

ENVIRONMENTAL NEWS, RESEARCH & ANALYSIS (ENRA)

NIEL's monthly roundup of the latest international research information and policy analysis relevant to Northern Ireland.



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[Take part in our Freshwater Stakeholder Survey!](#)

[Platform launched to empower NI households to tackle the Climate Crisis](#)



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Agriculture

[Strengthening EU's water resilience through sustainable farming practices](#)

The European Commission has released its much-anticipated Water Resilience Strategy. The document identifies agriculture as a major water user (with 59% of all EU water consumption) and polluter (estimated costs for nitrogen pollution are 75-485 billion Euros). Two of the three objectives of the strategy are particularly relevant for the agricultural sector: restoring the water cycle and building a 'water-smart economy', the latter with a strong focus on improving water use efficiency. When it comes to offering solutions, however, the document falls short of ambition and concreteness. Non-binding targets, a strong reliance on voluntary measures to deliver results, and a lack of dedicated funding to address the identified challenges raise questions about the strategy's potential to drive the much-needed action on this fundamental and scarce resource.

[New EU farm policy writes blank cheque for Member States threatening green transition](#)

The European Commission's proposal for a reformed Common Agricultural Policy (CAP) after 2027 – which currently accounts for a third of the ongoing EU budget – fails to guarantee minimum funding to support farmers in the green transition, leaving ambition entirely in the hands of – generally reluctant – Farm Ministers. The European Environmental Bureau (EEB), alongside other environmental organisations, warns that without dedicated funding and stronger safeguards, the EU risks falling dangerously short on climate and biodiversity targets, while creating a fragmented, unlevel playing field for farmers across Europe. This jeopardises the resilience of agricultural land in the face of the triple climate, nature, and pollution crisis, directly threatening farmers' livelihoods.



Air Quality

[Even low levels of air pollution may quietly scar your heart, MRI study finds](#)

Breathing polluted air—even at levels considered “safe”—may quietly damage your heart. A new study using advanced MRI scans found that people exposed to more air pollution showed early signs of scarring in their heart muscle, which can lead to heart failure over time. This damage showed up in both healthy individuals and people with heart conditions, and was especially noticeable in women, smokers, and those with high blood pressure.

[Decline in Aerosols Could Lead to More Heatwaves in Populated Areas](#)

Heatwaves are becoming more frequent around the world. And while rising temperatures caused by greenhouse gas emissions are part of the problem, the declining levels of aerosols — the small particles that make up smog and air pollution — may be driving the rise even more, particularly in populated areas. This finding comes from a study published in Environmental Research Letters and led by researchers at The University of Texas at Austin. While recent research has linked declining



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aerosols to rising regional temperatures, this study is the first to examine aerosols' impact on people's exposure to heatwaves.



Biodiversity

[Why Some Ecosystems Collapse Suddenly and Others Don't](#)

A new study published in the journal *One Earth* reveals that the way ecosystems collapse, abruptly or gradually, may depend on internal complexity, much like how magnetic materials behave under stress. The study, led by Professor John Dearing at the University of Southampton with colleagues from Rothamsted Research, Bangor University, and Edinburgh University, challenges the prevailing assumption that climate tipping points always happen suddenly. Instead, it shows that some large-scale Earth systems may be experiencing gradual collapses that are easy to miss, with profound implications for climate policy and planetary resilience.

[Volunteers monitoring pollinators make interesting findings](#)

The UK Pollinator Monitoring Scheme (PoMS), which engages thousands of citizen scientists to record insects on surveys across the UK countryside and gardens, is emphasising the value of having a wide range of plants and habitats to support a diverse range of pollinators. The latest annual report of the scheme, coordinated by the UK Centre for Ecology & Hydrology (UKCEH), has been published at the start of Insect Week 2025, organised by the Royal Entomological Society (RES). The RES is calling on everyone to pledge to discover, observe and protect insects in all their fascinating glory.

