rönnskär) to low-dose exposure (WHO, 2000).

The US EPA uses the same approach as the WHO, but they only use domestic studies (their guidelines) and get a slightly higher risk estimate. This means that they set a lifetime excess risk of cancer of one per million at an airborne arsenic content of 0.2 ng/m^3 (US EPA). In 2000, an EU expert group discussed if there might be an impact threshold (EC, 2000). In the presentation of results they concluding that there was no convincing evidence for an impact threshold, with other words there are no safe levels of Arsenic in air (EC, 2001). Following the publication of the EU position paper, further studies have shown lung cancer at arsenic exposures without any apparent threshold level (Swedish Environmental Protection Agency, 2008). The European body ECHA (2013) has compiled calculations, the latest of which is from DECOS 2012. The Dutch Expert Committee on Occupational Safety (DECOS) used the same methodology as the WHO but instead used the study that found the method to be of the highest quality and found that the lifetime risk of lung cancer is 1 per million at an air content of arsenic at 0.9 ng/m^3 (ECHA, 2013).

To summarize, arsenic in the air is carcinogenic and the risk increases with dose and there does not seem to be evidence for threshold of effect according to the WHO (2000). Different expert bodies have calculated acceptable cancer risks, based on different samples of studies. The excess lifetime risk level is one per million inhabitants at a concentration of 0.2–0.9 ng/m^3, while the the WHO assessment being 0.7ng/ m^3. Unlike other countries, the EU does not have a defined acceptable risk, it is therefore a philosophical/political question about how many extra cancer cases to allow in society. Economically, lung cancer cases tend to be one of the most expensive outcomes, partly through medical costs, loss of work ability

Figure 1, Arsenic in PM_{10}, Umweltbundesamt II 4.2 mit Daten der Messnetze der Länder und des Bundes.

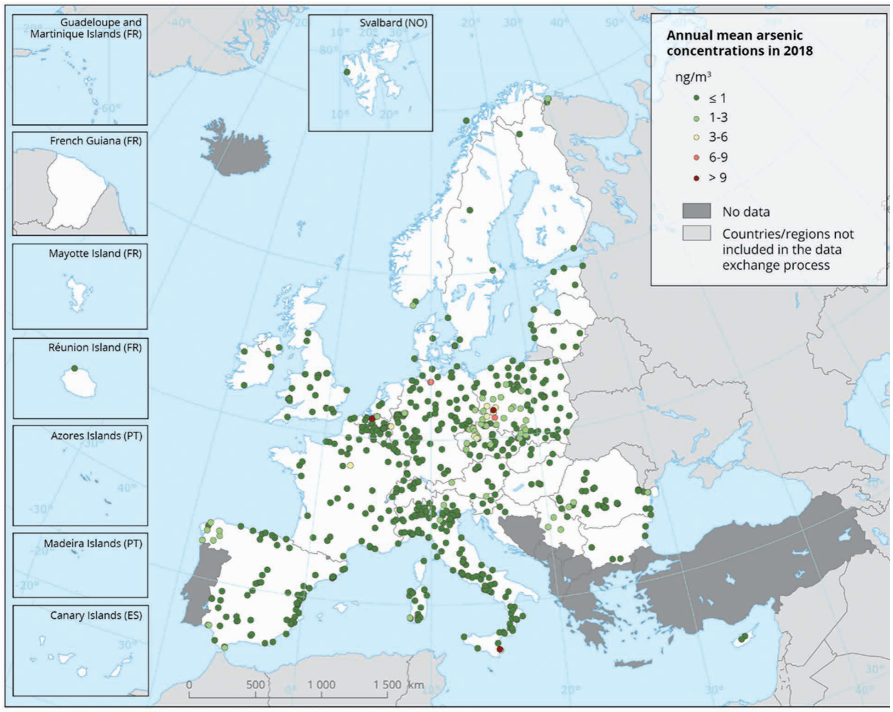


and partly through the suffering you are exposed to before you die.

Background concentrations in Europe have decreased over the past 20 years and are now mostly below 1 ng/m^3 (EEA, 2023) (Figure 2). The statistics are in whole numbers and do not determine how much less than 1 ng/m^3. As can be seen in Figure 1, with Germany as an example due to its large industrial sector, levels are well below 1 ng/m^3 in most area with levels reaching 1.5 ng/m^3 in industrial areas. Thus, the feasibility of reaching a health-based limit value seems good with little effort in most of the EU.

Ebba Malmqvist

Figure 2, Annual averages of arsenic in air 2018 (EEA, 2023)



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International Agency for Research on Cancer: IARC (2012) vol. 100C: A review of human carcinogens

US Environmental Protection Agency (EPA). Arsenic. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0278_summary.pdf

WHO (2000) Air quality guidelines for Europe; second edition No. 91.

European Parliament votes on air quality

Although the Environment Committee had agreed on WHO alignment from the year 2030, a compromise proposal was presented to the European Parliament that aimed instead at 2035. This delay will lead to an excess mortality of 600,000 over the five-year period according to calculations by the European Respiratory Society. In addition, arsenic, nickel and B(a)P limit values were changed in line with the Commission proposal after heavy lobbying from industry. However, the proposal did retain the following changes: 1, More environmental monitoring of soot, mercury, ammonia, sulphur dioxide, carbon monoxide, lead and benzene. 2, EU countries must draw up air quality roadmaps in which they explain how they must meet the regulatory requirements. 3, More so-called super monitoring stations (from one per 10 million inhabitants to 2 million inhabitants). 4, Faster requirements for measures when limit values are regularly exceeded; within three years instead of the EU Commission's proposal of five years. 5, People who experience serious health problems due to bad air get legal tools to bring action for damages. EU citizens should be able to access public information on air pollution.

Actualité Parlement européen, Communiqué de presse 13-09-2023
https://www.europarl.europa.eu/news/fr/press-room/20230911IPR04915/pollution-de-l-air-les-deputes-souhaitent-des-limites-plus-strictes

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Polluted air is killing 40,000 in the Po-valley each year

A recent scientific article has shown that air pollution in the Po Valley in Italy is still a big killer. The researchers looked at chronic exposure to $PM_{2.5}$ for the years 2016–2019 and 39,628 attributable premature death were estimated in the regions of the Po Valley. These are alarming numbers that show that a lot more has to be done in the region to protect the health of its citizens.

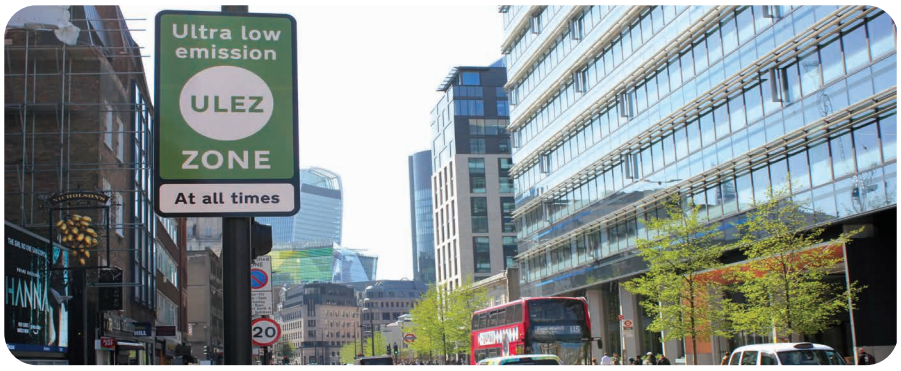
Epidemiologica & Prevenzione 3-2023
https://doi.org/10.19191/EP23.3.S1.A619.040

London's expanded ULEZ benefits more residents

London's Ultra Low Emissions Zone (ULEZ) expanded in late August to cover all boroughs in Greater London. Now, drivers of vehicles that fail to meet minimum emissions standards are required to pay a daily fee. First implemented in 2015 in central London, the ULEZ has shown good results with a 50 per cent reduction in the main air pollutants and a third fewer children being admitted to hospital with air-pollution-related illnesses. The expansion is supported by a 160 million pounds scrappage scheme to help drivers with non-compliant vehicles and reduce the economic injustice of the ULEZ.

https://www.bbc.com/news/uk-england-london-66592199

https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667%2823%2900106-8/fulltext



US EPA launches new review of ozone air quality

Due to the strong US EPA emission standards, which also include ozone, ozone has decreased by 7 per cent between 2010 and 2022. The areas not meeting the 2015 standards need further mitigation action. The EPA has initiated new federal emission standards for cars and trucks and strengthened the rules to reduce volatile organic compounds (a precursor to ozone) from the oil and gas industry, as well as other mitigations. The overall reductions in ozone precursors amount to hundreds of thousands of tons, with estimated health benefits adding up to billions of dollars.

The US EPA established current standards at a level of 70 parts per billion in 2015 and retained them at this level in 2020 after concluding that there was little new information to suggest the need for revision. The corresponding Advisory Committee CASAC has now identified studies published more recently and recommended that the EPA conduct additional risk analyses that might support more stringent standards.

Environmental Protection Agency, August 21, 2023
https://www.epa.gov/newsreleases/epa-initiates-new-review-ozone-national-ambient-air-quality-standards-reflect-latest

Nature wins over fossil fuels in Ecuador

A majority (60 per cent) of Ecuadorians voted to halt its largest oil project underneath Yasuní National Park. The binding referendum permanently bans oil drilling in the Ishpingo-Tambococha-Tiputini (ITT) oil project, located on the eastern edge of the Yasuní national park, one of the most biodiverse places on the planet. There are an estimated 1.67 billion barrels of crude in the ITT fields, with 225 active wells. More than 500 total wells were planned. But Sunday's popular vote prohibits the opening of all new wells and requires state oil company Petroecuador to close wells currently in production and dismantle and remove all oil infrastructure within a year. The vote also requires remediation and reforestation in the area.

