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05 June 2008

Dear Barry

Scottish Environment LINK response to consultation on a proposed Marine Reserve in Lamlash Bay

As convenor of the Scottish Environment LINK Marine Task Force, I am writing in response to the consultation on a proposed marine reserve in Lamlash Bay. Scottish Environment LINK, and member organisations of the Marine Task Force have actively supported COAST for several years and campaigned for a number of years for further marine protected areas in Scotland, most recently as part of our campaign for a Scottish Marine Bill.

1. Do you agree or disagree with the proposal to establish a Marine Reserve in Lamlash Bay?

Scottish Environment LINK's Marine Task Force agrees with the proposal to establish a Marine reserve in Lamlash Bay.

2. Do you think there would be any (a) positive or (b) negative implications should a Marine Reserve be established in Lamlash Bay?

(a) Scottish Environment LINK's Marine Task Force believes that there would be many positive benefits from establishing a Marine Reserve in Lamlash Bay as detailed below:

Marine Biodiversity: As stated in the Regulatory Impact assessment, the objective for the area proposed for a Marine Reserve in Lamlash Bay is the conservation of biodiversity. Although the area in question is a very small area, it represents an area of perhaps the last >90% live maerl bed in the Firth of Clyde. Maerl beds are of considerable conservation value because they support a very rich community of associated algae and animals and their high biodiversity is one of the

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key characteristics of this biotope (Birkett et al., 1988¹). For example, 622 species were recorded between 1996 and 1999 in the Clyde Sea area (Barbera et al., 2003). These included 66 species of macroalgae, 120 species of annelid worms, 104 crustacean species, 138 species of mollusc and 32 species of fish. Maerl beds can also be of importance to sustainable fisheries, providing nursery grounds for commercial species of fish and shellfish (Barbera et al., 2003²) which utilise Maerl habitats for the provision of food and shelter from predation (see below).

Maerl-forming algae are among the slowest growing of all algal species with individuals only growing a few millimetres per year. As a consequence of this slow growth, and the physical and biological characteristics of maerl, this habitat is particularly sensitive to physical disturbance or to anything that would reduce the three-dimensional complexity, whether by smothering or by breaking-up their structure.

A major threat to the complexity, biodiversity and long-term viability of maerl habitats is commercial fishing. For example, when a pristine maerl bed (Creag Gobhainn, Loch Fyne) was damaged by experimental scallop dredging, there were profound, long-term impacts, with no measurable recovery in terms of area of living maerl after four years (Hall-Spencer & Moore, 2000³). Prohibition of fishing in the area proposed for a Marine Reserve in Lamlash Bay is therefore essential to protect perhaps the best maerl beds in the Clyde.

Fisheries: As mentioned above, maerl habitats provide nursery areas for commercial species of fish and shellfish. For example, maerl consistently harbours significantly higher numbers of juvenile queen scallops and other juvenile invertebrates than adjacent habitats (Kamenos et al., 2004⁴). In a further laboratory based study Kamenos et al (2004⁵) demonstrated that juvenile queen scallops consistently preferred pristine live maerl over impacted dead maerl, sand or gravel as a habitat. Kamenos et al. (2004⁶) demonstrated that juvenile gadoids (cod, saithe and pollack) were found in greater densities over maerl than over heavily vegetated rock and gravel substrata.

¹ Birkett, D.A., Maggs, M.J. and Dring, M.J. (1998) Maerl (volume V). An overview of dynamics and sensitivity characteristics for conservation management of marine SACs. Scottish Association for Marine Science (UK Marine SECs Project). 116 pp.

² Barbera, C., Bordehore, C., Borg, J. A., Glemarec, M., Grall, J., Hall-Spencer, J. M., De la Huz, C., Lanfranco, E., Lastra, M., Moore, P. G. et al. (2003). Conservation and management of northeast Atlantic and Mediterranean maerl beds. *Aquatic Conservation-Marine and Freshwater Ecosystems* **13**, S65-S76.

³ Hall-Spencer, J. M. and Moore, P. G. (2000). Scallop dredging has profound, long-term impacts on maerl habitats. *ICES Journal of Marine Science* **57**, 1407-1415.

