PRESS RELEASE

On the occasion of the IENE 2022 International Conference being held in Cluj Napoca, Romania, the H2020 BISON project will present its preliminary results during an online press conference on Monday 19 September at 10:30 EEST / 9:30 CEST.

Experts will offer solutions for sustainable European transport by mainstreaming biodiversity.

The project, led by a consortium of 44 members where UIC represents the railway sector, aims to help synergise biodiversity and transport infrastructure.

BISON
BIODIVERSITY AND INFRASTRUCTURE SYNERGIES AND OPPORTUNITIES FOR EUROPEAN TRANSPORT NETWORKS

Experts to offer solutions for sustainable European transport by mainstreaming biodiversity

(Paris, 16 September 2022), **on the occasion of the IENE 2022 International Conference being held in Cluj Napoca, Romania, the H2020 BISON project will present its preliminary results during an online press conference on Monday 19 September at 10:30 EEST / 9:30 CEST. Click here to join the zoom press conference. Journalists should register by replying to the e-invitation or by e-mail to julie.debouville@fondationbiodiversite.fr**

Key points

- **If business-as-usual prevails, by 2050, there will be twice as many roads and railways than in 2010.**
- **27% of the land surface in the EU (the 27 & UK) is highly fragmented.**
- **Transport sustainability policies focus on CO_2 reduction, but largely miss another key issue: tackling biodiversity loss.**

- **The central focus of sustainable transport policy must be on reducing transport demands.**
- **Solutions that jointly address climate change and biodiversity loss are essential to having a net positive impact on biodiversity as well as developing resilient, safe, and sustainable transport infrastructure systems.**

While Europe currently has an estimated 6 million kilometres of road and rail networks, this is predicted to expand substantially in the coming years, particularly in Eastern Europe which is seeking to expand and modernise its transport infrastructure. However, this region is the home of many rare and endangered species, and also contains productive landscapes and functional ecosystems due to a long history of extensive small-scale farming. Here, infrastructure and the entire transport system will have to be very carefully designed to preserve biodiversity and ecosystem services. On the other hand, the focus in Western Europe is on repairing and restoring biodiversity values. Europe needs to implement innovative and sustainable solutions to stop the decline of native species and the fragmentation of ecosystems for which transport infrastructure is partly responsible. Existing infrastructure must also be adapted to overcome flooding, droughts, and forest fires due to climate change. Mitigating the spread of invasive species, which between 1960 and 2020 cost 116.61 billion euros, is also a priority.

The BISON reports provide information, analysis, and tools to prevent nature from being further impacted by transport infrastructure. They provide recommendations for restoring ecological functions already lost or damaged by traffic and infrastructure. The BISON reports explore some of the recognised trends and predicted changes in transport, technology, the climate, natural environment, and in human societies. The reports also examine the challenges and opportunities for mainstreaming biodiversity in the European transport infrastructure sector.

The impact of the transport sector on biodiversity and how to mitigate it.

Where the transport sector (traffic and infrastructure) is responsible for biodiversity loss and where they need to be mitigated are as follows:

- The barrier effect and subsequent wildlife mortality rates. To avoid having this impact, natural processes and species movement need to be maintained across landscapes. Restoring ecological corridors and enhancing green and blue infrastructure that intersects transport infrastructure are good solutions.
- Pollution and disturbance in surrounding habitats. To protect the quality and integrity of the habitats, the spread of noise, light, chemicals, and waste, as well as invasive species, urgently need to be reduced.
- New roads often herald wide-reaching change. When transport infrastructure is built in natural pristine areas, people inevitably follow. Once the first blow has landed, the impact spreads leading to deforestation, forest fires, or habitat fragmentation.

On the other hand,

- Transport infrastructure can provide new habitats, sheltering wildlife in road verges, stormwater basins, or green spaces at airports, which can complement and enrich the surrounding landscape and promote biodiversity and a healthy environment.

A key focus for sustainable transport policies must be on reducing transport demands.

The transport sector is undergoing changes which have been made possible by recent advancements in vehicle, energy, and communication technology which, if used appropriately, can help to create safer, cleaner, more efficient, and equitable transport. Alongside the need to mitigate climate change and adapt infrastructure to withstand it, this technology can provide opportunities to develop a sustainable and resilient transport sector.

"To accomplish these changes we need stronger governance and more ambitious and aligned policies, as well as cross-sectoral collaboration," says Dr Andreas Seiler, originally talking in Swedish. New regulatory frameworks, economic incentives, support, and the rapid implementation of mitigation measures are also needed.