The referendum has renewed Ecuador's democracy and is an example for the whole world, says Ivonne Yáñez, co-founder of environmental organization Acción Ecológica. For over twenty years her organization worked for to protect Yasuní from the oil industry.

EU Emissions portal

MEPs were largely united behind the European Parliament's position on the Industrial Emissions Portal Regulation in a vote in June 2023 (563 voting in favour, 51 against and 18 abstaining). The position would require the portal to include links to more information for each installation (or group of installations with the same operator at the same site). This would include summaries of its permit, environmental management system and IED green transformation plan. It would also require a list of non-compliant installations. The MEPs endorsed the Commission's proposal to add new pollutants to the reporting requirements, in particular substances of emerging concern, such as micropollutants or microplastics, as well as the addition of "forever chemicals" – per- and polyfluoroalkyl substances – to the list.

Follow-up: https://www.europarl.europa.eu/doceo/document/TA-9-2023-0260_EN.html

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New steps towards banning high-carbon advertising

Last year hundreds of thousands of people signed up to support the idea of a ban on fossil fuel ads and sponsorships in the EU, such as the existing one on tobacco advertising.

The issue is now growing – several cities, including Sydney and Stockholm, have decided to ban fossil ads and there is a good chance that it will be an issue in the election to the European Parliament 2024. The question is not if fossil fuel ads and sponsorships will be banned, it is a matter of how and when.

Fossil fuel ads pollute our minds every day, influencing our wishes and dreams, normalising high-carbon lifestyles. In a short period of time environmental movements all over Europe have succeeded in making this an issue.

Last year 350,000 signatures were gathered in the European Citizens' Initiative (ECI) on banning fossil fuel ads and sponsorships, demanding new legislation in the EU. The ECI was initiated by Greenpeace Europe, and Silvia Pastorelli, climate and energy campaigner, describes why: "We have seen a change of tactics of fossil fuel companies from denying to delaying and deflecting. Fossil fuel companies' social license has remained unchallenged for decades and we wanted to bring awareness to it and to start dismantling it."

Advertising and sponsorship had already been highlighted as an issue by some parts of the movement in Europe and the UK, for example in the Badvertising campaign. Greenpeace saw the possibility of acting as a catalyser of the movement, bringing various groups together in one campaign and making it part of the mainstream discussion.

The ECI's goal to get one million signatures was not met, but many other successes were achieved. Who could have imagined that the UN Secretary General would highlight the fossil fuel industry's misleading PR? Or that the director of Don't Look Up, Adam McKay, would support the idea of a fossil ad ban?

But of course, the most important part is not what is said, but what is done. From a Swedish perspective a lot of things have happened. The Swedish Advertising Ombudsman recently held a seminar on fossil fuel ads, prompting discussion within the industry on how to tackle the issue. Sweden's two biggest cities, Stockholm and Gothenburg, have decided to ban or regulate fossil fuel ads in different ways.

There are similar initiatives all over the world, such as in Sydney and France. Most of them are described on the global website on fossil ad ban initiatives, launched in April 2023. The spokesperson for the new website and campaigner at Reclame Fossielvrij, Charlotte Braat, comments: "As can be read in the research section on our website, the IPCC found that 40–70 per cent of emission reductions for 2050 can be achieved through choices we make in our daily lives. (…) For the IPCC, this includes the regulation of advertising, high-carbon advertising in particular."

The issue of fossil fuel companies influencing our minds is not only about ads, but also about sponsorship. There have been several initiatives to highlight this issue, such as the Bad Sports Award by the Badvertising campaign. The winner in 2022 was the Men's FIFA World Cup in Qatar for its "unreliable carbon-neutrality claims and having oil and gas giant QatarEnergy as its main sponsor". The issue of high carbon-sponsorship in winter sports has been scrutinised in the report The Snow Thieves. Commenting on the report, Britain's most successful Winter Olympian, Lizzy Yarnold, said: "Having high-carbon sponsors is like winter sport nailing the lid on its own coffin, and it needs to stop."

The legal aspect also has an important role. There have been several lawsuits during the past years – such as one filed against KLM by ClientEarth and Reclame Fossielvrij over greenwashing allegations and against Total Energies for "misleading the public over Net Zero", by Greenpeace France, Friends of the Earth France and Notre Affaire à Tous, supported by ClientEarth.

So, what next? On a European level

there is a good chance that demands for new legislation banning fossil fuels ads and sponsorships will become part of the debate before the election to the European Parliament 2024. The next step is a conference on advertisement in the EU Parliament in May, and specifically on the topic of advertising by fossil fuel companies, led by the Green MEP, David Cormand.

Another upcoming issue is whether there is really a need for new legislation, or can the existing legislation be used more effectively to end fossil fuel ads and sponsorships? The big call within ECI member organisations was for new legislation. There are now voices claiming that the existing legislation could be used, since ads affecting the climate are misleading per se. New Weather Sweden recently published a report on this issue, based on an article by Clemens Kaupa, assistant professor in EU law at Vrije Universitet in Amsterdam: Smoke gets in your eyes: misleading fossil fuel advertisement in the climate crisis.

Gunnar Lind, New Weather Sweden, says: "Surely we need new legislation to clarify, but we can already claim that fossil fuel ads are banned since they are misleading, and the current legislation is clear on that issue. The big question right now is not if fossil fuel ads will be banned, it is just a matter of how and when."

Anna Jonsson

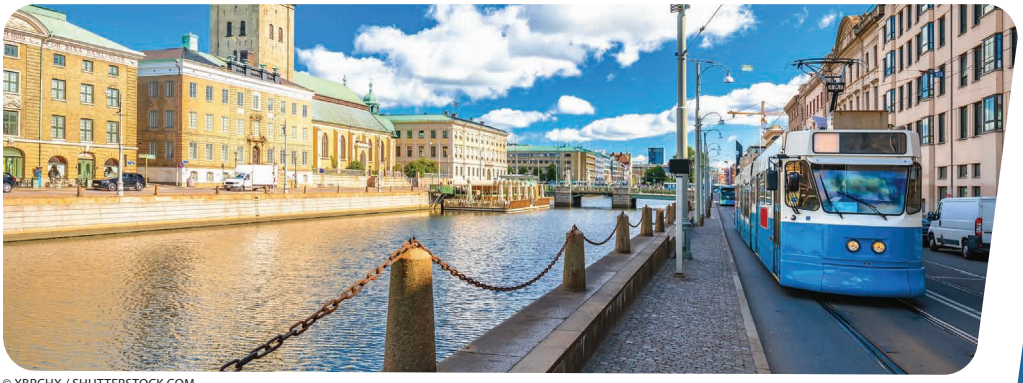
Earlier articles in this issue, Time to ban climate-threating advertising, Dec 2021, and Fossil advertising – halfway towards a ban, June 2022.

https://www.worldwithoutfossilads.org

What source of air pollution is the biggest killer?

A recent study in The Lancet Public Health estimated which sources contribute most to the mortality associated with $PM_{2.5}$ and NO_2 in 857 European cities. The results show great variability between the cities studied, but in general the largest contributor to $PM_{2.5}$ mortality is emissions from residential sources (23%), with the agricultural sector in second place (18%), followed by industry (14%), transport (13.5%), the energy sector (10%), natural sources (9%) and shipping (5.5%). In terms of NO_2 mortality, there is one very prominent contributor, which is the transport sector, with an average contribution across all cities of 48.5%, followed by industry with an average of 15%, the energy sector with 15%, housing (10%) and shipping (10%).

The Lancet, 23 July, 2023
doi:10.1016/S2468-2667(23)00106-8



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Reviewed Gothenburg Protocol calls for revision

Under the UNECE Convention on Long-range Transboundary Air Pollution (LRTAP) the Gothenburg Protocol has been reviewed in terms of effectiveness. The review report found that emissions have been reduced, but that countries will continue to suffer from health, ecosystems, and crop yield damages from air pollution under current legislation. Further emission reductions are needed across various sectors such as agriculture, energy and transport, and societal changes are needed in the areas of energy and diet.

The Working Group on Strategies and Review agreed at its 61st session (4–6 September 2023) that continuing with the amended Gothenburg Protocol in its current form with no additional action is not an option. Among delegations, there was significant support for a revision of the Protocol and the Working Group therefore recommended to the Executive Body that it launches a process for revising the Protocol at its 43rd session (11–14 December 2023).

The full meeting report can be found here: ECE_EB.AIR_150_Add.2_2305247E.pdf (unece.org)

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Unexpected CO_2 movements at pioneering Norwegian CCS sites

The CO_2 in the pioneering Norwegian CCS projects has moved in an unexpected way, says a recent IEEFA study. This raises questions about the feasibility and economy of large-scale CO_2 storage.

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If CCS – carbon capture and storage – is to be used at large scale, the proponents will have to demonstrate that the CO_2 will not leak back into the atmosphere from the storage site.

The longest experience of dedicated storage is at the Sleipner field in the North Sea off Norway, which has been in operation since 1996. Another Norwegian storage site, Snøhvit, far further north, has been in operation since 2008. CCS proponents have for decades pointed at the supposed successes of the two projects.

