



INSTITUTE of ECOLOGY and ENVIRONMENTAL MANAGEMENT

Position Statement

On

Ecological Networks and Habitat Connectivity

Introduction

Alongside habitat loss and degradation, fragmentation of the natural environment is one of the biggest problems we face today. The combination of intensive agricultural land management, urban growth and severance by transport infrastructure threatens our remaining semi-natural habitats and creates barriers to the movement of poorly-dispersing species. In light of climate change this situation may also further threaten the survival of our flora and fauna and impact on effective climate change adaptation by preventing species movement into new climate space.

Issues, Opportunities and Concerns

An increasing number of projects are being developed by a range of organisations and partnerships to create larger, landscape scale areas for the conservation of biological diversity. The importance of ecological connectivity – functional ecological networks of interactive mosaics of different habitats and land uses – has been recognized as one component of this large-scale vision, but is yet to be properly integrated into national legislation and planning policy. The establishment of these robust ecological networks should be centred on, though not restricted to, existing protected and high-value biodiversity areas to increase their effective contribution in the face of environmental change – notably climate.

In addition to enhancing the viability of ecosystems and improving conditions for biodiversity, ecological networks should be seen as a mechanism to provide broader public policy objectives in terms of ecosystem services, quality of life and economic regeneration. To be effective, nature conservation policy also needs to widen its focus to large spatial scales over long periods, in parallel with conservation objectives for individual sites and species.

The measures that will be necessary to establish and maintain ecological networks will necessitate integrating nature conservation with other sectors such as agriculture and rural development, land use planning, housing developments, sustainable flood management, river catchment management, forestry, transport and tourism. There will also need to be links between statutory and economic instruments, a targeted programme of habitat restoration and creation, flexibility in the planning process along with heightened public awareness and partnership working to achieve this integrated approach.

Ecological networks may be able to help accommodate the movement of species, but only if we enhance connectivity between protected and high-value biodiversity areas to facilitate species movement, for example by increasing the number and frequency of high-value habitat patches. Ecological networks will also have to be dynamic, to allow for natural and artificial processes to occur over various spatial and temporal scales.

While there is sufficient scientific information to support the principles of ecological networks, detailed evidence is still developing about i) the exact habitat requirements of high-value species during dispersal and other movements; ii) the benefits of different habitat types and habitat configurations in enhancing connectivity and iii) associated risks, for example with respect to the enhanced dispersal of nuisance species, particularly as climate changes.

IEEM's Recommendations

National Governments should:

- i. recognise the importance of ecosystem services and place ecological networks, and the protected and high-value biodiversity areas that support them, making implementation a key priority for the conservation of biodiversity;
- ii. effect the integration of ecological networks into relevant sectoral Government policy;
- iii. review existing instruments, agreements, programmes and initiatives and recommend ways in which they can contribute to the establishment of the networks; and

- iv. should support research and co-operation so as to increase understanding of the different scales and approaches to ecological networks.

Regional and Local Government should:

- i. set out coherent and functional ecological networks that will achieve maximum ecological benefit and facilitate the dispersal and migration of species;
- ii. both encourage investment in relevant parts of the network, and avoid investments that will harm biodiversity and conflict with the network;
- iii. identify, protect and maintain networks through regional, local and community strategies;
- iv. promote the integration of ecological networks and ecosystem services into policy and operational practices
- v. use all appropriate funding streams to contribute to wider countryside initiatives and to deliver landscape-scale environments that people can enjoy for the benefit it brings to physical and mental health.

Statutory Nature Conservation and Environmental Protection Agencies should:

- i. bring about the delivery of ecological networks through the preparation of national programmes;
- ii. ensure cross-border co-operation where ecological networks straddle national boundaries;
- iii. ensure that sufficient and appropriate data, methodologies and other information are available for use by the partners involved in developing and implementing the networks; and
- iv. promote the integration of ecological networks and ecosystem services into policy and operational practices, especially in areas of river basin management and flood control.

NGOs, Ecological Network Planners and Practitioners should:

- i. mobilise the support and involvement of relevant administrative bodies and local stakeholders, such as landowners and local community representatives; and
- ii. ensure that local partnerships support the development of ecological networks through the alignment of national, regional and local BAP action plans and spatially targeted actions.

IEEM – Who We Are and What We Do

IEEM is the professional Institute supporting professionals in the fields of ecology and environmental management. The Institute was established in 1991 and currently has around 3,500 members drawn from local authorities, government agencies, industry, environmental consultancy, teaching/research, and voluntary environmental organisations.

The objectives of the Institute are:

- To advance the science, practice and understanding of ecology and environmental management for the public benefit in the United Kingdom and internationally;
- To further the conservation and enhancement of biodiversity and maintenance of ecological processes and life support systems essential to a fully functional biosphere;
- To further environmentally sustainable management and development;
- To promote and encourage education, training, study and research in the science and practice of ecology, environmental management and sustainable development;
- To establish, uphold and advance the standards of education, qualification, competence and conduct of those who practise ecology and environmental management as a profession and for the benefit of the public.

IEEM is a member of SocEnv (The Society for the Environment), EFAEP (The European Federation of Associations of Environmental Professionals), the Europarc Federation and IUCN (The World Conservation Union).

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