[Vanishing saltmarshes threaten climate progress, but recovery is within reach](#)

The world's saltmarshes are disappearing three times faster than forests, threatening global progress on climate change goals, according to a major new report co-led by the UK Centre for Ecology & Hydrology. In a natural state, saltmarsh absorb and lock in carbon dioxide (CO₂), act as natural flood defences and support biodiversity. But the report points out saltmarshes now only cover an estimated 53,000km² globally – less than half their original extent – as these coastal wetlands have been drained, diked and reclaimed for farmland, ports or cities. This has resulted in less CO₂ being removed from the atmosphere through saltmarsh vegetation via photosynthesis and more greenhouse gas emitted from the land surface due to degraded habitats.



Circular Economy

[Switching 30% of grocery goods to reuse could save UK £577m and cut emissions by 95%](#)

A new study suggests a large-scale switch to reusable packaging in UK grocery retail could bring major environmental and economic benefits, from reduced waste to millions in annual savings. Moving 30% of packaged grocery goods in the UK to reusable formats could save up to £577 million per year and reduce packaging-related carbon emissions by 95%, according to a new study. The research, led by

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reuse consultancy GoUnpackaged and supported by a cross-sector Advisory Panel, presents the first detailed model of what large-scale reuse could look like across the UK's grocery sector. It outlines how such a transition could be practically achieved, with reusable packaging replacing single-use alternatives in 18 priority product categories using just 30 standardised formats.

[Recent research explores maximising circularity in plastic supply chains](#)

A traditional economy follows a linear "take-make-use-dispose" path. A circular economy, in contrast, retains the value of materials and products within a supply chain for longer. Industry and policymakers are considering circular economy networks to achieve sustainability goals. Researcher Ana Inés Torres is creating systematic ways to help them make decisions with less ambiguity. The Torres Research Group uses mathematical models to design better systems. Recent papers propose frameworks for designing circular economy networks and apply these frameworks to the polyethylene terephthalate (PET) supply chain in the US.



Climate Action

[Asia is warming twice as fast as the rest of the world](#)

In April 2024, China broke the average temperature record that month. The following month, it was the same - and then again in August. And September. And November. While there are records which exist to be broken – Olympic ones, for example -these monthly temperature extremes are not medal worthy. And yet, China was not the only Asian country to set a flurry of new highs in 2024. The continent is warming twice as fast as the global average, according to a report released by the World Meteorological Organization (WMO). This rate of warming – which shows no signs of stopping – is leading to devastating consequences for lives and livelihoods across the region, and no country is exempt from the consequences. "Extreme weather is already exacting an unacceptably high toll," said WMO Secretary-General Celeste Saulo.

[Northern hemisphere heatwave underscores value of early-warning alerts](#)

The blistering early-summer heatwave that's brought life-threatening temperatures across much of the northern hemisphere is a worrying sign of things to come, UN weather experts said. Three days after Spain's national weather service confirmed a record 46°C reading in the southern town of El Granado, there's been little let-up in stifling day and night temperatures across the continent and beyond. In Barcelona, a road sweeper reportedly died after completing her shift, prompting an investigation and widespread public appeals to keep out of the sun wherever possible. "Everybody is at risk," insisted Clare Nullis, spokesperson for the World Meteorological Organization (WMO): "If you go out without water in the middle of the day, to do jogging, have a bike ride, you will probably have health problems or even die."

[State of the UK Climate in 2024](#)

This report provides a summary of the state of the UK's climate in 2024. It is one of a series of annual reports published in the International Journal of Climatology (IJC) since 2017. It provides the latest assessment of UK climate trends, variations, and extremes based on the most up to date observations and shows what has already happened to our climate.



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[Deadly floods show need for faster, wider warnings, UN agency says](#)

From the Himalayas to rural Texas, deadly floods this month have killed hundreds and exposed dangerous gaps in early warning systems, the UN's weather agency warned, linking the devastation to rapid urbanization, land-use change and a warming climate that traps more moisture in the atmosphere. The UN World Meteorological Organization (WMO) said that more intense downpours and glacier outburst floods are becoming increasingly frequent, with deadly consequences for communities caught off guard. "Flash floods are not new, but their frequency and intensity are increasing in many regions due to rapid urbanization, land-use change and a changing climate," said Stefan Uhlenbrook, WMO Director of Hydrology, Water and Cryosphere. Each additional degree Celsius of warming enables the air to hold about 7 per cent more water vapour. "This is increasing the risk of more extreme rainfall events. At the same time, glacier-related flood hazards are increasing due to enhanced ice melting in a warmer climate," he added.