A new study[1] by Grant Hauber of IEEFA, the Institute for Energy Economics and Financial Analysis[2], concludes that "the two projects have been successful in sequestering their intended annual CO_2 deposit volumes", i.e. there has been no leakage, but both have "also experienced unexpected subsurface storage behaviours that could have led to CO_2 leakage and, in the case of Snøhvit, potential subsurface geological failure."

Potential geological failure was also the reason why the In Salah CO_2 storage operation in Algeria, which began in 2004, was shut down in 2011[3]. The build-up of pressure one kilometre down, caused a measurable uplift (more than 2 cm, an earthquake) on the surface. CO_2 injection never resumed. This was in effect the second Norwegian CCS project, as Statoil (now Equinor) and BP were partners.

At Sleipner, problems started in 1999, after three years of operation, according to the report. The CO_2 moved up 220 metres to a previously unknown "layer 9". Fortunately, it has stayed there, just under the caprock, but the flow has accelerated over the years and the capacity of layer 9 to store more CO_2 remains unknown. There is no way to move the CO_2 back to where it was supposed to be.

"Once you have injected the CO_2, you lose control over it," said Grant Huber in a presentation of his findings in September.

"Remedial actions are always a possibility and must be anticipated and budgeted for," says the report. That includes plugging a hole.

Snøhvit encountered problems after just 18 months of operation. The storage pressure, 2,600 metres down, was building up. The reason was that the storage volume was far smaller than expected. The CO_2 was supposed to migrate into a porous structure (like a sponge), but the porosity was too low, so the intended storage site could only take 1.4 million tonnes instead of the expected 13–14 million tonnes. Instead of 18 years of expected injection, the storage was full after less than two years. A new, shallower, layer was found to take care of some of the CO_2, but not

CCS geology – how do they know where the CO2 is?

The underground geology consists of rock, soil and liquids with varying pressures, temperatures and chemical properties. A CCS storage site also contains supercritical CO2, which is something between a liquid and a gas.

The Sleipner and Snohvit storage sites have been closely monitored. They have been the subject of more than 150 academic papers and have used the best and most modern technology.

The main monitoring technology is reflection seismology, a method originally developed to find locations for oil drilling. A (computer-generated) 3D image of what is under the ground can be pieced together by sending a sound wave from explosions, airguns or large vibrating plates and recording the echo, and repeating this from several locations. Development over time can be seen by comparing one image with an earlier image.

Reflection seismology was developed to locate where to drill for oil. It has limited accuracy, because it is not feasible to fire an unlimited amount of sound waves, and because ocean-going seismic survey vessels are expensive.

Caprock is like the icing on a cake, a more solid (impermeable) layer on top of a softer layer. The caprock is where the oil company drills through to get to the oil or gas. In CCS the caprock is the main barrier that prevents the CO2 from escaping.

Source: Institute for Energy Economics and Financial Analysis, June 2023. Norway's Sleipner and Snøhvit CCS: Industry models or cautionary tales? https://ieefa.org/resources/norways-sleipner-and-snohvit-ccs-industry-models-or-cautionary-tales

enough for the lifetime of Snøhvit.

If the problem had not been correctly diagnosed, a well failure or a big crack in the caprock might have followed.

While both projects encountered problems, the roots of these problems differed. The report finds that due to the unique geology of each site, field operators must make detailed plans that take contingencies into account.

The report furthermore highlights among its key findings that "Sleipner and Snøhvit cast doubt on whether the world has the technical prowess, strength of regulatory oversight, and unwavering multi-decade commitment of capital and resources needed to keep CO_2 sequestered below the sea – as the Earth needs – permanently".

This is not what CCS proponents have been saying. For instance – according to the press release associated with the report – the Norwegian government is justifying larger-scale projects with the experiences from Sleipner and Snøhvit. But if every site is different, the economy of scale may not be there, especially with regards to costs for monitoring and remedial action. According to the report such measures and their associated resources are needed long after the end of injection,

Fredrik Lundberg

1. Institute of energy economics and financial analysis 14 June, 2023 https://ieefa.org/resources/norways-sleipner-and-snohvit-ccs-industry-models-or-cautionary-tales

2. EEEFA is a non-profit corporation with some 70 employees in several countries, mainly active in the Americas, South Asia and Australia. They publish large numbers of reports on energy choices.

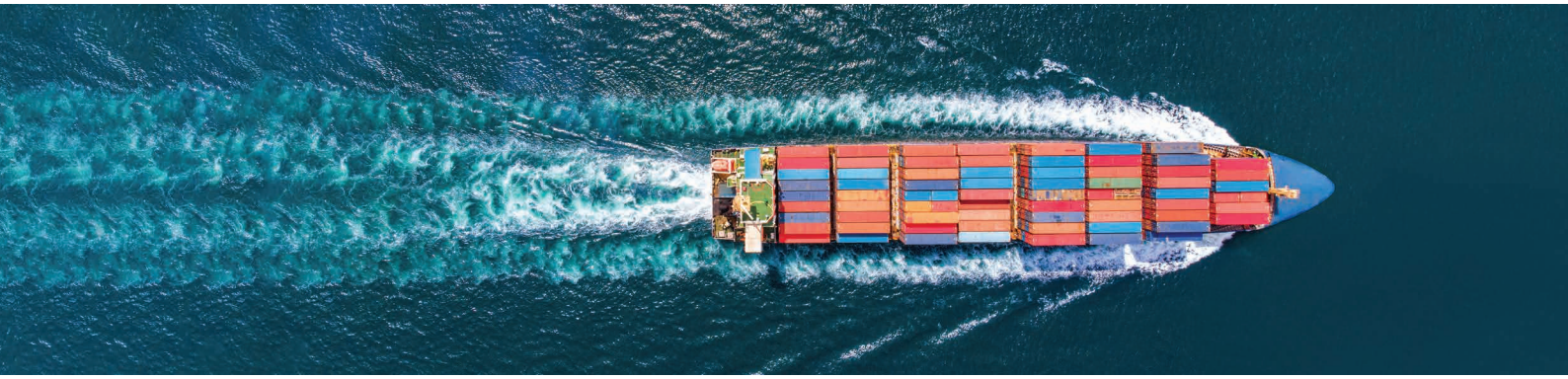
3. https://sequestration.mit.edu/tools/projects/in_salah.html

Lots of room for improvement within FuelEU Maritime

Maritime transport is an important factor in the transport system of the EU, accounting for around 75 per cent and 31 per cent of the external and internal trade, respectively, in terms of volume. New regulation in the form of the FuelEU Maritime initiative has been finalised during spring, and the European Parliament adopted in July its position on the regulation of renewable and low-carbon fuels in maritime transport.

In an explainer to a recent report by Transport & Environment (T&E), the FuelEU maritime is described as "… arguably the most important shipping-related legislation in its 'Fit for 55' package." However, T&E also notes that "…the ambition and scope of the regulation still leave huge room for improvement, and more needs to be done to put shipping on a Paris-compliant trajectory." According to T&E, the transition away from fossil-based fuels is likely to be slow, with fossil fuels accounting for the majority of maritime fuels until 2045, and ships could continue the use of LNG until the 2050ies.

Transport & Environment, 2023. Modelling The Impact Of FuelEU Maritime On EU Shipping. https://www.transportenvironment.org/wp-content/uploads/2023/07/FuelEU-Maritime-Impact-Assessment-July-2023.pdf



Methane slippage underestimated in ETS draft methodology

In August, the European Commission published draft regulations setting on the methodology to report emissions of methane and nitrous oxide from shipping, with reference to the revised emissions trading system (ETS). "Slippage coefficients" are used to calculate the amount of LNG fuel that is not burned but released into the atmosphere. It would also be possible to provide emission data based on laboratory testing.

Transport & Environment is (T&E), however, is critical to these default values, which are said to "grossly underestimate methane slippage", according to a recent article in ENDS Europe. "The default values should be updated to take into account research that shows methane slip is considerably higher than the current default values,", says T&E. The criticism also concerns the option to provide emissions values based on laboratory testing until a test cycle that "reflects real-world operational conditions (notably, the engine loads and their weightings)" is available. The NOx test cycle (NTC) of the IMO assumes a 75 per cent engine load more than 70 per cent of the time, but according to research cited by T&E, most ships operate on average at a lower engine load, resulting in higher methane slippage. "Relying on the NTC risks turning a blind eye to a significant amount of emissions," according to T&E.

Ends Europe, 24 August 2023. Shipping emission rules risk new 'dieselgate', green group warns. https://www.endseurope.com/article/1835085/shipping-emission-rules-risk-new-dieselgate-green-group-warns

IED vote: EU Parliament rejects key proposals to curb emissions

MEPs agreed to improve emission reporting, but sided with the industry and farm lobby instead of taking action to protect citizens' health and the environment.

In July, the EU Parliament voted to reject most of the recommendations of the Commission's proposal for a revision of the Industrial Emissions Directive (IED). Instead of requiring environmental permits from all facilities with more than 150 Livestock Units (LSU) (in other words 150 adult cows, 375 calves, 10,000 laying hens, 500 pigs, or 300 sows), they decided to maintain the existing thresholds from 2010, i.e., 40,000 laying hens, 2,000 pigs, or 750 sows and no limit for cattle.

Liberal MEP Michal Wiezik commented to Euractive that the outcome of the vote is "the worst outcome hardly possible" and yet "another blow to the integrity of the European Green Deal".

