



November/ December 2022

Agriculture/ Land Use

[Pesticides: on borrowed time?](#)

False friends: Intensive agriculture has entrenched and universalised the use of pesticides. Often seen as allies in ensuring predictable, consistent and high-yield harvest, is our trust in these chemicals proving to be misplaced?

[Why an EU framework for sustainable food is crucial for climate, biodiversity and competitiveness](#)

In her plans for 2023 addressed to the EU Parliament, President of the EU Commission von der Leyen did not mention the proposal for a Sustainable Food System legislative framework (SFSF). This created speculation about the timeframe of this key proposal which has been put forward as a cornerstone of the EU Green Deal for the agri-food sector. This blogpost, co-signed by members of the Think Sustainable Europe network, underlines the importance of the SFSF to be proposed next year in order to drive a sustainable transition of the EU food system, given the urgency of such a transition.

[The Fertiliser Transition - Addressing social and environmental spillovers in the fertiliser sector](#)

The European Green Deal implementation would make Europe the first climate-neutral continent by 2050 by reducing GHG emissions by 55% compared with the 1990 levels. The agriculture sector will have a key role to play as it is expected to become the single largest emission source in the EU by 2030.

Air Quality

[Sink or swim, what the Commission has in stock for our health](#)

Holding our breath: Air pollution in the EU comes with an ever-growing human, environmental and financial cost. European waters are polluted by discharges from urban and rural population, killing fish and destroying our ecosystem. The Commission finally released its Zero Pollution Package, but to achieve a toxic-free environment, we need continuous ambition from policies.

[Zero Pollution: Europeans seriously worried about air quality and call for stronger action](#)

Europeans are worried about the effect of air pollution on health and the environment, according to a [special Eurobarometer survey](#). Most also think that industry, public authorities and employers need to do more to improve air quality. Respondents clearly favour an international or European approach to improving air quality and a large majority of the respondents who have heard of EU air quality standards say that they should be strengthened.

Biodiversity/ Nature

[New online tool quantifies contributions to global goals for nature](#)

At its inaugural Leaders Forum, IUCN (International Union for Conservation of Nature) presents the IUCN Contributions for Nature Platform. This online tool provides governments, civil society and Indigenous Peoples Organisations with a simple way to measure potential contributions from specific actions in specific places towards global biodiversity and climate goals.

[Bird conservation: protected areas are most effective when over 50 hectares in size](#)

Establishing protected areas (PAs) is important for the conservation of species, but more data is needed on their effectiveness. Drawing on a large data set from previous observational studies worldwide, new research indicates that protected fragments of forest can be successful for bird conservation, however, their size is the most important factor – rather than the level of protection. Additionally, protection need not be limited to pristine areas, as ‘moderate protection’ – with some human activity permitted – is also worthwhile in areas over 175 hectares.

[The private sector can \(and should\) lead the way on nature-positive](#)

Nature has been collateral damage in the growth of the global economy in the past few decades. Is it possible then for the private sector to lead the way to a nature-positive future? Not only is it possible, but it may be our best shot, and companies and investors need to step up at the IUCN Leaders Forum and beyond; writes Rohit Dhawan, President and Chief Executive Officer of the International Council on Mining & Metals.

[IEEP UK | Event Recap: Divergence in EU/UK Biodiversity Targets](#)

In October 2022, IEEP UK hosted a webinar to assess current proposals on biodiversity and nature restoration in the EU and UK, and analyse the main areas of divergence between them, as well as amongst the UK's four nations. The main findings of IEEP's report: "[Divergence of environmental policy post Brexit: A comparison of biodiversity targets emerging in the EU and UK](#)" were presented. Click [here](#) to re-watch the event including a presentation by Jane Clarke, Chair, Nature & Environmental Protection Working Group, NIEL.