Economy

[A LIFE-threatening budget: Commission's MFF proposal risks quiet rollback of EU environmental funding – through budget lines, not headlines](#)

The European Commission's proposal for the next Multiannual Financial Framework (MFF) suggests that the EU LIFE Programme – the Union's only dedicated fund for environment, nature and climate action – would be repealed, with only some elements absorbed into a new European Competitiveness Fund, undermining LIFE's proven return on investment and contributions to climate, nature and people. Instead of maintaining a comprehensive approach to environmental protection, climate action and the circular economy – as LIFE has done for more than 30 years – the text refers only to the competitiveness of the circular economy, decarbonisation and energy transition. This signals a deeply worrying narrowing of scope, just as the Commission's own Environmental Implementation Review shows that most Member States are not meeting existing EU environmental obligations, with society bearing the costs. The findings make one thing very clear: more dedicated funding is needed, not less. Investing now is far cheaper than paying for ecological collapse later.

[€86 billion in limbo: EU countries miss key deadline to protect their most vulnerable](#)

The deadline for National Social Climate Plans (NSCPs) has now passed, and the majority of EU governments have not submitted their plans on time to the European Commission detailing how they will support those most vulnerable to the effects of the carbon pricing of road transport and buildings (ETS2). With some countries only beginning public participation in June (and others not having started at all), NGOs are concerned that measures outlined in NSCPs will be insufficient to protect those most vulnerable to ETS2 prices. National governments must prioritise completing their plans as soon as possible, but not at the expense of meaningful stakeholder engagement.



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**Energy**[AI Large Language Models: new report shows small changes can reduce energy use by 90%](#)

New research published by UNESCO and UCL, shows that small changes to how Large Language Models are built and used can dramatically reduce energy consumption without compromising performance. The report advocates for a pivot away from resource-heavy AI models in favour of more compact models. Used together, these measures can reduce energy consumption by up to 90%.

**Environmental Justice**[Human rights can be a 'strong lever for progress' in climate change, says UN rights chief](#)

Speaking at the Human Rights Council in Geneva, High Commissioner Volker Türk asked Member States whether enough was being done to protect people from the escalating impacts of climate change. “Are we taking the steps needed to protect people from climate chaos, safeguard their futures and manage natural resources in ways that respect human rights and the environment?” asked delegates at the ongoing session of the Human Rights Council in Geneva. His answer was simple – we are not doing nearly enough. Mr. Türk emphasised that while climate change presents dire risks human rights – especially for the most vulnerable – it also can be a strong lever for progress. Central to this is a “just transition” away from environmentally destructive activities. “What we need now is a roadmap that shows us how to rethink our societies, economies and politics in ways that are equitable and sustainable,” he said.

[A Defining Moment for Climate Justice: What to Watch for in the ICJ Climate Ruling](#)

On July 23, 2025, the International Court of Justice (ICJ) will deliver a landmark Advisory Opinion (AO) on States’ legal obligations to address climate change, potentially one of the most consequential legal rulings of our times. At a moment when climate devastation is accelerating worldwide and climate-destructive conduct too often escapes accountability —with climate polluters enjoying near total impunity— this ruling is poised to serve as a vital legal compass for climate justice. The Court’s authoritative opinion rooted in binding international law could become a guiding star for climate policies at all levels of governance, across jurisdictions, reinforcing litigation in national, regional, and international courts, anchoring climate ambition in legal obligation, and shaping diplomacy and multilateral negotiations for years to come.

[Ahead of COP30, environmentalists risk freedom to defend nature](#)

COP30 in Brazil is an opportunity to spotlight the risks facing environmentalists and to ramp up measures to better protect them. Ana María Palacios Briceño leads civic space research for the Americas at the CIVICUS Monitor. Eduardo Marengo leads the advocacy and campaign work in the Americas for CIVICUS. Kenia Ines Hernández is an Indigenous woman, feminist and human rights lawyer from Guerrero, Mexico. She grew up speaking the language of her Amuzgo community, and



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for years defended the rights of her people. But that commitment has come at a steep cost. Hernández is currently serving two prison sentences totalling nearly 22 years for her environmental human rights activism.



