



UK Biodiversity Action Plan Priority Habitat Descriptions

Saline Lagoons

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Saline Lagoons

This habitat description has been adapted from the 1994 UK BAP Action Plan for Coastal saltmarsh beds and would benefit from an update

<http://tna.europarchive.org/20110303145238/http://www.ukbap.org.uk/UKPlans.aspx?ID=42>

Correspondence with existing habitats

Habitats Directive Annex I: Coastal Lagoons

Description

Lagoons in the UK are essentially bodies, natural or artificial, of saline water partially separated from the adjacent sea. They retain a proportion of their seawater at low tide and may develop as brackish, full saline or hyper-saline water bodies. The largest lagoon in the UK is in excess of 800ha (Loch of Stenness), although the rest are much smaller and some may be less than 1ha. Lagoons can contain a variety of substrata, often soft sediments which in turn may support tasselweeds and stoneworts as well as filamentous green and brown algae. In addition lagoons contain invertebrates rarely found elsewhere. They also provide important habitat for waterfowl, marshland birds and seabirds. The flora and invertebrate fauna present can be divided into three main components: those that are essentially freshwater in origin, those that are marine/brackish species, and those that are more specialist lagoonal species. The presence of certain indigenous and specialist plants and animals make this habitat important to the UK's overall biodiversity.

There are several different types of lagoons, ranging from those separated from the adjacent sea by a barrier of sand or shingle ('typical lagoons'), to those arising as ponded waters in depressions on soft sedimentary shores, to those separated by a rocky sill or artificial construction such as a sea wall. Sea water exchange in lagoons occurs through a natural or man-modified channel or by percolation through, or overtopping of, the barrier. The salinity of the systems is determined by various levels of freshwater input from ground or surface waters. The degree of separation and the nature of the material separating the lagoon from the sea are the basis for distinguishing several different physiographic types of lagoon.

Relevant biotopes

IR.LIR.Lag – Submerged fucoids, green or red seaweeds (low salinity infralittoral rock)

SS.SSa.SSaLS – Sublittoral sand in low or reduced salinity (lagoons)

SS.SMu.SMuLS – Sublittoral mud in low or reduced salinity (lagoons)

SS.SMx.SMxLS – Sublittoral mixed sediment in low or reduced salinity (lagoons)

SS.SMp.Ang – Angiosperm communities in reduced salinity

Current and potential threats

- *Transient lagoons*: Many lagoons, particularly in England and Wales, are naturally transient, salinity regimes change as succession leads to freshwater conditions and eventually to vegetation such as fen carr. Some formerly saline sites are now freshwater.
- *Infilling of lagoons*: The bar-built sedimentary barriers of 'typical' coastal lagoons tend to naturally move landwards with time. Lagoons behind them will eventually be in-filled as bar sediments approach the shore.
- *Pollution*, in particular nutrient enrichment leading to eutrophication, can have major detrimental effects. This may result from direct inputs to the lagoon or from water supply to the lagoon.
- *Artificial control of water* (sea and fresh) to lagoons can have profound influences on the habitat (many lagoons are often seen as candidates for infilling or land claim as part of coastal development).

- *Coastal defence works* can prevent the movement of sediments along the shore and lead to a gradual loss of the natural coastal structures within which many coastal lagoons are located.
- *Sea level rise*: The impact of coastal defences will be compounded by the effects of sea-level rise.

References

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