

## **Written submission from the Scottish Association for Marine Science (SAMS).**

[SAMS is an independent Scottish Charity dedicated to marine scientific research and education and, at 130 years old, is the oldest marine institute in Scotland and in the UK. Views expressed in this document are collective and follow an internal consultation of key specialists.]

SAMS welcomes the recent release of a specific list of sites designated as MPAs in Scotland. This concludes a lengthy period of uncertainty and enables a more focussed dialogue on the essential management measures that will determine whether the MPAs will achieve their stated purpose or become meaningless 'paper parks'. Before commenting on the specifics of the next steps in the process, we would like to express some more general remarks about the usefulness of MPAs and set them in the context of wider goals for sustainable development, the ecosystem approach and the need to consider inevitable global change.

Properly managed MPAs can afford protection to endangered benthic (bottom dwelling) species with limited mobility and have a valuable place amongst the measures needed to achieve a marine plan. However, they do not by themselves achieve **the 'ecosystem approach'** which is *a resource planning and management approach that integrates the connections between land, air and water and all living things, including people, their activities and institutions*. The 12 practical principles for implementing this approach were articulated in the Malawi Declaration of the Convention for Biodiversity and should underpin the development of Scotland's marine regions and the process of marine spatial planning.

A network of MPAs is designed to protect sensitive features. It will have little consequence for highly mobile species (unless a particular breeding ground is protected) or to the larger scale ecological coherence of a region. And it may not enable the **coherent development of human activities** within the overall limits of the natural system, vital for achieving sustainable livelihoods and protecting human communities. MPAs themselves may be vulnerable to global change from climate, acidification and invasive species and to be effective, need regular monitoring and scope for adaptation.

We begin our evidence statement by pointing out that the creation of MPAs must not be seen as the end point of marine management responsibilities, making it acceptable to trash the 80% of the marine environment that remains unprotected. Our concern is to prioritise understanding and management of unacceptable threats to marine social-ecological systems irrespective of their formal status, as well as best practices for sustainable use. We are concerned that the human dimension of conservation and planning that ensures sustainable livelihoods is still regarded in isolation from the natural ecosystem conservation dimension, a situation that leads to inevitable conflicts. Threats such as noise, plastic microfibers and destructive fishing gear need to be managed throughout Scotland's seas if it is to implement the European Marine Strategy Framework Directive, and these threats can only be managed with full understanding and cooperation of industry. In our view, the historical measure of restricting trawling to beyond 3 miles from the coast (but allowing other fishing techniques) was a good Scottish example of pragmatic conservation and its removal in 1984 was a missed opportunity for sustainable

management of Scotland's seas. Arguably the new MPAs offer less protection than was available before 1984.

Having framed the role of MPAs in their wider context, we can make a few comments on designation. We have examined the scientific evidence for uniqueness and are content that this was properly scrutinised. It is regrettable that a few 'reference areas' (completely protected areas) were not designated as they would have provided a valuable baseline for change. These could have been associated with experimental MPAs where the impact of specific human activities could have been evaluated in cooperation with industry, enabling the trial and development of lower impact practices (eg. in fishing, aquaculture, renewable energy, etc) as part of an adaptive management strategy.

Another important consideration is the unpredictable dynamics of global change. There is a legitimate concern that MPAs can ghettoise marine biodiversity if they are not networked in a way that enables species to redistribute as our seas become warmer, more acid and potentially stormier. As yet we have little empirical evidence of the way species, habitats and communities will move but Scottish scientists have become world-leading experts in modelling likely change. It is unclear if the proposed network has been 'future-proofed' by applying these models. It is another good reason to combine the designation of MPAs with rigorous long-term monitoring and with measures to reduce threats throughout the entirety of Scotland's seas.

The key issue for the immediate future will be the development of robust management plans for the designated MPAs. These need to be coupled with extensive monitoring and habitat mapping in order to establish a baseline for change. In many situations, monitoring conducted in collaboration with local stakeholders will boost understanding of conservation and local people's needs and facilitate cooperative planning. We are hugely encouraged by the experiment in community-led management being piloted for the Barra SAC. This offers real opportunities to meet community needs whilst achieving conservation objectives. Proper monitoring and a process of adaptive management (not backsliding but a stepwise approach towards achieving an agreed vision) offer genuine prospects of implementing the ecosystem approach in Scotland's marine regions and ensuring that designations will be respected and locally enforced without detriment to local economies.

Future management of our seas in order to optimise the sustainable flow of ecosystem services will involve difficult decisions and inevitable trade-offs that must be made explicit. There is clear evidence of degradation of marine habitats though its severity varies from place to place providing good opportunities for conservation. For benthic habitats, MPAs may operate as an insurance policy, providing a starting point for recovery in wider areas once threats are properly managed. SAMS is willing and able to participate, together with other stakeholders in our marine regions, in the process of developing innovative and coherent plans that promote sustainable use, understand and manage threats and take advantage of the newly designated MPAs.