"The Parliament decided to water down and eliminate all significant improvements of the Proposal," he said, "it is really tragic that [the European Parliament] is not willing to even consider the inclusion of the biggest and most intensive farms under the scope of IED."

The Commission proposal would have targeted 13 per cent of EU livestock farms, but as much as 60 per cent of the ammonia emissions and 43 per cent of the methane emissions. The proposed rules were expected to generate 5.5 billion euro of environmental and health benefits for the EU every year.

"It is highly disappointing to see that a majority of European lawmakers chose to defend the vested interests of the livestock industry over the health of the people they're supposed to represent. This result is a win for populist politics and a loss for everyone else," said Célia Nyssens, at the EEB as response to the parliament decision.

Member states' position on rules for livestock farms was agreed in March. It is less ambitious than the Commission's proposal, but still contains some improvements compared to current rules, since they propose a threshold of 350 LSU for cattle and pigs, 280 LSU for poultry, and 350 LSU for mixed farms.

The Parliament also failed to protect citizens' rights in the revised regulation. Citizens should have the right to seek compensation for health issues caused by illegal pollution, but current EU rules severely restrict this possibility. The newly adopted compensation right comes with a requirement for evidence from the affected party that makes it difficult to assert their right in practice.

In addition, the Parliament has rejected measures to integrate decarbonisation and energy efficiency and has supported a 2035 permit delay amendment. Member states are prevented from introducing greenhouse gas emission limits for all industries, without impacting the EU's market-based emissions trading system. Furthermore, the adopted text hampers the consistent enforcement of EU laws regarding air and water quality standards.

The only positive outcomes from the vote concerned emission reporting. Firstly, the Parliament has endorsed improvements to the Industrial Emissions Portal, including the direct incorporation of vital information reported under the IED into the centralised European Environmental Agency Portal, making data extraction more user-friendly. Secondly, the text now categorises all PFAS chemicals as a group, subjecting them to monitoring and permit limits, and strengthens the Commission's proposal for permit summaries and mandatory consumption reporting.

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Kajsa Pira

Sources:

EEB Press release 11 July 2023

https://eeb.org/new-eu-industry-laws-fail-green-test-polluting-sectors-keep-business-as-usual/

Euractive 12 July 2023

https://eeb.org/new-eu-industry-laws-fail-green-test-polluting-sectors-keep-business-as-usual/

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Agrivoltaic solutions show positive performance in combating heatwaves

In the face of heatwaves and growing concerns about water scarcity, Sun'Agri, a French agrivoltaics specialist, has published insights on the positive impact of temperature regulation, water resource management and crop yields under agrivoltaic installations.

One study focuses on evaluating how solar panels affect the growth of apple, cherry and nectarine trees across three distinct locations in southern France – La Pugère, Etoile sur Rhône and Loriol. At the La Pugère site, the shading provided by the solar panels led to a reduction in air temperature by 3.8 degrees Celsius and an increase in relative humidity of up to 14 per cent between 2019 and 2021. The research also highlights the role of agrivoltaics in water conservation. The study revealed that irrigation requirements under the agrivoltaic system were up to 30 per cent lower compared to the reference areas, resulting in an average reduction of 22 per cent between 2019 and 2021.

Additionally, the research indicates that water retention in the soil was notably higher under the agrivoltaic structures. This phenomenon can be attributed to the microclimate regulation facilitated by the panels' shade, creating favourable conditions for plant growth while minimising transpiration and the need for irrigation.

Another study demonstrated the successful results achieved in cultivating eggplants in the Brinkhoff agrivoltaic greenhouse in Granges-sur-Lot. Commissioned in September 2020, the 2500 m^2 facility was designed to meet the growing challenges posed by climate crisis. Greenhouses typically face rising temperatures, with spring temperatures soaring to 30°C and summer temperatures escalating to a scorching 40°C. These conditions often result in flower burns and the accelerated emergence of new pests, making it increasingly challenging to sustain crop yields.

One year after its inception, the Brinkhoff greenhouse revealed positive outcomes. The initial findings demonstrated significantly higher crop yields beneath the agrivoltaic panels when compared to the reference area. The harvest yielded more than 800 kilograms of vegetables under the agrivoltaic structure, outperforming the reference area, which produced approximately 500 kilograms. Additionally, eggplants cultivated beneath the panels exhibited higher biomass, indicative of healthier plant development.

Youp Brinkhoff, Manager of the farm, emphasised the impact of agrivoltaic solution, stating, "We grow various vegetables under these louvers without needing to bleach the greenhouses in the summer. With two years of hindsight, there is less pressure from pests such as aphids. The upcoming harvests will allow us to confirm and complete the first encouraging results of this tool."

Since the inception of the Brinkhoff greenhouse project, nine different fruits and vegetables have been successfully cultivated, including tomatoes, cucumbers, eggplants, peppers, celery, fennel, spinach, lamb's lettuce and green beans. This achievement underscores the potential of dynamic agrivoltaics as a sustainable and resilient approach to greenhouse farming, with benefits ranging from enhanced crop yields to reduced environmental impact.

Reference:

Gwénaëlle Deboutte, Sun'Agri reveals agrivoltaics performance in heatwaves, 25 August 2023 https://www.pv-magazine.com/2023/08/25/sunagri-reveals-agrivoltaics-performance-in-heat-waves/

Gwénaëlle Deboutte, Eggplants grow 50% more under solar panels, 25th august 2023 https://www.pv-magazine.com/2023/01/25/eggplants-grow-50-more-under-solar-panels/

New Approaches to Offshore Wind Conflict Management

New report highlights the importance of exploring novel approaches of stakeholder involvement in the expanding offshore wind deployment and related public opposition .

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Effective ways to address conflicts are needed as the targets for the Baltic Sea offshore wind development are 22.5 GW by 2030, 34.6 GW by 2040, and 46.8 GW by 2050. At the moment, the Baltic Sea has 2.2 GW.

Studies have stated that communication is the principal problem to tackle during the decision-making process on developing wind facilities. Generally, authorities or the industry lead stakeholder dialogues such as consultations or public hearings, however, these face major engagement challenges. Many researchers have recommended a collaborative approach to solve conflicts when it comes to wind deployment. However, there is a lack of studies specifically focusing on the role of effective communication together with the use of a trusted third party in the decision-making process. The Baltic Sea Offshore Wind Collaborative Learning pilot project (BALOWIL) addressed this issue by getting NGOs to lead stakeholder workshops in a collaborative learning approach, with promising results.

Studies have shown that NGOs could be a trusted third party in complex decision-making processes, especially maritime spatial planning. While existing maritime spatial planning consultations and public hearings recognise and include various stakeholders, they often overlook the unique role of NGOs in mediating negotiations and building consensus. In this context NGOs, can act as facilitators for transparent and constructive dialogues, often fostering higher levels of trust compared to other project communicators.

At the core of BALOWIL's strategy lies the Collaborative Learning approach, offering a framework for addressing complex public policy situations. It engages with stakeholders by encouraging open dialogue and interaction among parties through stages, making sure to prioritise 'talking with' rather than 'talking at' stakeholders. BALOWIL's approach spans two workshops, the first focusing on concerns and barriers, and the second proposing solutions based on initial workshop findings.

The project included multi-sectoral stakeholders from Estonia, Latvia, Lithuania and Sweden. There was an equal split between those that were against offshore wind deployment and those that supported it. About 70 per cent of the participants to some degree had jobs dependent on the Baltic Sea.

During the first workshop there were some concerns that were voted as more important than others. Some of these were;

- Financial benefits would not reach the affected stakeholders and community in a fair way
- Impacts on local communities are unclear
- Lack of communication leads to disappointment and passiveness
- Negative environmental impact on the landscape
- Negative impact on animals

After the second workshop the NGOs analysed the concerns raised and found applicable solutions. All the concerns of higher and lower importance, according to the stakeholders, where presented with solutions but with less detail if of less priority. After the presentation of the proposed solutions these were discussed and the most important were selected. Some of these were:

- Community-owned offshore projects
- Collaboratively developed community benefits
- Monitoring included in the project schedule
- Appropriate facilitators and available information
- Circular economy models
- Transparency in the use of public funding

Both before and after the workshops a questionnaire was sent to analyse and get feedback on the experience. Participants largely agreed that the collaborative learning approach implemented in the workshops was beneficial for constructive dialogue. Indeed, 90% found it an beneficial approach (63% of respondents agreed, with 16% somewhat agreeing, and 11% strongly agreeing with this statement). In addition, 90% of the stakeholders found it easier to share their views when discussions were led by NGOs (53% agreed, 26% somewhat agreed, 11% strongly agreed). Another important indicator was that out of a diverse group all respondents agreed that projects like BALOWIL would enhance stakeholder inclusiveness (63% agreed, 21% somewhat agreed, 16% strongly agreed).

In conclusion, the approaches used in BALOWIL are important to further explore effective tackling of conflicts. The project findings offer a list of recommendations for policy makers, industry and future projects to use in constructive and collaborative dialogues. All of these were applied throughout the BALOWIL project.

Here follows nine Recommendations for Collaborative and Constructive OW Dialogues:

1. **Have a dialogue when there is potential to affect the results**

   One of the key factors when it comes to OW conflict management is timing. Stakeholder involvement must be undertaken not merely as a formality for final stage confirmation but rather as an integral part of the planning process from the very outset. Communicating timelines for regulatory and consultation activities should be done well in advance to give stakeholders

time to prepare for engagement. Early engagement can address stakeholder concerns about getting involved too late to be able to have a meaningful impact.

