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Dear Daniel

Marine Conservation Society response to Consultation on a proposed Marine Reserve in Lamlash Bay

As Scottish Conservation Manager for the Marine Conservation Society, and Seasearch Scotland co-ordinator, I am writing in response to the consultation on a proposed marine reserve in Lamlash Bay.

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

MCS 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) MCS think that there would be many positive benefits from establishing a Marine Reserve in Lamlash Bay, as follows:

Marine Biodiversity Benefits

The area proposed for a Marine Reserve in Lamlash Bay is necessary to protect perhaps the last >90% live maerl bed in the Firth of Clyde from seabed disturbance of any kind. Maerl is an important habitat for marine biodiversity, supporting a rich associated fauna and flora of up to 150 macroalgal species¹ and over 400 benthic faunal species.² Confirming Seasearch records collected by divers from the Community of Arran Seabed Trust (COAST)

¹ Birkett, D.A., Maggs, C. and Dring, M.J. (1998) Maerl. An overview of dynamics and sensitivity characteristics for conservation management of SACs. Queen's University of Belfast 117 pp.

² Scott, R. and Moore, P.G. (1996). The status and distribution of maerl in Scotland with regard to the EC Habitats Directive. A desk study prepared for Scottish Natural Heritage. University Marine Biological Station Millport.

following Seasearch training by MCS, a more detailed survey by the University Marine Biological Station Millport (UMBSM)³ reported that high invertebrate macrobenthic numbers and diversity were present in the part of Lamlash Bay proposed as a Marine Reserve, at a level associated with maerl in pristine condition. Maerl in some areas of the proposed Marine Reserve was 85% - 95% live. Clyde Sea maerl beds characteristically contain only between 5% -10% live maerl due to extensive impacts of scallop dredging.

UMBSM concluded that the area is highly unusual in the Clyde and any damage of that deposit may be affecting one of, if not the last, >90% live maerl bed in the Clyde sea area. MCS would support this conclusion. Prohibition on fishing in that part of the Scottish zone defined for Lamlash Bay in the consultation is therefore essential to protect among the best, if not the best, maerl beds in the Clyde.

Fishery Benefits

Whilst the first priority of the Marine Reserve is to protect the maerl beds from direct impacts, a secondary and equally beneficial effect will be affording associated species, such as scallops, protection and an opportunity to recover. The closure of the part of Lamlash Bay proposed for the Marine Reserve will benefit the local scallop fishery by providing a refuge for juvenile king and queen scallops, allowing the overspill of scallop spat beyond the proposed Marine Reserve boundaries.

“Reserves worldwide have led to increases in abundance, body size, biomass and reproductive output of exploited species”⁴.

The benefits to fisheries of Marine Protected Areas has already been made at length in direct relation to Lamlash Bay⁵. Well-documented cases exist for many species spilling out of marine reserves into surrounding waters from countries worldwide⁴. Compelling evidence also exists of the benefits of closed areas to scallop populations, ultimately of course benefiting the fisheries themselves. Results from Port Errin on the Isle of Man *“present strong evidence that scallop dredging alters benthic communities and suggest that the closure of areas to commercial dredging may...permit the populations of some species to increase.”⁵*

The Lamlash Bay Marine Reserve will therefore be of additional benefit to scallop fishermen, including both the mobile gear sector outside the proposed Marine Reserve and Fisheries Management Area, and scallop divers in adjacent areas within the bay within the proposed Fisheries Management Area.

³ Kamenos, N.A., Moore, P.G. and Stevenson, T.D.I. (2004) Marine Survey to Identify Maerl Beds: Lamlash Bay Long Sea Outfall. University Marine Biological Station Millport. Pp10

⁴ Roberts, C.M. and Gell, F.R. (2004) No Take Zones – Are They Helpful? Proceedings of the Clyde Fisheries Workshop. *The University Marine Biological Station Millport*. 52 pp

⁵ Howdon, T (2004) The Arran Marine Regeneration Trial: the mechanisms and evidence of fisheries benefits to Marine Protected Areas. *MSc Aquatic Resource Management*, Kings College London pp34

Marine Science

“A common problem with studying fishing disturbance is the lack of good control sites.”⁶

The proposed Marine Reserve would provide an ideal opportunity to study the effects of fishing disturbance in shallow inshore sea beds of the Clyde sea by providing a control, in the form of the Marine Reserve, for comparison with other zones of increasing fisheries pressure, namely the rest of Lamlash Bay (no dredging or trawling within the proposed Fisheries Management Area) and outside the bay (full fishing activity).

Success of the trial would be assessed by monitoring dispersal and settlement of larvae from the Marine Reserve and Fisheries Management Area and their subsequent success in re-colonising adjacent areas of seabed.

Tourism and associated socio-economic benefits

Tourism plays a major part in the economy of the Isle of Arran. Based on examples in New Zealand, when the Marine Reserve is fully promoted it could lead to a 3% increase in island tourism from extra visitors and SCUBA divers. This could give an annual increase of £580,000 to the economy of Arran. Secondary recovery of finfish species could also help lead to Lamlash Bay once again becoming a popular destination for sea angling, as it once was during the Lamlash Bay Fishing Festival held annually by the Arran Sea-Angling Association. In 1968 the festival resulted in total catches fish weighing up to 16,000kg but by the 1980s the catch fell to less than a tenth of this. By 1994, the final year of the festival, the catch was below 28kg (Arran Sea Angling Association *pers comm*). Such a successful annual event was once a huge economic boost to the island.

(b) Based on the evidence outlined above and first-hand experience of the success of the Cape Rodney to Okakari Point Marine Reserve in New Zealand (often called the Leigh Marine Reserve), I do not think that there would be any negative implications of the proposed Marine Reserve in Lamlash Bay.

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

MCS see the establishment of the Marine Reserve as the minimum and believe that the entire bay should be closed to mobile gear fishing. 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. Through Seasearch training and advocacy support, MCS has assisted the Community of Arran Seabed Trust (COAST) for a number of years, which is recognition both of the merit of their original proposals and also of the determination and commitment of COAST

⁶ Bradshaw C, Veale L.O., Hill A.S. and Brand A.R. (2001) The effect of scallop dredging on Irish Sea benthos: experiments using a closed area. *Hydrobiologia* 465: 129-138

to establish their Marine Reserve and Fisheries Management Area. COAST are to be commended for working closely with Scottish Natural Heritage, the Clyde Fishermens Association, the Scottish Government (then Executive) and MCS to progress their proposals.

For a number of years, MCS has been calling for a comprehensive network of nationally important marine protected 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 to protect marine biodiversity of national importance to Scotland and also a mechanism to allow the establishment of local Marine Nature Reserves, for sites that might not merit Scottish or European status but for which there is strong community support. Had the latter mechanism existed 10 years ago, the welcome Lamlash Bay Marine Reserve proposal could have come to fruition sooner.

If you would like any further information in relation to this consultation response, please do not hesitate to contact me.

Best wishes

A handwritten signature in black ink, appearing to read 'Calum Duncan'. The signature is fluid and cursive, with a large initial 'C' and 'D'.

Calum Duncan
Scottish Conservation Manager
Marine Conservation Society