



SUSTAINABILITY BULLETIN

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Coal-Related Air Pollution Threatens Public Health

In a new briefing note published ahead of COP31, Greenpeace Türkiye drew attention to the impacts of coal use not only on climate change but also on public health. According to data compiled from national and international scientific studies, coal-related air pollution can affect many organs, including the lungs, heart and brain, while children, older people and individuals with chronic illnesses are at greater risk. **According to data cited by Greenpeace, an estimated 44,200 people in Türkiye die each year due to exposure to ambient air pollution.**

The briefing note emphasizes that, in addition to being one of Türkiye's major sources of greenhouse gas emissions, the use of coal in electricity generation also results in the release of air pollutants such as sulphur dioxide, nitrogen dioxide and various heavy metals. Greenpeace states that the transition from coal to renewable energy sources would also benefit public health by reducing exposure to air pollution. Published ahead of COP31, which will be held in Antalya in November, the study once again brings attention to the importance of the energy transition not only for climate targets but also for public health.



Air pollution from the Yatağan, Kemerköy and Yeniköy coal-fired power plants is estimated to have caused approximately 45,000 premature deaths since 1983. If these plants continue operating, they could cause a further 5,270 premature deaths by 2030.

Nepal Seeks USD 20 Million in Climate Compensation Following Flood Disaster

Nepal has requested **USD 20 million** in climate compensation from the United Nations Loss and Damage Fund following a devastating flood disaster triggered by a glacier and rock collapse in the Himalayas on 26 August. **More than 1,300** people have been confirmed dead in the disaster, while thousands remain missing. Scientists state that climate change has contributed to glacier retreat and the destabilisation of the high-mountain environment in the region, although it cannot be considered the sole cause of the disaster.

Responsible for less than 0.1% of global greenhouse gas emissions, Nepal is bringing the disaster to the agenda as a concrete example of the climate justice debate. The Nepalese government is calling on economies with high historical emissions to make greater contributions to the recovery of countries that are more vulnerable to the impacts of climate change. More than 20,000 homes, as well as roads and other critical infrastructure, may need to be rebuilt, while total damage is estimated to reach billions of dollars.

Global Farm Animal Population Increased by 50% Over the Past 20 Years



A new study published by Stop Financing Factory Farming has revealed that the number of farmed mammals and poultry worldwide has increased by **approximately 50%** over the past 20 years. According to the study, which draws on FAO data, the number of animals raised for slaughter, milk and egg production increased from 61.8 billion in 2006 to 94.9 billion in 2023. This means that **more than 33 billion** farm animals were added to the global production system over approximately two decades.

According to the research, growing demand for animal-based products is also increasing pressure on land use, water resources and greenhouse gas emissions. Agricultural land used for animal feed production is reported to have expanded by approximately one quarter, while FAO data show that greenhouse gas emissions from livestock **increased by more than 20% between 2001 and 2023**. Intensive use of feed and fertilisers, together with animal waste entering water systems, can also contribute to excessive nutrient loading and the formation of “dead zones,” where oxygen levels decline significantly.

The study highlights that the environmental impacts of the livestock sector should be assessed not only in terms of greenhouse gas emissions, but also together with land degradation, water use, biodiversity loss and pressures on aquatic ecosystems.

Equal Pay for Work of Equal Value

International Equal Pay Day, observed every year on 18 September, draws attention to the importance of putting into practice the principle of equal pay for work of equal value between women and men. Established by the United Nations in 2019, the 2026 campaign also highlights the theme of “Equal Pay for Work of Equal Value.” The campaign calls on governments, employers and workers’ organisations to take action to reduce gender inequalities not only in pay, but also in recruitment, promotion and working conditions.

According to data from the International Labour Organization (ILO), women workers worldwide earn approximately **78 cents for every USD 1** earned by men, while the global gender pay gap is estimated to be around 20%. Women’s lower labour force participation and the fact that they spend more than 2.5 times as much time as men on unpaid care work are also among the factors that deepen economic inequalities.