2. **Introduce possible developments in an inclusive way**
Stakeholders should be provided with accessible and clear information about the possible impact of the offshore wind project. This information should be made readily available through locally defined channels.

3. **Let participants express their concerns**
Create opportunities for stakeholders to express their concerns openly early in planning processes. This fosters a respectful and engaged atmosphere, helps identify critical issues early, and reduces the risk of misunderstandings. For example, before dialogues it can be beneficial to agree upon active and respectful listening to each other.

4. **Make the dialogue space feel safe**
Establish a safe and inclusive environment by having dialogues that promote active listening, understanding and empathy. For example, making sure that there is enough time for everyone to be heard in a round-table discussion within smaller groups. This provides a safe space for stakeholders to share their perspectives without fear of judgement or retaliation. When participants feel that their opinions are valued, they are more likely to contribute constructively to the conversation.

5. **Ensure facilitation of high impartiality/choose facilitators with minimal bias**
Another important aspect contributing to making the dialogue space feel safe is to employ facilitators with high impartiality for leading stakeholder dialogues. As shown through the BALOWIL project, NGOs can be a fruitful third party, due to their economically unbiased position. Facilitators can generate higher trust levels and enable less defensive, transparent and reflective dialogues.

6. **Show how you adapted to their concerns**
Adapting proposals to the concerns raised ensures that the proposed resolutions are relevant. This customization is vital in achieving more effective and sustainable conflict resolution outcomes. Additionally, clearly explain how the proposals regarding the stakeholder concerns were developed and why they were relevant. Transparency fosters trust and accountability in the decision-making process.

7. **Have the discussion in stages**
Organize dialogues in stages to effectively collaborate and address possible conflicts. It can be beneficial to have the first stage only for identifying concerns and letting stakeholders present concerns regarding the projects. The second stage explores tailored solutions where stakeholders can discuss and evaluate potential synergies and compromises. This enables the next steps to consider multiple perspectives and strike a balance between conflicting interests.

8. **Find applicable, updated examples of the proposals to the concerns**
Focus on finding applicable, updated examples to illustrate the relevance of proposed solutions to stakeholders concerns. Real-life examples provide concrete evidence of successful conflict resolution.

9. **Be open to criticism and show how it was taken it into account**
Welcome criticism and adapt proposals based on stakeholder feedback. Stakeholders may identify flaws or alternative perspectives that can lead to more refined and effective resolutions.

Emilia Samuelsson

Based on final BALOWIL report: https://www.airclim.org/publications/baltic-sea-offshore-wind-collaborative-learning-project

Shift to plant-based foods could halt forest reduction

A recent study has assessed the potential impacts of a global shift from livestock products to plant-based alternatives. The findings indicate that such a shift could have profound positive effects on the global food system and the environment.

Using an economic land use model, the researchers assessed the effects of substituting 50 per cent of all pork, chicken, beef and milk with plant-based alternatives by 2050. The study predicts two key outcomes:

- Almost complete halting of the net reduction of forest and natural land.
- A significant decrease of 31 per cent in greenhouse gas emissions from agriculture and land use compared to 2020 levels.

Moreover, the study suggests that if agricultural land within forest ecosystems is restored to its natural state, the climate benefits could be doubled, reaching up to 92 per cent of the previously estimated land sector mitigation potential. Additionally, this restored land could make a substantial contribution, ranging from 13 to 25 per cent, toward meeting the global land restoration goals set under the Kunming Montreal Global Biodiversity Framework by 2030.

Regionally, the impacts of this dietary shift vary. China would experience the largest cuts in nitrogen and water use, while Sub-Saharan Africa and South America would witness the most significant reductions in greenhouse gas emissions and increase in area of restored land.

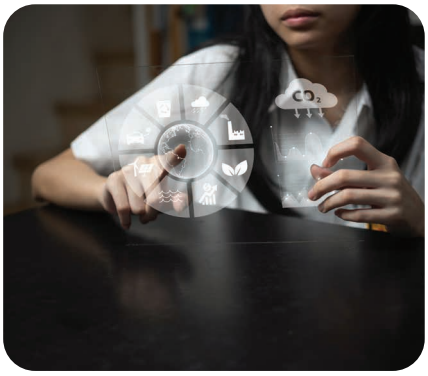
Source: Nature Communications 12 September 2023 https://doi.org/10.1038/s41467-023-40899-2

NEC sets obligations to reduce five pollutants

The National Emission Reduction Commitments (NEC) Directive sets obligations to reduce national emissions of five pollutants, namely fine particulate matter ($PM_{2.5}$), nitrogen oxides (NOx), non-methane volatile organic compounds (NMVOCs), ammonia (NH_3) and sulphur dioxide (SO_2). The Directive targets 2020–2029, with more drastic obligations from 2030 onwards.

Three member states need to step up their game to meet their 2020–2029 commitments: Romania needs to reduce its $PM_{2.5}$ emissions by around 26% while Poland and Hungary need to reduce their emissions by around 9% and 7% respectively compared to 2021 levels. 10 member states will have to further reduce NH_3 emissions by up to 10% to meet their 2020–2029 national emission reduction commitments. The agriculture sector was responsible for 93% of emissions, and further measures need to be put in place in several member states, such as good practice for housing and feeding livestock, storing manure and spreading it on land, and sustainable fertiliser use. Regarding NOx emissions, only four member states met their emission reduction commitments for 2030 and 23 member states will need to reduce emissions for which transport is the main source. In the case of SO_2 emissions it will be necessary to stop using coal for energy and heat in order to reach the targets. Cyprus needs emission reductions of more than 50% and Germany, Hungary, Poland and Slovenia by up to 30%, while Ireland and Lithuania need to reduce their emissions by up to 10%.

https://www.eea.europa.eu/publications/national-emission-reduction-commitments-directive-2023?utm_source=EEASubscriptions&utm_medium=RSSFeeds&utm_campaign=Generic



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Amendments to Euro 7

According to the draft agenda of upcoming Council meetings published in late June, the Spanish Presidency aims to reach a Council position on the Euro 7 vehicle emission standards at the Competitiveness Council on 25 September in Brussels. This would be the week after the Euro 7 vote in the Parliament's Environment (ENVI) Committee. The Environment (ENVI) Committee of the European Parliament published amendments in July to the proposed Euro 7 regulation regarding type-approval of motor vehicles and engines and of systems, components and separate technical units intended for such vehicles, with respect to their emissions and battery durability. The main topics of amendments are dates of entry into force which range from 1 July 2025 to 60 months, durability requirements, so-called CO_2-neutral fuels as well as definitions of real-driving conditions, and emission limits.

AECC has published a factsheet on Euro 7 in which they state that each Euro invested in Euro 7 results is equivalent to a reduction of 5 euros on healthcare and environment costs. Keeping Euro 6/VI is not sufficient as one fifth of the distance driven in Europe is not captured because the standard does not reflect real driving. With China and USA going ahead with more stringent standards than EURO 6, the EU could lose competitiveness. The additional cost to consumers would be in the range 104–251 euros compared to Euro 6d.

https://www.aecc.eu/

UK announces new oil and gas fields opening

Reacting to the Prime Minister's announcement in July 2023 for hundreds of new oil and gas licences in the North Sea, alongside investment in carbon capture and storage, Friends of the Earth UK said:

"Rishi Sunak's energy security drive should focus on energy efficiency and the UK's vast home-grown renewable resources, rather than championing more costly and dirty fossil fuels."

"Climate change is already battering the planet with unprecedented wildfires and heatwaves across the globe. Granting hundreds of new oil and gas licences will simply pour more fuel on the flames, while doing nothing for energy security as these fossil fuels will be sold on international markets and not reserved for UK use."

"Talking up carbon capture and storage is an obvious attempt to put a green gloss on the Prime Minister's announcement. Even if it ever worked, which is unlikely in the near term, CCS won't capture all the climate pollution caused by burning fossil fuels or address the significant emissions that are created when gas and oil is extracted."

"If the government were serious about energy security it would invest in a nationwide street-by-street home insulation programme, focusing first on the communities that need it most. This would slash gas consumption, reduce energy bills, and help meet UK climate targets."

"Rishi Sunak's international credibility is on the line. He promised other world leaders the UK would cut carbon by more than two-thirds by 2030. His recent announcements on energy and transport look as though he is reneging on the UK's commitments. The Prime Minister should stop playing politics with young people's futures and build the safe, clean economy we urgently need."

https://friendsoftheearth.uk/climate/rishi-sunak-unveils-energy-security-plans

Ambitious solar venture in Lithuania and Latvia

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A Danish renewable energy company is set to construct a 65 MW solar facility in Anyksciai, Lithuania, with the capacity to provide clean energy for approximately 24,000 households.

This forthcoming solar plant, anticipated to be one of the largest in the Baltic region, is scheduled for operation in the fourth quarter of this year. Covering 120 hectares with over 140,000 solar panels, it is expected to yield around 90,000 MWh annually. The facility will employ solar panels mounted on tracker systems that will dynamically orient the panels to follow the sun's path, optimising power generation throughout the day.

Knud Erik Andersen, CEO of European Energy, underscored the company's commitment to Lithuania, declaring, "Our mission in Lithuania is to support the transition to a green economy, enhance the energy independence of all Baltic nations, and contribute to the realisation of global climate change goals. Consequently, we remain dedicated to ongoing investments in bolstering Lithuania's renewable energy sector."

To date, European Energy has invested over 460 million euros in clean energy ventures in the country, with ambitious plans to channel over 1.6 billion euros into wind and solar farms, collectively amassing a capacity exceeding 1.6 GW.