Food

[Climate crisis causing food price spikes around the world, scientists say](#)

Report finds extreme climate events linked to price hikes for rice, corn, cocoa, coffee, potatoes and other food items. South Korean cabbage, Australian lettuce, Japanese rice, Brazilian coffee and Ghanaian cocoa are among the many foods that have been hit by price hikes following extreme climate events since 2022, a team of international scientists has found. The research released cites, among other examples, a 280 percent spike in global cocoa prices in April 2024, following a heatwave in Ghana and the Ivory Coast, and a 300 percent jump in lettuce prices in Australia after floods in 2022.



Freshwater

[Water for people, nature and the economy](#)

Water sustains every aspect of our lives — from the health of our citizens to the productivity of our industries and the health of our natural environment. From extended droughts and pollution to mounting demand and inefficient use, our freshwater systems are under unprecedented stress. How can we ensure that we continue to have access to sufficient amounts of clean water in the future?

[Stronger chemical safety laws needed to protect UK food and waters – with 95% of rivers polluted by harmful biocides](#)

Environment groups are warning that new chemical deregulation proposals from the Health and Safety Executive could have far-reaching damaging implications for our health, environment and for trade. The groups are urging the Government to abandon proposals which would end mandatory renewal processes for biocide chemicals and remove requirements to respond to new EU hazard classifications. They warn these shifts would weaken consumer and environment protections and have implications for contamination risks for UK rivers, food and products for sale. The groups are also urging the Government to recognise the risks that diverging from the EU's approach to chemical regulation could be a major barrier to aligning with EU trade requirements in future, which could harm the economy. The calls come as new research reveals UK waters are almost universally contaminated with biocides.

[Water For Data](#)

What's the environmental cost of our increasing data usage? Our appetite for data is growing fast. And so is the number of data centres filled with computer servers. They store and process the data generated by our online activity, from social media to shopping to cloud storage. And they consume massive amounts of water and electricity.



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Marine

[25 years, 1 coastline report card: The shocking wins and misses](#)

Twenty-five years after first warning that oil spills would wane while invasive species and climate impacts would surge, an international team revisits its coastal forecasts and finds many bull's-eyes, alongside surprising misses. Plastic pollution, ocean acidification, and sensory pollution have risen faster than imagined, even as strong treaties curbed chemicals like TBT. The scientists argue that shorelines remain “sentinels” for the global ocean and urge a blend of local action and sweeping accords such as a Global Plastics Treaty to keep future surprises in check.



Planning

[Brexit reset talks take first step forward since summit](#)

Brexit reset talks took a step forward as the European Commission outlined its negotiating plans on agri-food standards and carbon emissions trading. The Commission published draft proposals for its negotiating position in the two policy areas which are among a handful set for discussions. The plans will now be scrutinized by EU governments.

[Green Industry Needs a Buyer: The State](#)

Every year, €2 trillion flows from public coffers to private companies to buy services and build infrastructure. That's 14% of the EU's GDP. What if all that money went to the greenest providers? If Europe is serious about its clean industrial revival, it must harness public procurement and make green criteria binding. Financed by the public, built by the private. From hospitals to railways, countless infrastructures across Europe carry this invisible signature. The system behind these purchases is called public procurement: a mechanism governed by EU rules and gaining new political momentum.

[Europeans consider tackling climate change a priority and support energy independence](#)

A large majority of Europeans believe climate change is a serious problem (85%), according to a new Eurobarometer survey. Among those surveyed, 8 in 10 (81%) support the EU-wide goal of reaching climate neutrality by 2050. From an economic perspective, more than three quarters (77%) of Europeans agree that the cost of damage due to climate change is much higher than the investment needed for a net-zero transition. Most Europeans (85%) agree that tackling climate change should be a priority to improve public health and quality of life. Likewise, 83% of those surveyed agree that preparing better for the adverse impacts of climate change will improve the lives of EU citizens. Close to nine in ten Europeans (88%) think it is important that the EU takes action to increase renewable energy and improve energy efficiency. Three quarters (75%) believe that reducing fossil fuel imports will increase energy security and benefit the EU economically.