⁴ Kamenos, N. A., Moore, P. G. and Hall-Spencer, J. M. (2004). Nursery-area function of maerl grounds for juvenile queen scallops *Aequipecten opercularis* and other invertebrates. *Marine Ecology-Progress Series* **274**, 183-189.

⁵ Kamenos, N. A., Moore, P. G. and Hall-Spencer, J. M. (2004). Attachment of the juvenile queen scallop (*Aequipecten opercularis* (L.)) to Maerl in mesocosm conditions; juvenile habitat selection. *Journal of Experimental Marine Biology and Ecology* **306**, 139-155.

⁶ Kamenos, N. A., Moore, P. G. and Hall-Spencer, J. M. (2004). Small-scale distribution of juvenile gadoids in shallow inshore waters; what role does maerl play? *ICES Journal of Marine Science* **61**, 422-429.

There is a great deal of evidence from around the world that marine reserves can promote habitat and species recovery, including some commercial fish and shellfish species with possible overspill of commercial species into surrounding areas. Closed areas to dredging and bottom trawling have proved beneficial to scallop density inside the closed area as well as in the adjacent fished area outside the reserve in the waters around the Isle of Man and in Georges Bank, Gulf of Maine, USA. There is good evidence therefore to indicate that the Lamlash Bay Marine Reserve will therefore be of benefit to scallop fishermen, including the mobile gear sector outside the proposed Marine reserve and Fisheries management Area, and scallop divers in adjacent areas within the proposed Fisheries Management Area.

Science: The Marine Reserve designation will, for the first time in Scotland, leave an area of sea to regenerate undisturbed. To date there has been limited scope for research on ecosystem recovery in the UK and Lamlash Bay will provide a valuable site for such research.

Local Communities: Tourism plays a major part in the economy of the Isle of Arran and examples in New Zealand demonstrate that full promotion of the Marine reserve could lead to increases in island tourism from extra visitors and SCUBA divers. COAST have worked extremely hard to achieve significant local and national support for the proposed Marine Reserve, thereby sending a positive message to other coastal communities in Scotland, that the Scottish Government is responsive to local community needs and priorities. It is recognised that environmental management is most effective where there is a sense of local ownership for natural resources. We believe that the experience of COAST could be a driver to improve community access to local marine management tools through provisions in the forthcoming Scottish Marine Bill.

(b) We do not believe there would be any significant negative implications from this proposal.

3. Are there any other points which you would like to make in relation to the proposed Lamlash Bay Marine Reserve.

Scottish Environment LINK's Marine Task Force believe that there could be environmental advantages in the entire bay being closed to mobile fishing gear. We therefore support the establishment of the remainder of Lamlash Bay as a Fisheries Management Area under the Sea Fisheries (Shellfish) Act 1967, which together with the Marine reserve would form the Lamlash Bay Community Marine Conservation Area.

Scottish Environment LINK is calling for a comprehensive network of marine protected areas, including nationally Important Marine Areas to be delivered as part of a Scottish Marine Bill. We look forward to the Scottish Marine Bill delivering the means to establish sites of national importance to Scotland, but also a further mechanism for the establishment of local marine Nature Reserves for sites which may not merit Scottish or European status but for which there is strong community support.

If you require any further information, please do not hesitate to contact me.

Yours sincerely,

A handwritten signature in black ink that reads "Calum Duncan". The signature is fluid and cursive, with the first name "Calum" and the last name "Duncan" clearly distinguishable.

Calum Duncan
Scottish Conservation Manager, Marine Conservation Society
Convenor, Scottish Environment LINK Marine Task Force

Scottish Environment LINK is the umbrella body for Scotland's voluntary environmental organisations, representing around 500,000 members. Scottish Environment LINK's Marine Task Force and its campaign for a Scottish Marine Bill is supported by:

Hebridean Whale and Dolphin Trust	Scottish Wildlife Trust
Marine Conservation Society	WWF Scotland
National Trust for Scotland	Whale and Dolphin
RSPB Scotland	Conservation Society

See www.savescottishseas.org for details of the LINK Marine Task Force campaign for a Scottish Marine Bill with the marine environment at its heart.