The company recently also disclosed plans to construct a 115 MW solar facility in Latvia, forecasted to generate 120,000 MWh of clean electricity annually, providing power to approximately 57,000 Latvian households. The solar plant is currently in its final stages of development and is scheduled for grid connection by 2025.

Rreference : European Energy to build 65 MW solar plant in Lithuania. Power Technology. 28 August 2023.

https://www.power-technology.com/news/european-energy-solar-plant-lithuania/?cf-view

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Offshore wind potential around Sri Lanka

A recent report published by the World Bank reveals that Sri Lanka possesses substantial locational potential for offshore wind energy, estimated at 56 GW.

The report, titled "Offshore Wind Roadmap for Sri Lanka", delineates the country's potential for harnessing offshore wind energy, outlining two main categories: 27 GW of fixed offshore wind in shallow waters (less than 50 metres) and 29 GW of floating offshore wind in deeper waters (between 50 and 1,000 metres).

The report identifies three general regions suitable for offshore wind development, with the western and southern coasts standing out due to their robust wind speeds and favourable technical conditions. This comprehensive assessment was commissioned by the Sri Lankan government.

Sri Lanka has sustainability goals which aim to have 70 per cent of its electricity generated from renewable sources by 2030 and to achieve carbon neutrality in electricity production by 2050.

Notably, private sector interest in offshore wind projects is already growing in Sri Lanka, highlighting the potential for clean energy development. The report underscores that offshore wind expansion can not only accelerate the country towards carbon neutrality but also enhance energy security and alleviate the economic strain of fossil fuel imports.

Published under the World Bank Group's Offshore Wind Development Program, the report offers a comprehensive analysis of low and high growth scenarios for offshore wind development in Sri Lanka. It includes a series of recommendations to guide the government in realising these scenarios effectively.

Reference: World Bank Group. 2023. Offshore Wind Roadmap for Sri Lanka. © Washington, DC: World Bank. http://hdl.handle.net/10986/40264 License: CC BY 3.0 IGO.

https://openknowledge.worldbank.org/entities/publication/e6b6cede-930b-4e71-8efe-a1cb5ab269ca

Unlocking Europe's building revolution

Buildings account for as much as 40 per cent of the EU's overall energy consumption, with 75 per cent of these structures classified as inefficient.

Over the past few decades, there has been a lack of proactive and comprehensive building policies aimed at improving the energy efficiency of Europe's buildings.

The Build Better Lives campaign unites more than 60 of Europe's civil society, social, health and environmental NGOs, local authorities, trade unions and youth movements in a call for policy makers to ensure Europe's buildings provide the foundation for an inclusive, fair and just energy transition.

Of the existing buildings in the EU, 85 to 95 per cent are expected to still be standing in 2050. Governments need to implement EU and national legislations around building renovation and heating decarbonisation in a manner that is inclusive and will deliver benefits for all. The revision of the Energy Performance of Buildings Directive (EPBD) is a crucial starting point that can steer EU member states towards developing more supportive frameworks for holistic building renovations that combine insulating our buildings and installing renewable heating solutions.

Currently, negotiations are underway between the EU Commission, EU Parliament and EU Council to determine the ambition level of the EPBD. This is a once-in-a-generation opportunity to push policy makers to support a strong legislative framework that prioritises improving the energy performance of the leakiest buildings as well as financial support, technical aid and strong social protection.

The EPBD was established in 2002 to set requirements for member states to improve the energy performance of buildings with the aim of reducing the EU's energy consumption and greenhouse gas emissions.

An ambitious EPBD could lift millions of homes out of energy poverty as well as addressing the climate crisis. In addition it could stop dangerous fossil-fuel-based installations being installed in homes and buildings. With the help of extensive renovation and installation of renewable energy and heating systems, Europe's buildings can support an inclusive, fair and just energy transition.

Build Better Lives proposes the following:

Maximise the energy performance potential through a "Holistic Deep Renovation Wave" to address the current energy prices crisis:
To reduce demand for energy and end the use of fossil fuels as quickly as possible, combining insulation works with the installation of renewable heating and cooling systems to deliver high energy savings and greater emission reductions, while integrating buildings into the energy system.

Implement a strong and clear regulatory framework with social safeguards:
Improving the energy performance of residential buildings is essential to deliver a just and inclusive transition. Social safeguards need to be designed at national and local levels to protect tenants and homeowners and secure housing accessibility to all residents.

Provide sufficient funding to vulnerable households to renovate the worst-performing homes:
Allocation of tailored accessible and affordable funding should take into account economic as well as racial, age and gender equality when designing financial schemes for renovations. The nature of building tenures should be taken into account, as well as different financial instruments and/or technical assistance measures.

Activate and support national and local actors through adequate EU policies to enable stakeholders to prepare for the challenges:
By providing a well-defined roadmap aligned with the Paris Agreement, along with necessary support and enforcement measures, governments, regional authorities and local bodies will have the means, and indeed the obligation, to develop essential energy infrastructure for conserving energy and harnessing local renewable heating resources. To achieve the goal of creating highly energy-efficient residences, phase out the use of fossil fuel-based heating systems and promote green employment opportunities it is essential to collaborate with a diverse range of stakeholders, including anti-poverty organisations (such as social service providers, NGOs and local healthcare practitioners), energy communities, trade unions, industrial sectors and financial institutions.

When it comes to renewable heating in particular there are important enablers but also barriers.

Daniel Sanz, Project Manager at ECODES, explains: "There are a plethora of reasons to embrace the transition to renewable heating, especially given the current international context. We have all heard by now how important it is to become energy independent, but that's only the tip of the iceberg. This transition will bring us closer to achieving our climate goals and will have direct consequences on European citizens, improving our health and comfort, business competitiveness, and saving money on our energy bills. Energy efficiency is key and many options are already available in the market to enable citizens to take advantage of it. In order to boost this transition, many barriers have been identified and action is needed from not only public administrations, but also citizens and industry."

One key solution, district heating, is underutilised in Europe, with most district heating networks still reliant on fossil fuels due to the complexities of planning and infrastructure investment. The report calls for stronger commitments at the EU and member state levels to deploy integrated renewable heating and cooling systems, and realise energy savings and efficiency improvements. Another important development is the switch to heat pumps. Replacing 30 million oil and gas boilers with modern heat pumps by 2030 has the potential to yield a 36 per cent decrease in gas and oil consumption within these installations, accompanied by a 28 per cent reduction in their CO_2 emissions.

CAN Europe has published a report focusing on how to enable a renewable heating revolution in buildings which presents several additional solutions to barriers.

The subsidies allocated for installing fossil-fuel-based heating systems in buildings should cease by 2024. Instead, these public funds should be reallocated to enhance energy efficiency, building renovation and the transition of district heating systems to renewable sources. Put a stop to flexibilities and exemptions that would enable heating systems using hydrogen and biogas in a blended mix with fossil gas to be installed in existing and new buildings. These systems undermine climate and energy objectives, while also binding occupants to environmentally harmful heating technologies for an extended period. Instead, prioritise renewable heating installations that will guide us toward the complete elimination of fossil fuels in buildings by no later than 2035.

Homeowners need to be guided and accompanied from start of the process right through to the end as they switch heating technology and/or renovate their homes. A network of national, regional and local one-stop-shops and other sources of free-of-charge, independent information, would help homeowners and tenants, especially the most vulnerable, identify and access financial support, refine their project, and even check installers offers and the quality of the installations carried out. Public authorities and other organisations providing such services should work with social services, local associations and identify and proactively reach out to people in need of support. Such schemes not only support citizens in their projects, but they also help make those providing advice more aware of citizens' situations and needs.

Public information campaigns can promote the opportunity for renewable heating technologies and highlight how they can benefit households and businesses. There is evidence from countries like Sweden and Germany that a successful renewable heating transition requires significant investment in strategic communications.