[Benefits of agri-environment wildflower areas vary according to the surrounding landscape](#)

Sowing wildflower areas is a common agri-environment measure, however, its biodiversity impacts are disputed. Recent research assessed non-pollinator invertebrates (spiders and beetles) using a focus on landscape characteristics to broaden the perspective on this debate. The researchers report that the presence of different semi-natural habitats in the surrounding area can influence the effects on arthropod communities. They recommend that landscape characteristics be considered in the design of such schemes.

[Expenditure on preventing biological invasions is far below environmental damage costs](#)

Invasive alien species are a major global problem causing substantial environmental and economic damage. This study explored the costs associated with such species, using the InvaCost database, to quantify the level of damage and of mitigation measures. The researchers report that between 1960 and 2020 invasive alien species caused over US\$1 130.6 billion (€1 trillion) in damage worldwide, with management expenditure ten times lower, and preventative management representing a small fraction of this outlay

Circular Economy

[Understanding of the broader context is important for SME's transitioning to circular economy](#)

Models for adopting a circular economy are largely aimed at large corporations. Recent research looks at six smaller enterprises in the UK and the EU to characterise the tools, opportunities and challenges affecting successful transitions. This study presents a framework identifying the key stages in the circular economy transition process and highlights the importance of engaging with the wider environmental, social and business context.

[E-waste: chemical processing without heat may offer efficient method of recovering metals from end-of-life products](#)

Waste from disposed electrical products – e-waste – is one of the fastest growing solid waste streams. Over 53 million tonnes (Mt) of e-waste was generated in 2019, predicted to grow to 74 Mt in 2030. Meanwhile, new electronics include about 8% of all gold produced each year – about 250 tonnes. Current methods of recovering gold and other metals from e-waste tend to use large amounts of energy, but researchers have proposed a new chemical-processing system that can be carried out at ambient temperature and pressure.

[Europe must set the bar high on packaging reuse system to curb waste](#)

Packaging: Europe is currently faced with the highest ever levels of packaging waste. At the same time, reuse systems are declining all over Europe. This autumn, the EU is presented with a rare opportunity to scale up reuse with the revision of the Packaging and Packaging Waste Directive.

Climate Change/Action

[CO2 emissions need to be reduced twice as fast as the rate they have gone up since 1990](#)

In the last 30 years, the amounts of CO2 emissions have increased at a rate faster than ever before in history. IEEP has calculated that they would need to be reduced twice as fast by 2030 in order to stay well below a 2°C increase.

[Shifts in distribution of bird species due to climate change may compromise ecosystem services](#)

As species' ranges shift due to climate change, ecosystems will be altered and may change how they function. This study uses a large data set to model changes in the ecological roles performed by bird species in ecosystems around the world. Researchers report that forecast changes in ecological function vary across geographic areas. They suggest possible implications of these findings for future provision of ecosystem services.

[Entomologists Issue Warning About Effects of Climate Change on Insects](#)

In a new scientific review, a team of 70 scientists from 19 countries warned that if no steps are taken to shield insects from the consequences of climate change, it will "drastically reduce our ability to build a sustainable future based on healthy, functional ecosystems."

Energy

[Safeguarding renewables against social backlash](#)

Social opposition: As the economic and environmental costs of the energy crisis are skyrocketing, the European Commission is paving the way for renewables with legislative initiatives such as RePowerEU. But events across Europe show that renewable projects need to involve local communities to be effective.

[University Researchers 'Feed' Leftover Coffee Grounds to Microalgae to Produce Low Emission Biodiesel](#)

Two Aston University researchers have produced high-quality biodiesel after 'feeding' and growing microalgae on leftover coffee grounds. Dr Vesna Najdanovic, senior lecturer in chemical engineering and Dr Jiawei Wang were part of a team that grew algae which was then processed into fuel. In just the UK, approximately 98 million cups of coffee are drunk each day, contributing to a massive amount of spent coffee grounds which are processed as general waste, often ending up in landfill or incineration.

[European Commission and industry leaders launch Biomethane Industrial Partnership](#)

The European Commission and industry leaders, committed to the green energy transition, have launched the Biomethane Industrial Partnership (BIP). This new public-private partnership was announced in the [REPowerEU Plan](#) and it aims to support the achievement of the target to increase annual production and use of biomethane to 35 billion cubic metres by 2030.