Pesticide Poisoning Is a Global Health Risk for Agricultural Workers

A new study published in the journal *Frontiers in Public Health* estimates that **between 402 and 433 million** cases of accidental acute pesticide poisoning occur each year among farmers and agricultural workers. According to the research, which examined data from 2006 to 2023, this figure corresponds to **46% of the approximately 934 million** farmers worldwide. The highest estimated number of cases was observed in South Asia, followed by Southeast Asia and East Africa. The study also estimates that pesticide poisoning causes approximately **11,000** deaths each year.



The research also draws attention to the fact that global pesticide use has nearly doubled since 1990, reaching 3.8 million tonnes in 2023. Farmers may be exposed to pesticides particularly during preparation and application processes, through contact with treated crops, or through contaminated equipment and clothing. While the study addresses only acute health effects that occur shortly after exposure, it does not cover long-term effects. The researchers emphasize the need to reduce the use of highly hazardous pesticides, expand safer alternatives, and strengthen agricultural workers' access to training, protective equipment and healthcare services.

Chile's Salmon Crisis Offers Lessons for Marine Ecosystems

The environmental crisis that occurred in 2016 in the Los Lagos region of southern Chile has once again brought attention to the relationship between intensive aquaculture, marine pollution and climate change. Approximately 100,000 tonnes of salmon were lost due to an intense microalgal bloom in the region, and when disposal capacity proved insufficient, approximately 4,700 tonnes of decomposing fish were dumped into deep waters 140 kilometres off Chiloé Island with the approval of the authorities.

A few weeks after this event, a large-scale "red tide" caused by a toxic algal species occurred in the region. Fishing bans were imposed after toxins were detected in shellfish, while thousands of fishers faced economic losses. Factors such as sea temperatures, El Niño and climate change are also reported to have played a role in the event.

In its 2018 ruling, the Supreme Court of Chile found that the environmental precautionary principle had not been sufficiently observed when permission was granted to dump the fish into the open sea. The crisis stands out as one of the examples demonstrating the importance of assessing the environmental impacts of aquaculture, waste management and climate-related risks together, particularly in a future in which the oceans are warming.

El Niño Yeni Bir Risk Dalgası Yaratıyor

The unusual temperatures observed in the world's oceans in 2026 serve as a new warning regarding the impacts of climate change. Excluding the polar regions, global oceans recorded record-high average sea surface temperatures for **100 consecutive days** between 2 June and 10 September. During the same period, El Niño strengthened in the Pacific Ocean and is expected to peak towards the end of the year.

While human-induced climate change is the main driver of long-term ocean warming, El Niño, a natural climate phenomenon, can temporarily increase temperatures even further. The possibility that the effects of a strong El Niño may extend into 2027 is leading to close monitoring of its potential impacts on temperatures, precipitation patterns, food production and water resources.



● Oceans Broke Records for 100 Consecutive Days

According to Climate Reanalyzer data, the average sea surface temperature of the global oceans was higher on each of the 100 days between 2 June and 10 September than any value recorded for the same calendar day since 1982. In August, global average sea surface temperatures **exceeded 21°C**.

The oceans absorb more than 90% of the excess heat accumulated in the Earth system as a result of human-induced global warming. In 2025, the oceans were estimated to have absorbed approximately 23 zettajoules of heat, with warming occurring not only at the surface but also in deeper ocean layers.

● El Niño Is Creating a New Wave of Risks

El Niño refers to the warm phase of the El Niño–Southern Oscillation (ENSO), in which temperature and atmospheric conditions in the Pacific Ocean naturally fluctuate. Data indicate that temperature anomalies during the current El Niño have exceeded 3°C, while some models suggest that the event could strengthen further in the final months of the year.

Although El Niño is a natural climate phenomenon, it is now occurring within a climate system that is much warmer than in the past. Therefore, the temporary increase in temperatures caused by El Niño is being added on top of the long-term global warming driven by greenhouse gas emissions.

● Could 2027 Bring a New Global Temperature Record?