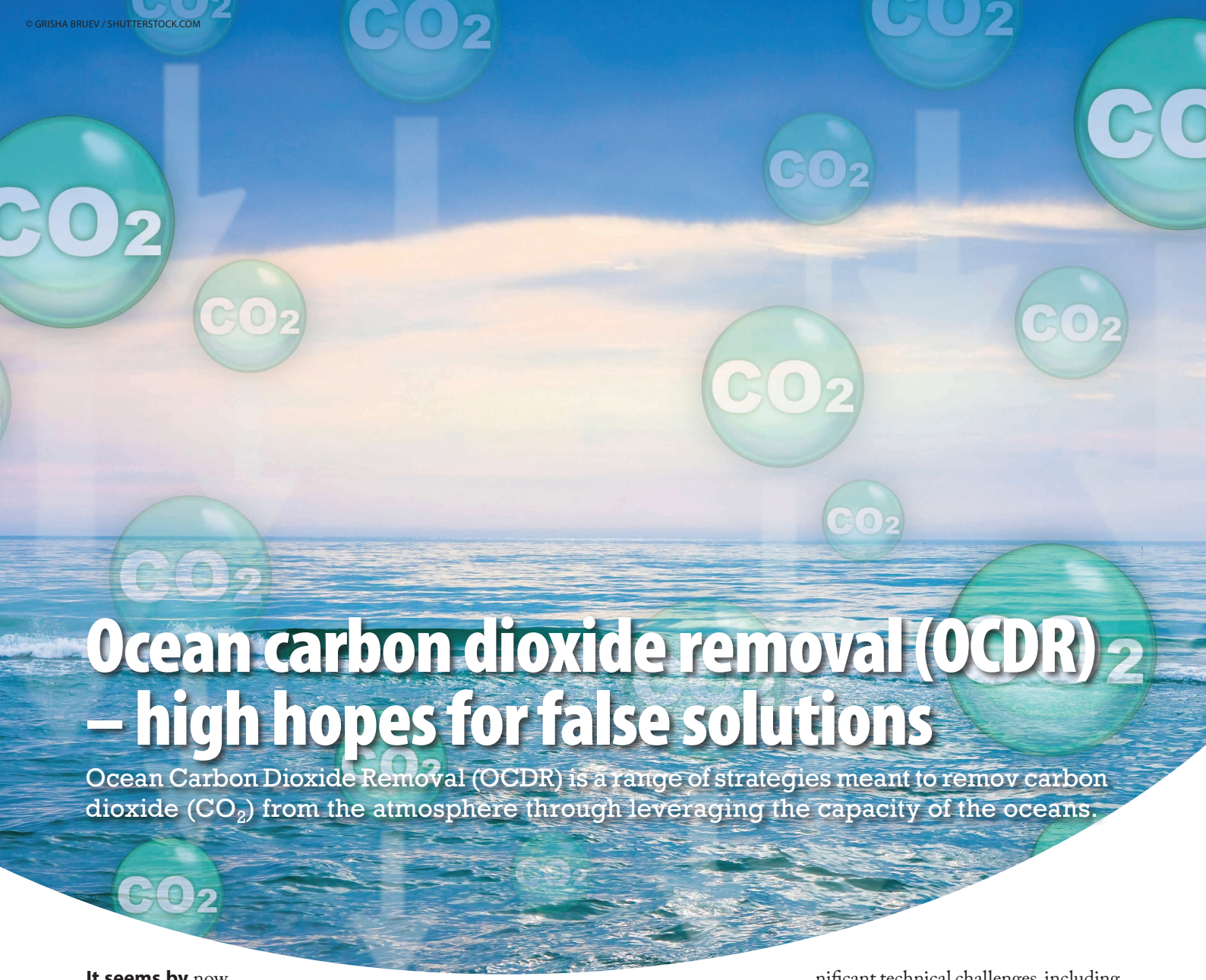
Governments and manufacturers need to step up their efforts to promote this sector and entice a new workforce to install renewable heating systems. They first need to make current installers aware of renewable heating technologies, their importance, benefits, applications, etc. This will make installers more willing to recommend such technologies to their customers. In addition, to attract new installers, and boost training, governments and the private sector need to team up in a concerted recruitment and training effort. Financial and political support should be offered to facilitate the unionisation of workers engaged in new green jobs.

As a result of a strong post-Covid recovery and geopolitical tensions, resources and materials for renewable heating systems are limited. In the short term, this issue can be addressed by installers of renewable heating equipment by diversifying suppliers and pre-ordering some equipment to make sure there is a stock to offer to clients. Long-term supply chain disruptions could lead to partial or total relocalisation of the renewable heating industry, particularly in former coal and industrial regions which can be funded by the Just Transition Fund, among others.

Based on CAN Europes report Embracing a renewable heating revolution in our buildings! https://caneurope.org/renewable-heating-barriers-solutions/

and CAN Europes Build Better Lives statement https://buildbetterlives.eu/wp-content/uploads/2023/09/Copy-of-Statement-BBL-campaign-EN-3.pdf

Emilia Samuelsson



Ocean carbon dioxide removal (OCDR) – high hopes for false solutions

Ocean Carbon Dioxide Removal (OCDR) is a range of strategies meant to remov carbon dioxide (CO_2) from the atmosphere through leveraging the capacity of the oceans.

It seems by now that both climate change and the solution to this problem (phasing out fossil fuels) are obvious to everyone. At the same time, while our planet is heating up, leading to natural disasters and the disappearance of ecosystems, some still hope that it will be possible to continue doing "business as usual", while some miracle solutions will save the planet. Such false solutions include, in particular, various proposals for Carbon Dioxide Removal (CDR). And the oceans are no exception from such "high hopes".

Ocean Carbon Dioxide Removal (OCDR) involves various strategies aimed at removing carbon dioxide (CO_2) from the atmosphere by leveraging the capacity of the oceans. While these strategies might seem promising on the surface, they come with significant challenges and potential negative consequences.

- Environmental Risks: Increasing CO_2 absorption in seawater can lead to ocean acidification, which has adverse effects on marine ecosystems and organisms, such as coral reefs, shellfish and other marine life. Some proposed methods, like ocean fertilisation, may disrupt local ecosystems and harm marine organisms by altering nutrient balances and oxygen levels in the water.
- Lack of Permanence: Ocean-based carbon removal methods are not permanent solutions. The carbon stored in the ocean can be released back into the atmosphere over time, potentially exacerbating future climate change.
- Uncertainty: The long-term effects of large-scale ocean carbon removal are uncertain. There are justified fears among scientists and policymakers about the effectiveness and safety of these approaches.
- Technological Challenges: Many ocean carbon removal technologies are still in the experimental phase and face significant technical challenges, including cost-effectiveness, scalability and energy requirements (together with the above-mentioned threats to environment).
- Ethical Concerns: Ocean-based approaches raise ethical concerns related to uncontrolled experiments in the marine environment and potential unforeseen consequences.
- Equity Issues: There are concerns that ocean carbon removal may benefit some nations or corporations while potentially causing harm or inequity to others (indigenous peoples and local communities), particularly in vulnerable coastal regions.
- Diversion from Primary Solutions: Relying too heavily on ocean carbon removal methods divert attention and resources away from more effective and immediate climate mitigation strategies, such as reducing greenhouse gas emissions at their source.
- Regulatory and Governance Challeng-

es: It is difficult to establish guidelines and regulations to ensure responsible and sustainable practices at the international level, considering the potential negative effects of such practices.

Ocean carbon dioxide removal strategies are far from being a complete or universally accepted solution. And some of them (like large-scale ocean fertilisation or enhanced weathering of minerals added to the oceans) carry a high risk of having damaging side effects on ocean ecosystems that outweigh the potential climate benefits. Their potential risks and uncertainties make it crucial to prioritise and focus on reducing greenhouse gas emissions at their source, transitioning to renewable energy sources, and implementing other proven climate mitigation measures. These include protecting and restoring ecosystems to increase CO_2 removal and meeting the Paris Agreement goals. Those carbon dioxide removal approaches that increase carbon sequestration in natural ecosystems and have strict environmental and social safeguards could be part of the solution. But once again we need to emphasise that protecting and restoring nature cannot be used to compensate for, or delay a just and equitable phase-out from fossil fuels and industrial agriculture.

Following the discussions at the SB58 in Bonn, it seems that the Ocean and Climate Change Dialogue is the right forum for identifying the emerging issues in the context of ocean-climate action, such as ocean-based geoengineering and OCDR, to be dealt with in the future sessions of the dialogue series in order to protect the oceans.

Sofia Sadogurska, Ecoaction, Ukraine

Global efforts to reduce energy demand

At the last G20 Leaders' Summit, which took place on 9–10 September 2023 in New Delhi, India, the leaders of the world's biggest economies agreed to pursue tripling renewable energy capacity globally. And while recognising the important role of energy efficiency, no agreement was reached on a similar target to reduce energy demand as the leaders only took note of the Voluntary Action Plan on Doubling the rate of Energy Efficiency Improvement by 2030, developed by the International Energy Agency (IEA). The Action Plan repeats what is already mentioned in the Versailles Statement: The Crucial Decade for Energy Efficiency, issued in June 2023, which is supported by the European Union, the African Union and over 50 countries, including two-thirds of the G20 membership (all except China, India, Mexico, South Korea, Russia, Saudi Arabia and South Africa).

The doubling of energy efficiency target is actually inspired by the IEA's Net Zero Emissions by 2050 (NZE) scenario, which explicitly looks at both the technological improvements and sufficiency measures needed to achieve the objective of reducing total final energy consumption to 337 exajoules by 2050. This is quite ambitious and would mean a reduction of energy consumption by about a quarter of projected energy demand by mid-century. In the Versailles Statement the sufficiency concept is firmly recognised: "Ambitious actions should be taken by every country across all sectors, (…) to lead to an acceleration in overall global energy efficiency progress and to reduce energy demand, where possible. Governments should consider the implementation of effective policy packages that may include measures related to behaviour change, sufficiency measures, and technological improvements such as digitalisation and decarbonised heating."

Nevertheless, much more is possible, and scientists have developed alternative scenarios and pathways, such as the Low Energy Demand (LED) scenario and the On Earth Climate Model that foresee total final energy consumption to be reduced to between 245 and 280 EJ by 2050.

It will obviously be crucial that action to limit and reduce energy demand should not infringe on people's rights to access affordable, reliable and modern energy services as provided in the Sustainable Development Goals.

Hence the importance of ensuring an equitable energy demand reduction approach. Such an approach should be based on capping the energy use of the top global consumers. As a recent European study indicated, capping the energy use of the top 10 or 20 percent of consumers could result in savings that are more than 10 times the increase needed to provide all Europeans with basic access to energy services.

In support for a strong call for more ambition on energy efficiency and energy sufficiency targets and policies, CAN International agreed on a new position calling for substantial additional action to tackle energy consumption:

- Support a substantial improvement in energy savings and energy conservation by both decreasing energy intensity and reducing wasteful energy demand, in an equitable way, including strong and binding energy efficiency legislation in all countries in next years whilst ensuring safe, clean, reliable and affordable access to energy services for all and tackling energy overconsumption by the rich, with the aim of reducing total final energy demand by at least a quarter by 2050 compared to today.

