



## **Agriculture**

### [Visual soil evaluation — a key tool for better management of risks to soils](#)

A new review of the potential uses of visual soil evaluation (VSE) shows how this tool can be used to indicate risks of erosion, compaction, greenhouse gas emission or storage and surface-water run-off. Assessing soils in this way is not only useful for agriculture, but has implications for the wider environment, due to the vital role that soil plays in the provision of ecosystem services, for example as a habitat for biodiversity and as a carbon sink.

### [Natural enemies of crop pests will feature in the future of environmentally friendly farming](#)

Biological control agents are an environmentally-friendly way of controlling pests and diseases on crops and are advocated in the EU's Sustainable Use of Pesticides Directive<sup>1</sup>. The authors of a new review of the current state of biological control refer to a recent UN report<sup>2</sup> which states that it is possible to produce enough food to feed a world population of nine billion with substantially less chemical pesticides — and even without these pesticides if sufficient effort is made to develop biocontrol-based Integrated Pest Management (IPM) methods. The study suggests that policy measures can speed up the development and use of environmentally-friendly crop protection.

## **Air Quality**

### [New study suggests link between air pollution and dementia](#)

A new study suggests there could be a link between air pollution and heightened risk of dementia.

## **Biodiversity**

### [Vertebrate population losses & declines: Earth's ongoing mass extinction may be more severe than previously estimated](#)

A new study suggests that Earth's ongoing mass extinction episode is more severe than generally perceived. Rather than focusing on the complete extinction of entire species, researchers analysed the losses and declines of populations in a sample of 27 600 vertebrate species. Population declines and losses are often a prelude to species extinctions. Researchers also conducted a more in-depth analysis of population losses between 1900–2015 in 177 mammal species. The results reveal that rates of population loss and decline in vertebrates are extremely high, even in common "species of low concern".

### [How to prevent alien plant invasions in the global ornamental horticulture trade?](#)

Alien plant invasions can have significant environmental, ecosystem and economic implications. Since ornamental horticulture is the primary pathway for invasive alien plant introductions, it is a suitable focus for prevention policies. A recent review of published evidence has examined the effectiveness of four major instruments: pre-border import restrictions, post-border sales bans, industry codes of conduct, and consumer education. The study highlights that, while each instrument has the potential to contribute to a reduction in plant invasion risk, none is sufficient to achieve this goal alone.

## **Circular Economy**

### [Waste materials are an underused resource in the construction of Europe's roads](#)

Recycled waste material could play a major role in the construction of roads in Europe, bringing both environmental and economic benefits. A new study proposes a scenario where 50% of the asphalt for



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Europe's roads consists of recycled materials, leading to significant reductions in costs, energy use and greenhouse gas emissions.

## **Climate Action**

### [Ambitious environmental regulations can give the EU the competitive and low carbon economy it needs](#)

Leading up to IEEP's Think 2030 conference, experts express their views on Europe's most pressing sustainability issues in the Think 2030 blog series, Pathways to 2030.

### [Mapping the vulnerability of European cities to climate change](#)

A new study has assessed the vulnerability of 571 European cities to heatwaves, droughts and flooding caused by climate change. The causes of vulnerability differ across Europe and the researchers say the results could be used to design policies to mitigate the impacts.

### [Warming in the Channel leads to a decline in cold-water fish](#)

Results from a long-term study of fish communities in the Bay of Somme in the English Channel show that numbers of cold-water fish, such as dab and plaice, have been dropping since 1998, as sea temperatures have risen. The researchers say this is evidence of 'tropicalisation' in an English-Channel ecosystem. The findings may have implications for conservation policies in the Bay, which is a Marine Protected Area<sup>1</sup> designated under the Natura 2000 programme, as well as other marine sites affected by warming.

### [Rapid and significant sea-level rise expected if global warming exceeds 2°C, with global variation](#)

The world could experience the highest ever global sea-level rise in the history of human civilisation if global temperature rises exceed 2 °C, predicts a new study. Under current carbon-emission rates, this temperature rise will occur around the middle of this century, with damaging effects on coastal businesses and ecosystems, while also triggering major human migration from low-lying areas. Global sea-level rise will not be uniform, and will differ for different points of the globe.

## **Energy**

### [A simple and effective energy-auditing method for SMEs](#)

Researchers have developed a straightforward approach to help small to medium enterprises (SMEs) analyse their energy use and increase efficiency. They tested the methodology on 280 businesses in Europe, which, as a result, invested more than €10m in energy-saving measures. The measures reduced energy use by 6 500 toe (tonnes of oil equivalent) per year and avoided 13 500 tonnes of CO<sub>2</sub> emissions.

## **Environmental Governance**

### [Commission publishes Citizen's guide to access to justice in environmental matters](#)

The European Commission has just published a guide to help citizens understand Access to Justice in environmental matters. Using a frequently asked question's format, the Citizen's guide provides answers to basic questions citizens and NGOs may ask on access to justice: what does it mean, what kind of decisions can be challenged and how?

### [A project to assess environmental governance in European countries](#)

On 26 and 27 September, ClientEarth attended the second workshop on EU project, Development of an Assessment Framework on Environmental Governance in EU Member States. A consortium led by the Institute for European Environmental Policy is carrying out the project on behalf of the European Commission. Its aim is to overcome the lack of sound methodologies for assessing certain aspects of environmental governance, including access to justice for the public, revealed in the first round of the [Commission's Environmental Implementation Review \(EIR\)](#).

## **Freshwater**

### [Implementation of innovative, resource-efficient urban water systems depends on wide-ranging cooperation](#)

New technology that makes energy capture from waste water and re-use of grey water possible can contribute to energy- and resource efficiency — but the widespread application of such technology requires



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a new, collaborative approach, shows a new study. Taking radical innovation in urban water systems beyond the pilot stage will require cooperation between a variety of stakeholders, suggest the findings of expert interviews and workshops.

### **Marine**

#### [Ocean acidification puts Norwegian fishing industry at risk](#)

Fishing in most of Norway's counties is at 'moderate' to 'high' risk from ocean acidification, concludes a new study. The researchers reached this conclusion with the use of an integrated risk-assessment method that accounts for environmental, economic and social factors within the 19 counties. They call for immediate action to protect the fishing industry against the effects of ocean acidification.

### **Planning**

#### [Insights for urban planning — constructed wetlands sited near industry exposed to high levels of pollution](#)

Constructed wetlands serve as a cost-effective and multi-purpose option for storm-water treatment in urban landscapes, offering flood protection as well as wildlife habitat. However, a new study shows that when nearby land use includes industry, wetlands can accumulate high levels of pollution and potentially become toxic to wildlife. This new piece of research offers important insights for the planning and management of wetlands.

### **Transport**

#### [EU leaders must meet public demand for cleaner transport](#)

Germany has registered the [highest growth rate globally](#) in electric vehicles in 2017, making the country among the top international markets for electromobility.



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