Forestry/ Woodland

[Europe's beech forests threatened by climate change](#)

Beech is one of the most ecologically and economically valuable tree species in Europe. A new study finds that climate change could significantly reduce beech trees' growth across most of the continent this century. Forest dieback may follow, the researchers warn.

[Securing the position of smallholders in zero-deforestation supply chains](#)

The time for the EU to act and minimise its share of global deforestation is now. The Deforestation-free supply chains Regulation is vital to begin addressing the global spillovers of the EU's unsustainable consumption patterns, and to achieve the SDGs. This briefing analyses the potential impact of the EU Deforestation-free supply chains Regulation on smallholder farms.

[Retaining deadwood in disturbed forests reduces changes to soil fungal communities and promotes regeneration](#)

Events such as storms that cause significant damage to forest trees have obvious effects above ground. What happens below ground is less apparent, and less studied. Knowledge of impacts on fungal communities and carbon stocks, however, is important for informing optimal management. In particular, the symbiotic fungi that help trees to grow can be negatively impacted by disturbance, new research shows – which could be key in natural forest regeneration.

Freshwater/ Water

[Factsheet on the Review of the Urban Wastewater Treatment Directive](#)

Governance

[European Green Deal: Commission proposes rules for cleaner air and water](#)

The European Commission is proposing stronger rules on ambient air, surface and groundwater pollutants, and treatment of urban wastewater. Clean air and water are essential for the health of people and ecosystems. Air pollution alone means nearly 300,000 Europeans die prematurely each year, and the proposed new rules will reduce deaths resulting from levels of the main pollutant PM2.5 above World Health Organization guidelines by more than 75% in ten years. Across air and water, all of the new rules provide clear return on investment thanks to benefits in health, energy savings, food production, industry, and biodiversity. Learning the lessons from current laws, the Commission proposes to both tighten allowed levels of pollutants and to improve implementation to ensure pollution reduction goals are more often reached.

Health

[As Evidence Mounts, New Concerns About Fracking and Health](#)

Almost 20 years after the adoption of hydraulic fracturing began to supercharge U.S. production of oil and gas, there's growing evidence of a correlation between the industry's activities and an array of health problems ranging from childhood cancer and the premature death of elderly people to respiratory issues and endocrine disruption.

[Does Traffic-Related Air Pollution Increase Risk of Dementia?](#)

Higher exposure to a certain type of traffic-related air pollution called particulate matter may be linked to an increased risk of dementia, according to a meta-analysis published in the October 26, 2022, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

Marine

[Marine sediment analysis confirms effectiveness of pollution control legislation](#)

Levels of chemical pollution vary over time as new substances are brought into use and, in some cases, restricted or prohibited. This study used samples from a dated sediment core taken from the North Sea to track levels of 90 chemicals over the last century. The researchers report that, following legislative restrictions, pollution levels fell for many substances, but residual levels remain much higher than before contamination in several cases.

Plastics

[Novel concepts and alternatives to turn plastic waste into useful products – resources for a circular economy](#)

Plastic waste and pollution affect every part of the globe and every ecosystem. Innovative solutions that use recycled plastic material for reusable food containers, construction materials, furniture, and partnerships for bottle-to-bottle recycling are highlighted in the eight business plans and waste segregation guide found below.

[Towards greater plastics circularity](#)

The consumption of plastic products in the EU creates significant environmental and social impacts along the whole value chain. Whilst the EU has in place a range of policies and legislation relevant to plastics, this briefing outlines some additional recommendations to address the potential negative spillovers from the pursuit of greater plastics circularity.

Transport

[Net-zero, circular transition in road transport](#)

The European Commission proposed a zero-emission road mobility target for 2035 to reduce emissions produced by new passenger cars by 100% compared to 2021. Electric vehicles (EVs) are set to play a key role in decarbonising EU road transport, however, the net-zero transition will have implications for the EU's material demand and waste generation.