Mainstreaming biodiversity

Rationale/Challenge:

Transport infrastructure and related mobility are key drivers of global economic development. However, its negative impacts on climate change and biodiversity are significant and deserve consideration. Analysis of the interactions between biodiversity and infrastructure goes beyond the simple limits of transport networks, and it is indeed all networks: transport, energy and renewable energies that must jointly address the issue to optimise synergies.

The development of a biodiversity-friendly approach for different types of transport infrastructure has been included in the actions of national and international authorities in various forms for several years. This proposal aims to bridge transport and energy at its latest technology state of the art / innovation by identifying the best possible matches that deliver solutions to tackle simultaneously biodiversity loss and climate change.

In addition to the climate crisis, there is a biodiversity crisis, particularly of insects from pesticide use, habitat loss and fragmentation and climate change. This, in turn, impacts birds, reptiles and small mammals. Recognising that roads have been a factor in habitat fragmentation and loss, there is now a move towards changed design and maintenance regimes to encourage greater biodiversity and to integrate the transport infrastructure better in its environment.

A large factor in habitat loss is maintenance regimes on the soft estate that encourage a monoculture of grassland and regular mowing. Counterintuitively, lower soil fertility is generally required for increased biodiversity. This, coupled with a less frequent mowing regime has been successfully demonstrated to increase flora and fauna biodiversity, as well as reducing maintenance costs.

Added to the land use is water runoff that contains pollutants and damages the aquatic environment.

Scope Proposals should address one or more of the following:

The scope will include soil and water quality on the soft estate and areas immediately adjacent to it. This will require the involvement of ministries, infrastructure owners and operators, landowners, environment agencies, designers, consultants and contractors. The project to be funded under this scope aims to facilitate the implementation of the EU biodiversity policy and guidelines with a coordinated approach among stakeholders, focussing on the road, rail and energy sectors and how the application of a more homogenous biodiversity baseline can be defined. This coordination and support action also aims to support harmonised management by identifying opportunities for improvement in ecosystem services resulting from the management of habitats, vegetation, water and soil quality, leading to the elaboration of national transport and/or energy management plans to be used in new construction projects or the adaptation of existing ones. This call will be linked to the implementation by infrastructure actors of the EU Green Deal proposal: restore Europe's nature.

The following R&I activities are proposed:

<u>CSA</u>

1. The technical objectives of the CSA project include addressing the approach and promoting synergies between transport and energy sectors, the development of an inclusive assessment framework of the impacts from infrastructure on biodiversity enabling procurement improvements through harmonised, transparent, and robust data generation. This work could contribute to the development of European and international standards. The project shall aim to support stakeholders in decision-making by analyzing the existing situation.

2. The economic aspects of the project include leveraging the use of SOURCE, the multilateral platform for the preparation of sustainable infrastructure projects and enabling the achievement of green bonds, with criteria and scoring to be established to feed the extra-financial reporting (CSRD) and contributing to its support and dissemination as capacity building in developing countries, connected with the EU Global Gateway. The project should also identify tools to help sector actors integrate biodiversity more thoroughly into their strategic and operational plans.
3. Proposals should consider the societal perspective. The objective is to promote the development of a holistic approach to environmental mainstreaming of infrastructure by producing comparable results to demonstrate the benefits and impacts of infrastructure projects on public health and well-being and better integration in the policy-making processes.
4. The information obtained will support capacity building through the development of an initial and continuing training programme. It will also aim to support the emergence of a European knowledge hub on infrastructure and biodiversity with the development of a catalogue of case studies where biodiversity has been enhanced including guidelines on maintenance.

To ultimately ensure sufficient deployment impact, the proposals should involve national transport infrastructure, energy networks or environmental authorities with responsibility for managing their national networks from 6 to 8 countries (Member States or Associated Countries), ensuring strong engagement in relevant European platforms and wider reach.

RIA

1. Ecosystem approach to develop infrastructure that is more sensitive to aquatic and terrestrial habitats and can create sustainable habitats, moving beyond typical mitigation measures.
2. Manufacture of soils and planting trials in a range of climatic regions to enhance biodiversity.
3. Develop and trial green systems to filter and clean road runoff pollution for natural dissipation.

Expected Impact

- Reach applicable recommendations for the development and improvement of cross-cutting biodiversity and climate policies. This will serve as a baseline for the transport and energy sector, to be used holistically when planning future endeavours so the design, construction, and maintenance phases of any relevant projects shall consider biodiversity and net zero emissions throughout the lifecycle including the land use management.
- Developing technical methodologies for assessing the environmental efficiency of transport and/or energy infrastructures and their impact on ecosystem services and the climate challenge, including in phases linked to the sustainable financing of infrastructures.
- Inclusive assessment framework of the impacts from infrastructure on biodiversity enabling compiling heterogeneous data.
- Filling gaps in the accounting of joint carbon and biodiversity "transboundary" impacts between energy and transport sectors and identifying ways to address them.
- Improved soil quality with soil fertility appropriate to the growing regime.
- Develop methods to prevent / filter pollutants in road runoff / drainage.
- Develop methods to integrate infrastructure more sensitively to its environment

Relevant Clusters: Cluster 5

Project Type: CSA (€2.5 million) + RIA (€13 million)	**Budget:** €15.5 million