The impact of El Niño on global temperatures generally becomes more pronounced in the period following the year in which it begins to develop. As the current El Niño is expected to peak at the end of 2026 and its effects are expected to extend into 2027, next year is being closely monitored in terms of global temperatures. Some climate models indicate that 2027 could be one of the warmest years since measurements began, **or even the warmest year on record.**



● Food and Water Security Are Also at Risk

El Niño can also alter precipitation patterns in different parts of the world. While the risks of drought and wildfires increase in some regions, other regions may experience heavy rainfall and flooding. These changes can place pressure particularly on rain-fed agricultural production, affecting food and water security.

According to assessments by the World Food Programme, a strong El Niño could further worsen conditions for millions of people in regions already experiencing food insecurity. For this reason, the course of the current El Niño is important not only in terms of new temperature records, but also with regard to food security, water resources and the impacts of climate-related disasters.



Positive Tipping Points in the Climate Crisis

When it comes to climate change, the concept of a “**tipping point**” is most often associated with negative scenarios such as the irreversible melting of ice sheets, the loss of coral reefs or rainforests crossing critical thresholds. However, the same concept also has a more hopeful counterpart: positive tipping points.

A new study prepared by The Earthshot Prize and the University of Exeter shows that, when the right conditions are in place, climate and nature solutions can cross a certain threshold and create a self-accelerating transformation. The researchers examined 51 solutions that could accelerate planetary recovery over the next five years and grouped them under priority areas of transformation.

At the heart of a positive tipping point is the idea that, as a solution becomes more widespread, its cost falls, its accessibility increases and it is adopted by more people and organisations. Rising demand and investment can further accelerate the transition, allowing solutions that initially require policy support to build their own momentum over time.

Clean Energy Opens the Door to Other Transformations

One of the strongest areas highlighted by the research is renewable energy. Thanks to declining costs and technological advances in solar and wind energy, clean electricity is becoming increasingly competitive in many markets.

As electricity generation becomes cleaner, the climate benefits of many solutions, from electric vehicles and heat pumps to industrial electrification, also increase. For this reason, the study describes clean energy as a “**master domino**” capable of triggering other transformations.

However, the transition is not progressing at the same pace in every region of the world. Although Africa has around 60% of the world’s strongest solar energy resources, it attracts less than 2% of global clean energy investment. This highlights the importance of access to grid infrastructure and clean energy finance, particularly in developing economies.

Clean Energy Opens the Door to Other Transformations

Around 2.1 billion people worldwide still rely on solid fuels for cooking. The use of fuels such as wood and coal indoors causes household air pollution while also increasing black carbon emissions.

According to the research, the spread of solar-based systems and clean cooking solutions could create a new positive tipping point in some markets. Such a transition could provide benefits not only in terms of reducing emissions, but also for air quality, human health and quality of life.

Ocean Conservation Can Build on Its Own Success

Positive tipping points are not limited to technological solutions. In effectively managed marine protected areas, the recovery of fish stocks and biodiversity can support the food security and climate resilience of coastal communities. As these benefits become more visible, support for conservation efforts can also strengthen.

The High Seas Treaty is also considered an important step in this regard. By paving the way for the creation of interconnected marine protected areas in waters beyond national jurisdictions, which cover more than two-thirds of the oceans, the agreement creates an opportunity for broader-scale transformation.

Supply Chains Are Critical to Halting Deforestation

The global supply chains of products such as beef, soy, palm oil, timber, cocoa and coffee place significant pressure on tropical forests. However, the concentration of these chains around a limited number of major buyers and financial institutions also creates an opportunity for transformation.

Changes in the purchasing criteria of large companies, stronger policies by financial institutions regarding activities linked to deforestation, and more effective traceability of product origins could trigger a broader market transformation. Regulations such as the **European Union Deforestation Regulation** can similarly support the spread of new standards across global supply chains.

When Does a Solution Reach a Tipping Point?

According to the researchers, **three** key conditions stand out for the emergence of a positive tipping point: **the solution must be affordable, accessible and desirable**. If an environmentally beneficial technology is too expensive, the necessary infrastructure is not accessible, or it is not sufficiently attractive to users, it becomes difficult for it to scale widely.