But the central element of sustainable transport policy must be reducing transport demands. "We need to reduce unnecessary transportation", the researcher continues. This requires both the external costs of transport being internalised and alternatives to travelling being provided, such as supporting remote working, developing digital communication, or encouraging carpooling for transporting people and goods. We need to travel less not more.

This however requires both awareness and acceptance at both the individual and public level. "The general public, stakeholders, and political leaders must be prepared to change their attitudes and behaviour – and this is perhaps where the greatest obstacle lies," continues Dr Andreas Seiler.

At the same time, it is essential to adapt and improve existing infrastructure to improve their synergy with the environment. "To build sustainable transport, we need to integrate solutions into the very structure of transport itself," explains Dr Carme Rossell, speaking in Spanish. "Just as safety requirements have become commonplace, adaptations to biodiversity and climate change must be an integral part of road, rail, or waterway engineering."

Tools for mainstreaming biodiversity

Some tools will be available and promoted by BISON experts to help stakeholders, planners, and practitioners design and maintain infrastructure that is well integrated into the environment of its surrounding landscape:

- **Scenario building for future development** will help to identify critical paths and decisions.
- The **European defragmentation map** allows us to estimate the extent of current and future fragmentation and to propose mitigation measures such as constructing wildlife crossings to restore and reconnect habitats.
- **Existing digital technology**, such as mobile or static sensors, or **Building Information Modelling (BIM)**, allows biodiversity management to be properly integrated into the whole life cycle of transport infrastructure, ensuring sustainability and avoiding biodiversity loss.
- **A practical online handbook** is being produced together with Infrastructure and Ecology Network Europe (IENE), which expands and updates the "Wildlife and Traffic" handbook. It provides recommendations on planning strategies and mitigation

approaches for integrating landscapes, physical measures, and innovative tools to alleviate any damaging impact. It identifies the best methods for monitoring and evaluating the success of mitigation measures as well as maintenance routines based on international best practice experience.

With this knowledge, the BISON project **aims to produce a European roadmap for mainstreaming biodiversity in the life cycle of transport infrastructure**, from planning and design to decommissioning

Facts and Figures – Key Information from the BISON project

Globally:

- There could be twice as many roads and railways by 2050 compared to 2010 – if business-as-usual prevails.
- More than 25 million kilometres of roads and 335,000 kilometres of railways could be needed to support the growth of the global economy and enhance mobility, particularly in non-OECD regions.
- 75% of the infrastructure to be built by 2050 does not yet exist.
- 85% of new infrastructure is expected to be built in developing economies.
- There are expected to be two billion private vehicles worldwide by 2050.
- Private vehicles are parked 95% of the time.
- Energy consumption and emissions from the transport sector are expected to increase by approximately 40% by 2050.
- Air transport accounts for 13.9% of CO_2 emissions.
- 10% of global emissions come from road transport.
- 20% of global carbon emissions are due to deforestation
- 15% of deforestation can be attributed to new infrastructure that serves today's human lifestyle such as transport, manufacturing, and energy production.
- The third biggest cause of invasive alien species (which is one of the 5 drivers of biodiversity loss) is the transport sector, preceded only by agriculture and horticulture.

In Europe:

- Species (birds and mammals) are 25% to 38% less abundant near infrastructure.
- Birds are mainly affected closer to the infrastructure itself (up to 1km), while mammals are affected over longer distances (up to 5km).
- 28.5% of greenhouse gas emissions are caused by the transport sector. This makes it the largest emitter of greenhouse gases in Europe.
- The new EU legislative package "Fit for 55" aims to reduce emissions by 55% by 2030 and to achieve full climate neutrality by 2050.
- 5% of the total European gross domestic product (GDP) comes from the transport sector in Europe.
- The EU-27 employ 10.5 million people in the transport and storage services sector (about 5.4% of the total workforce). In 2019, this sector was the largest employer within the European Union.

European Freight transport:

In 2019, the total freight transport activity in the EU-27 was an astounding 3.392 trillion kilometre-tonnes. This figure includes intra-EU air and sea transport, but not transport activity between the EU and the rest of the world.

- 52% of the share was for road transport,
- 28.9% for intra-EU maritime transport,
- 12% for rail,
- 4.1% for inland waterways,
- 3% for oil pipelines,
- 0.1% for intra-EU air transport.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101006661.

CONTACT

The BISON project press contact on behalf of UIC
UIC Sustainability Senior Advisor
Isabelle De Keyzer
dekeyzer@uic.org

The BISON project press contact
Communication Officer
Julie de Bouville
julie.debouville@fondationbiodiversite.fr