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*Sustainable Development*[More bio-based innovation can help reduce environmental impacts, boost Europe's bioeconomy and sustainability](#)

Europe's environmental footprint beyond its borders remains high as it continues to rely on goods from key sectors including forestry, grain and energy according to a European Environment Agency (EEA) assessment. The study highlights the environmental impacts linked to these imports and underscores the need to accelerate bio-based innovations as part of a bioeconomy to develop more home-grown sourcing strategies that can boost Europe's path to sustainability.

[SDGs Report 2025](#)

The Sustainable Development Goals Report 2025 marks the tenth annual stocktaking of global progress toward the 2030 Agenda for Sustainable Development. With the 2030 deadline only five years away, the report delivers a stark assessment: the Sustainable Development Goals have improved millions of lives, but the current pace of change is insufficient to fully achieve all the Goals by 2030. The report reveals real and substantial development gains during the past decade. Since 2015, the world has made notable strides in expanding access to education, improving maternal and child health, and bridging the digital divide. Effective prevention efforts have significantly reduced the burdens of infectious diseases such as HIV and malaria. Access to electricity has continued to grow, and renewable energy is now the fastest-rising source of power worldwide.

*Transport*[Member States fall short of steering the automotive industry on a circular path](#)

Europe's Environment Ministers bowed to pressure from the automotive industry by voting to weaken a crucial regulation to make the sector more circular, warn environmental NGOs. Governments voted on a proposal to revise and merge the outdated End-of-Life Vehicles Directive and the 3R Type-Approval Directive into a single Regulation on Circularity Requirements on Vehicle Design and on Management of End-of-Life Vehicles. The proposal aims to strengthen the EU single market while improving the circularity of the automotive sector and reducing the environmental impacts associated with the design, production, use, and end-of-life treatment of vehicles.

[Almost half of young women feel unsafe to use public transport in NI due to fears of gender-based violence](#)

Almost half of 16 year-old girls in Northern Ireland say they feel unsafe to use public transport alone, a survey suggests. Some 49% of those surveyed said they felt unsafe when using buses and trains by



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themselves. The figures were released in the 'Ending Violence Against Women and Girls: Experiences and attitudes off 16-year-olds in Northern Ireland in 2024' report.

[Kimmins welcomes grant scheme to purchase zero emission vehicles](#)

Infrastructure Minister Liz Kimmins has welcomed a major new grant scheme to encourage more people to purchase a zero emissions vehicle. The £650m Electric Car Grant scheme, which will be open to applicants here, was announced by the UK Government's Department for Transport. The scheme provides consumers, including private individuals and commercial fleets with a grant toward the purchase cost of zero emission cars (electric and hydrogen fuel cell powered) that meet minimum criteria and have an RRP below £37,000.



Woodland/Forestry

[Europe's land carbon sink declines, but its potential stays high](#)

Europe's forests and land are absorbing less carbon than expected, putting the 2030 target for the sector at risk. But with the right policies and measures, the land use and forestry sector could still play a crucial role in climate mitigation, with significant co-benefits for people and nature, according to a new European Environment Agency (EEA) report.

[Multiple threats to woodlands require tailored solutions](#)

UK woodlands are increasingly under threat from changes in land management, climate, diseases and deer populations – and vegetation is responding differently, requiring tailored action to protect biodiversity. That is the finding of comprehensive surveys of broadleaf woodlands over the past 50 years by the UK Centre for Ecology & Hydrology (UKCEH). First carried out in 1971 by the late Professor Bob Bunce, the survey was repeated in 2001 and most recently in 2021, the survey examines 97 broadleaf woodlands in different landscapes across Britain. It found that over the past 50 years, canopy growth due to lack of management over time has led to widespread shading and an overall reduction in plant biodiversity, but in some forests, ash dieback has created canopy gaps. Dense forests protect ecosystems from some of the impacts of climate change, so a lot of gaps could reduce the ability of plants and trees to mitigate the effects of warmer temperatures and storms.