The positive tipping points approach therefore offers a different perspective on climate action. When certain thresholds are crossed through the right policies, investments and infrastructure, solutions can reinforce one another and accelerate transformation. At a time when the climate crisis is becoming increasingly visible, the key question is:

Can we enable solutions to cross positive thresholds before the planet reaches the negative tipping points it faces?



Electrification and the Global Energy Transition at the Heart of COP31

The role of electricity in the global energy system is changing rapidly. Electricity is no longer simply a source used to meet the energy needs of buildings and machinery; it is becoming the main energy carrier across an increasingly broad share of the economy, from transport and heating to industry and artificial intelligence. This transformation will also be one of the key agenda items of COP31, which will be held in Antalya in November.

The “35×35” global target put forward by Türkiye’s COP31 Presidency aims to increase the share of electricity in global final energy demand from just over 20% today to **35% by 2035**. The target envisages accelerating the electrification of transport, industry and buildings, while meeting rising demand with clean energy, modernising grids and expanding energy storage capacity.



Renewable Energy Deployment Needs to Accelerate

Although global renewable energy capacity is growing at a record pace, current progress remains behind the 2030 targets. At COP28, countries agreed to triple global renewable energy capacity by 2030. To achieve this, capacity needs to reach approximately **11.2 TW**.

By the end of 2025, global renewable energy capacity stood at approximately 5.15 TW. Although more than 690 GW of new capacity was added in the same year, annual installations need to reach an average of approximately 1,200 GW by 2030 in order to meet the target.

Grids Could Become the New Bottleneck of the Energy Transition

Installing more renewable energy capacity alone is not sufficient. Grids also need to transform in order to integrate variable sources such as solar and wind into the system, meet rising electricity demand and transport electricity to where it is needed.

According to the new report, global grid investments, which stood at approximately USD 525 billion in 2025, **need to reach an annual average of around USD 1 trillion** during the 2026–2030 period. In addition to expanding grids, their digitalisation, the wider deployment of energy storage systems and the integration of new areas of electricity demand, such as electric vehicles, into the system are also important.

Artificial Intelligence Adds a New Dimension to Electricity Demand

Developments increasing electricity demand are not limited to transport and industry. The rapid growth of artificial intelligence and data centres is adding a new and significant source of demand to the energy system.



For this reason, Türkiye is also working on the **Antalya Artificial Intelligence Pledge** as part of COP31. Developed together with the United Nations International Telecommunication Union (ITU), the initiative aims to better align investments in artificial intelligence infrastructure with climate targets. Increasing transparency regarding companies' energy use and supporting digital infrastructure with clean energy are also among the key areas highlighted by the initiative.

Electrification Does Not Always Mean Decarbonisation

Although electrification is one of the important tools of the energy transition, the sources from which the electricity is generated are decisive. The emissions reduction potential of electric vehicles, heat pumps or electrified industrial processes is directly linked to how low-carbon the electricity system is.

For this reason, some climate and energy organisations point out that the electrification agenda at COP31 should not replace the transition away from fossil fuels. Renewable energy, energy efficiency, electrification and reducing fossil fuel use are regarded not as alternatives to one another, but as complementary elements of the same transition.

Sabancı Holding to Serve as Electrification Partner at COP31

Sabancı Holding will participate as the **Electrification Partner at COP31**, which will be hosted by Türkiye in Antalya from 9–20 November 2026. The Holding will also co-chair the Electrification and Energy Transition Working Group within the COP31 Business Forum.



The Sabancı Group's activities in the field of electrification extend from energy generation and distribution to electric mobility, industry, finance and climate technologies. Enerjisa Üretim and Enerjisa Enerji operate in energy and grid infrastructure; Eşarj and Temsa in electric mobility; Çimsa, Brisa and Kordsa in industrial transformation; while Akbank, Aksigorta, SabancıDx and Sabancı Climate Technologies operate across different components of the transition in the fields of finance, insurance and technology.

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