

INFRASTRUCTURE AND ECOLOGY
NETWORK EUROPE

STRATEGIC ORIENTATION OF THE NETWORK

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IENE

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In the last decades the impact of anthropogenic activities on ecosystems becomes increasingly evident and calls for unprecedented global action. Biodiversity conservation emerges as a central topic in the framework of international negotiations. Infrastructure developments induce profound changes to natural landscapes and reduce the provision of valuable ecosystem services.

At European level, recent developments as the EU 2020 Biodiversity Strategy and the EU Strategy on Green Infrastructure encourage a transparent and collaborative exchange of knowledge and practices with the common aim to protect biodiversity and to promote low-carbon transportation alike.

The Infrastructure and Ecology Network Europe (IENE) began in 1995 as a common European effort responding to a demand from public authorities to address the effects of habitat fragmentation caused by infrastructure developments.

IENE is a non-profit, non-governmental, non-political, formalised network of experts active in the fields of ecology and transportation. The Network provides an independent, international and interdisciplinary forum to promote new cooperative and innovative knowledge and to exchange experience and best practices between the sectors of transportation and environment at both national and at international level, while raising awareness and encouraging the application of effective measures to balance infrastructure needs and nature conservation.

The overarching goal of IENE is to promote an ecologically sustainable and safe transportation and other linear infrastructure networks.

The IENE strategic orientation is based on the following fundamentals:

I. Recognise the impact of infrastructure development on biodiversity and ecosystems

The detrimental environmental impacts of new infrastructure are being increasingly acknowledged as a threat to biodiversity, in particular through their cumulative effects on species and ecosystems.

However, preventing land fragmentation requires a collaborative large-scale effort and a coordinated implementation of integrated measures and infrastructure strategies to counteract the loss of environmental quality. These efforts may equally require resources and engagement beyond national borders, involve large sample-size experiments, be performed through a long period of time and over multiple iterations. Clearly, more than ever, there is a need for international cooperation in research and development.

II. Mobilise resources to prevent detrimental impacts on biodiversity and ecosystems

IENE supports mainstreaming biodiversity-related concerns into linear infrastructure by providing recommendations on policy measures and planning procedures.

IENE can also act as a facilitator and advisor by: providing evidence-based expertise and applied tools; mobilising the international

scientific community to develop timely and cost-effective solutions to emerging conflicts; promoting innovation and strengthening scientific collaboration at European and international levels in the fields of infrastructure and ecology, and finally facilitate science-policy dialogues and streamline scientific breakthroughs into practice.

III. Enforce the mitigation hierarchy in infrastructure development

Infrastructure developments, which induce profound changes to natural landscapes and reduce the provision of valuable ecosystem services without the possibility to be mitigated should be avoided whenever possible as a most reliable and effective mean of meeting the relevant biodiversity targets.

Effective avoidance, reduction and mitigation strategies should be based on sound scientific evidence while refined approaches may be required to reconcile the ever growing pressure on the environment and the comprehensive energy, transport and mobility planning.

IENE is engaged in supporting public and private sectors' collaboration with the aim of fostering sustainable development and providing infrastructure services with least impact on biodiversity and on the environment as a whole. IENE will act as a bridge between research and action interface and shall produce publicly available scientific evidence and state of the art assessments to support informed decisions and to be used as guidance for carrying out cost-effective infrastructure planning and development.

IV. Identify opportunities and risks associated with existing infrastructure-related habitats

Transportation and other linear infrastructure-related habitats provide opportunities to reinforce green infrastructure. Their design, construction and management defines their potential role as biodiversity refuges or corridors and requires a precautionary approach. Transportation and other linear infrastructure-related habitats can serve to enhance biodiversity in intensively used landscapes and counteract the biodiversity loss induced by global climate change. Nevertheless, when performing poorly, these areas can act as ecological traps for nearby fauna and promote the dissemination of invasive alien species.

While there is no established consensus towards role of transportation and other linear infrastructure-related habitats, IENE promotes the development of new knowledge and guidelines to decide how, when and where opportunities for biodiversity can be provided without risks for adverse effects and supports the need for sustainable management of these areas.