
Squat lobster © Paul Kay

MARINE PROTECTED AREAS – ECOLOGICALLY COHERENT NETWORKS

Scottish Environment LINK

IN THIS THIRD LINK BRIEFING, WE EXPLORE THE KEY ELEMENTS OF ECOLOGICALLY COHERENT NETWORKS AND ASK WHETHER THE SCOTTISH GOVERNMENT CAN DELIVER ITS COMMITMENTS

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Pressure is building on the Scottish Government to properly protect the vast range of marine life found in Scotland's seas. Duties under the Marine (Scotland) Act 2010 and commitments under OSPAR require the Scottish Government to deliver a network of well-managed marine protected areas (MPAs) that will make a significant contribution to conserving and enhancing Scotland's marine environment.

You can learn more about why we need MPAs and how they are being selected in briefings one and two of this series.

CREATING AN ECOLOGICALLY COHERENT NETWORK

In the past, protected area selection focused on the merits of individual locations with little or no consideration given to how these sites could work together as part of a network. Yet, an ecologically coherent network, comprised of individual protected areas, can maintain the processes, function and structures of protected features more effectively than individual sites could alone.

We now urgently need such a network to support and help regenerate our precious marine environment.

KEY PRINCIPLES OF AN ECOLOGICALLY COHERENT NETWORK

The OSPAR Commission has produced guidance on the key principles crucial to developing a network. Together with other important factors such as best practice for stakeholder engagement, management and monitoring, these principles can maximise the benefits of a MPA network in Scottish waters.

The principles of replication, representativeness, connectivity and viability are of fundamental importance to ecological coherence. Together these principles will ensure our MPA network is both resilient and productive.

Replication: the duplication of features in separate protected areas within the network to safeguard against unexpected failures or collapse of populations.

Representativeness: ensure the network protects the full range of marine and coastal biological diversity.

Connectivity: sites within the network are located so they can link and support each other by taking advantage of ocean currents, migration routes and other natural ecological connections.

Viability: The size and shape of sites within the network are large enough to encompass ecological processes and the home ranges of protected features.

If an ecologically coherent network is to be achieved, these principles must be central to its design and applied according to our best available science and the precautionary principle.

The UK is a contracting party of the OSPAR Convention for the Protection of the marine Environment of the North-East Atlantic http://www.ospar.org

THE BENEFITS

The principles of ecological coherence can enhance overall resilience of the MPA network and the benefits of individual sites, thus improving the health of the wider marine environment by:

- Protecting the natural range of species through sufficient representation and viability.
- Ensuring connectivity between fragmented habitats to protect threatened and declining species.
- Securing viability by protecting essential ecological processes, for example by protecting foraging, spawning, breeding and nursery habitats.
- Spreading the risk of damaging events through replication.
- Allowing fish and other species to re-populate a damaged site through connectivity with healthy sites.
- Ensuring local populations mix to maintain natural genetic variation and improve overall resilience.

LINK'S VIEW

While the principles of ecological coherence have been reflected in the Scottish Government's MPA Selection Guidelines, we have questions about how they are being delivered in practice.

- LINK is concerned that new MPAs won't protect the full range of Scotland's habitats and species – particularly our iconic seabirds, whales and dolphins. This risks the representivity of the network;
- Replication will not be adequately achieved if only two sites are found for each feature within Scotland's seas, as currently planned. Replication must be delivered within smaller biogeographic regions, with a greater degree of representation for threatened and declining wildlife;
- To ensure viability and representivity, the extent or proportion of features protected must be taken into account, not purely the number of sites; and,
- The location of protected areas must maximise connections between sites to allow functioning of ecological processes to ensure they support each other. It is unclear how this is being considered and we are very concerned that functional connectivity will not be achieved.

NEXT STEPS

The Scottish Government will present its full suite of locations containing features of interest at the 5th National Stakeholder Workshop in June 2012. LINK will assess the options to see if they can deliver an ecologically coherent network which will contribute to protecting, and where appropriate, enhancing the health of Scotland's seas.

Scottish Environment LINK is the liaison body for Scotland's voluntary environmental organisations, over thirty organisations collectively representing around half a million people, working together for a sustainable Scotland. Scottish Environment LINK's Marine Taskforce comprises of the following organisations.

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