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Robust Marine Protected Area designation through the use of marine aggregate sector environmental data

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Abstract:

UK Government is committed to implementing an ecologically coherent network of Marine Protected Areas (MPAs) within territorial waters by 2020: a ‘blue belt’ comprised of international designations e.g. Natura 2000, and domestic Marine Conservation Zones (MCZs). UK aggregate operators have consistently engaged in the MPA process in a co-ordinated, unified, and strategic manner. The sector has provided extensive time-series acoustic and benthic datasets to the statutory bodies, frequently the highest quality and resolution of any data informing the designation process. Many UK MPAs have been designated for features originally identified from aggregate characterisation and monitoring surveys: notably MPAs for Ross worm *Sabellaria spinulosa* biogenic reefs in English southern North Sea waters. Off the south coast of England one of the only known black bream *Spondyliosoma cantharus* nesting sites was identified by operators, becoming one of England’s first MCZs designated. The sector’s data have also been used to revise the mapping and delineation of features already identified within MPAs. Sub-bottom profiling data have been used to investigate subtidal sandbank thickness and clearly differentiate bank toes from surrounding sandwave fields. High resolution acoustic data refined the boundary of a palaeochannel within an MCZ, allowing robust delineation of habitat features mis-mapped by statutory bodies. It is critical that designated features are correctly identified and mapped to achieve conservation objectives and avoid over-protection of non-feature areas, preventing unnecessary restriction of activities. UK experience shows that win-wins are possible, with engagement delivering robust MPA designation, whilst allowing operations to continue at most locations.

Keywords: Marine Protected Areas, nature conservation, aggregate dredging, North Sea, data, knowledge, information, designation, palaeochannel, sandbanks, Ross worm, *Sabellaria spinulosa* reef, black bream, *Spondyliosoma cantharus*

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