Wendel Trio

The importance and role of forests in Poland

A varity of forest types in Poland play an important role in the country's ecosystem and cultural heritage.

Poland is home to a variety of forest types, which cover an area of nearly 9.3 million hectares and account for 29.6% of the country's total land area. These forests play an important role in the country's ecosystem, economy and cultural heritage. The forests are dominated by coniferous species, which together cover 76.6% of the area. These include pine, larch, spruce and fir. Deciduous species appear on 23.4% of the area.

Polish forests are known for their rich biodiversity, creating living space for plants and animals. This is especially true of natural forests, which are remnants of ancient primeval forests. These have the highest biodiversity among Poland's ecosystems, and forests are home to about 65% of all the country's species, including rare and endangered species. Forests are home to large mammals such as bison, wolves, lynx and wild boar, as well as a variety of birds, insects and reptiles.

Forests in Poland perform a variety of natural functions. First of all, they shape the local climate, and contribute to the retention of dust and gas pollutants, including the absorption of carbon dioxide, which, combined with the production of oxygen, leads to air refreshment. This is particularly important in the vicinity of large industrial plants and urban agglomerations. They contribute to the proper circulation of water in nature as a result of transpiration, soil and biological retention (retention of rainwater on the surface of leaves, branches, tree trunks) and slow down snow melt and surface runoff of snowmelt and rainwater, which counteracts floods, avalanches and landslides. They also act as a buffer, trapping pollutants to protect the waters of lakes and rivers.

Forests in Poland have many important social functions. First of all, they provide an environment for physical and mental regeneration, especially for residents of large urban areas. To make this possible, tourism and recreation infrastructure is being created in the form of hiking, biking and horseback riding trails, camping areas, forest parking lots, shelters, health paths, viewing platforms, etc. They form the basis of local employment both directly in forests and in sectors directly and indirectly related to forestry, such as tourism or wood processing. In Poland, there are 454,000 employees in the forestry and timber sector, and 25,000 in state forests. The forest is the basis for much scientific research and is used to raise environmental awareness.

In Poland, the vast majority of forests are economic in nature, which means that they are managed to provide primarily timber but also other raw materials of plant and animal origin. According to the Central Statistical Office, 42.2 million cubic metres were harvested in 2021, i.e. 6.5% more than a year earlier and 25% more than in 2010.

According to the Forest Law that came into effect on 28 September 1991, commercial forests are divided into production and protected forests. The first provide raw timber and forest fruits and are semi-natural forest complexes, as well as monoculture plantations of fast-growing trees. The second group is protected forests, in which economic use is restricted. These include soil-protection forests, microclimate-protection forests, recreational and recreational spa-climate forests, which protect conditions conducive to improving health around sanatoriums and spas. At the end of 2021, the status of protected forests, i.e. those with non-productive functions, applied to almost 4 million hectares, i.e. more than 42.2% of Poland's forest area.

This article is an excerpt of a briefing by Andrej Kassenberg to be published by AirClim later this year with the aim to explain the importance of forests in the EU for biodiversity and climate protection.

Five countries responsible for 51% of planned oil and gas expansion

Analysis shows just 20 countries are responsible for nearly 90% of carbon dioxide pollution threatened by new oil and gas extraction projects between 2023 and 2050, with the United States, Canada, Australia, Norway, and the United Kingdom accounting for a majority.

If these 20 countries followed the call from UN Secretary General Guterres to stop new oil and gas fields and licensing, the equivalent to the lifetime carbon pollution of 1,100 new coal plants would be kept in the ground.

The United States is the main polluter, accounting for more than one-third of planned global oil and gas expansion through 2050.

Oil and gas expansion by the 20 countries would make it impossible to hold temperature rise to 1.5°C.

https://priceofoil.org/2023/09/12/planet-wreckers-how-20-countries-oil-and-gas-extraction-plans-risk-locking-in-climate-chaos/

Call: Sustainable Food Systems law must be published

As part of the Green Deal, the European Commission promised to deliver a proposal for a Sustainable Food Systems law (SFS) this autumn, which could put all food policy under one umbrella and set ambitious standards across the board.

However, Ursula von der Leyen didn't mention sustainable food systems in her State of the Union speech on 13 September. Instead, she praised the work that European farmers are already doing and spoke for reduced polarisation between sustainability and production interests and presented a seemingly new initiative: "a strategic dialogue on the future of agriculture in the EU."

The week before, 160 organisations and academics had urged her to "comply with her own working programme" and present the proposal before the European elections next year

While waiting for the law to be published, European civil society is mobilising. The Good Food Good Farming alliance has made a call for "a strong SFS law – based on science and social needs" the core topic of its annual action days in October.

Open letter: https://foodpolicycoalition.eu/wp-content/uploads/2023/09/Joint-open-letter-on-the-need-to-publish-the-EU-legislative-framework-for-Sustainable-Food-Systems-before-the-end-of-this-Commissions-mandate.pdf

Good Food Good Farming campaign https://www.goodfoodgoodfarming.eu/

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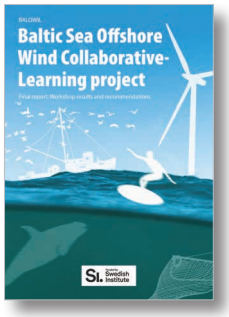
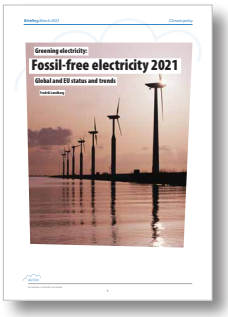


Baltic Sea Offshore Wind Collaborative-Learning project. (September 2023). By Emilia Samuelsson, Katarzyna Matuszczak, Krista Pētersone, Richard Henahan & Vaiva Ramanauskiene.



Fossil-free electricity 2021 (March, 2023). By Fredrik Lundberg. Global EU status and trends.

1.5°C Pathways for the Council of Europe: accelerating climate action to deliver the Paris Agreement (September 2022). By Aman Majid et al.

No further discussion needed. The agreed global goal is to limit temperature rise to 1.5°C. (March 2023). By Wendel Trio.

Emissions trading system for road transport and buildings in the policy mix for achieving climate neutrality in the EU. (December 2022). By Dr. Felix Chr. Matthes, Jakob Graichen.

Policy implications of Europe's dwindling carbon budget (September 2022). By Wendel Trio. Defining 1.5°C compatible CO_2 targets for a range of European countries.

Air pollution in Europe and children's health (May 2023). Emilie Stroh.

Failing to achieve 1.5°C puts a huge economic burden on our (grand)children (September, 2022). By Wendel Trio. Costs of action and inaction for several EU scenarios.

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Coming events

Environment Council. Luxembourg, 16 October 2023. Information: *https://www.consilium.europa.eu/en/meetings/env/2023/10/16/*

World Food Day. 16 October 2023. Information: *https://www.fao.org/world-food-day/en*

1st Mission Arena by Blue Mission BANOS. Gothenburg, Sweden, 14–16 November. Information: *https://1st-mission-arena.b2match.io*

Just Transition Platform Conference 23–25 October 2023. Information: *https://ec.europa.eu/regional_policy/whats-new/events/just-transition-platform-conference-7th-edition_en*

Fourth EU Clean Air Forum (2023). Rotterdam, the Netherlands, 23–24 November 2023. Information: *https://environment.ec.europa.eu/events/fourth-eu-clean-air-forum-2023-2…*

World Sustainable Transport Day. 26 November 2023. Information: *https://www.un.org/en/observances/sustainable-transport-day*

Climate Action and Health COP28 Pre-conference. NYU Abu Dhabi Institute, 27–28 November 2023. Information: *https://sites.google.com/nyu.edu/climate-action-and-health-2023*

POLIS Annual event on Sustainable urban mobility. Leuven, Belgium, 29–30 November 2023. Information: *https://www.polisnetwork.eu/2023-annual-polis-conference/*

UN Climate Change Conference. United Arab Emirates, 30 November –12 December 2023. Information: *https://unfccc.int/calendar/events-list*

Food 2030 conference: Green and Resilient Food Systems. Brussels Belgium, 4–5 December 2023. Information: *https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/food-2030-conference-green-and-resilient-food-systems-2023-06-06_en*

CLRTAP Executive Body, Forty-third session. Geneva Switzerland, 11 - 14 December 2023, Information: *https://unece.org/info/events/unece-meetings-and-events/air-pollution*

Environment Council. Brussels, Belgium, 18 December 2023. Information: *https://www.consilium.europa.eu/en/meetings/env/2023/12/18/*

Energy Council. Brussels. Belgium, 19 December 2023. Information: *https://www.consilium.europa.eu/en/meetings/tte/2023/12/19/*

International day of clean energy. 26 January 2024

World wetland day. 2 February 2024. Information: *https://www.un.org/en/observances/world-wetlands-day*

9th International Nitrogen Conference. New Delhi, India, 5–8 February 2024. Information: *https://www.n2024.org/*

IMO Marine Environment Protection Committee. London. UK, 18-21 March 2024. Information: *https://www.imo.org/*

International day of forests. 21 March 2024. Information: *https://www.un.org/en/observances/forests-and-trees-day*

European elections. In all EU member states, 6–9 June 2024. Information: *https://elections.europa.eu/*