


# Lagoon Monitoring on our coast


Coastal lagoons are bodies of shallow, coastal water separated from the sea by shingle, sand banks or rocks. Many are features of Special Areas of Conservation sites and Sites of Special Scientific Interest. As designated features they are monitored to assess their condition, and help to inform future management plans of the sites.

Coastal lagoons are monitored in accordance with Common Standards Monitoring guidance<sup>(1)</sup> which describes four mandatory attributes; extent, salinity, isolation barriers and biotope composition. We can also do additional water quality monitoring where needed.


The lagoon **biotope communities** are sampled through core sampling or grab sampling. Biotope communities should have a diverse range of species. This could include lagoon specialists and/or rare species such as *N. vectensis*, found in lagoons at Cley and Shingle Street.



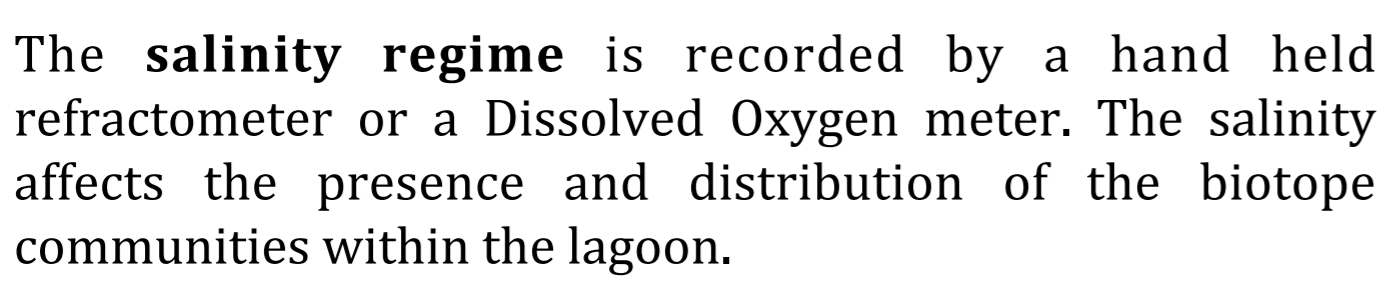
The integrity of the **isolating barriers** of the lagoons from their surroundings are assessed through walk overs during site visits. The connection with the sea defines the nature of a coastal lagoon.




The **Extent of the Basin** of a lagoon is assessed through aerial photography and annotating maps during site visits.



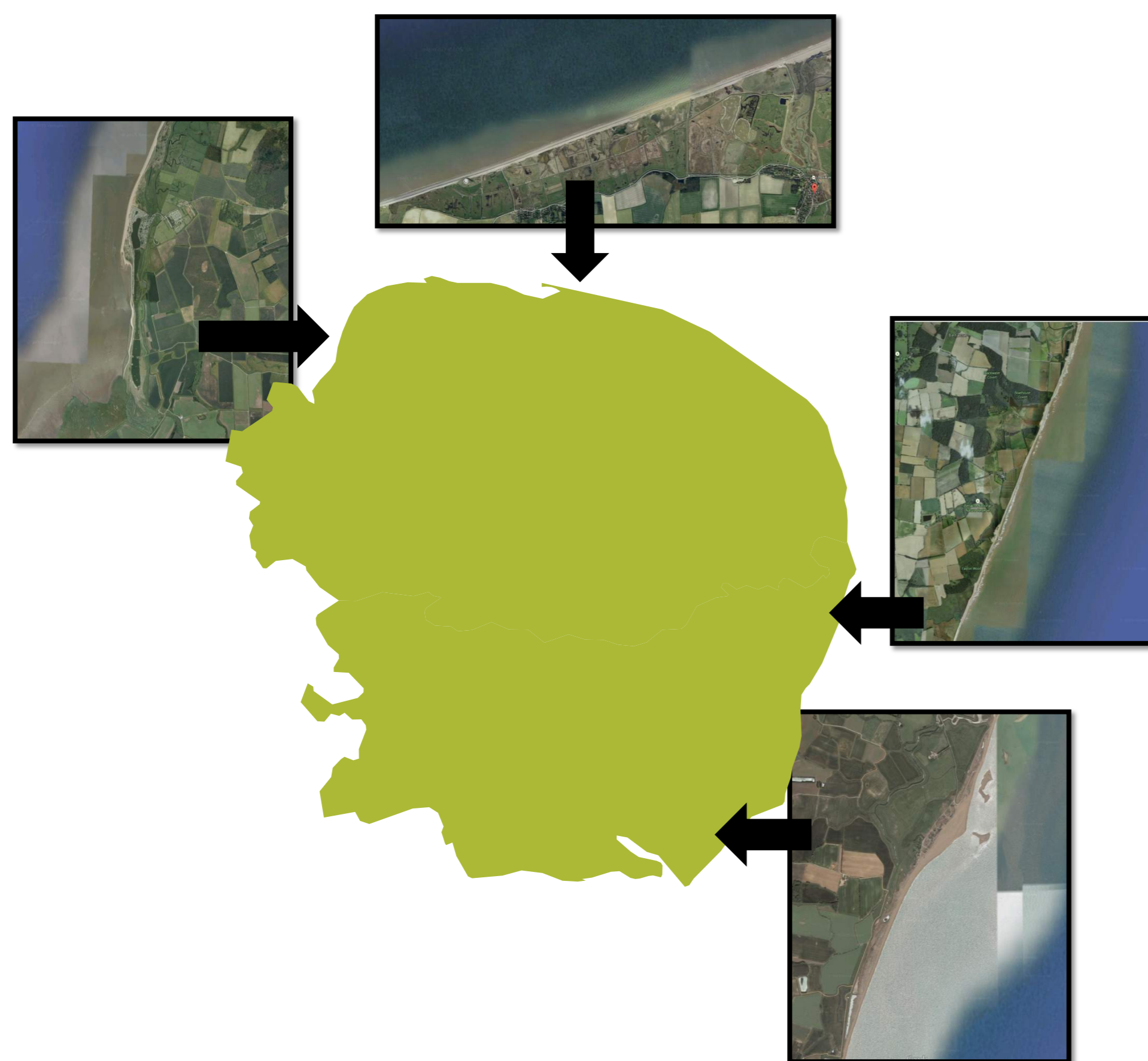
The **salinity regime** is recorded by a hand held refractometer or a Dissolved Oxygen meter. The salinity affects the presence and distribution of the biotope communities within the lagoon.



Good **water quality** is important for maintaining the diversity of lagoon biotope communities. Freshwater input from land can carry pollutants which can be tested through water sampling. Water sampling can test for a variety of indicators including various nutrients, chlorophyll and faecal coliforms.



**Water quality monitoring station at Benacre lagoons, summer 2014.**



Coastal lagoons are home to many unique species. Results of biotope community monitoring has been used to create a map of the BAP species *Nematostella vectensis* along the Suffolk coast, below. Their UK populations are sparse and they are classified as Vulnerable on the IUCN Red List, as Rare in the Red Data Book of Great Britain and are also listed under Schedule 5 of the UK Wildlife and Countryside Act 1981. As sites are increasingly subject to coastal squeeze a clearer understanding of these communities of rare species can inform future management strategies.



Coastal lagoons are designated features of four SACs in Norfolk and Suffolk; The Wash and North Norfolk Coast SAC, the North Norfolk Coast SAC, Benacre – Easton Barents lagoons SAC and Orfordness – Shingle Street SAC. These coastal lagoons are surveyed as part of a six year monitoring cycle. We have information on all or some of the mandatory attributes for all four sites above, and water quality information for lagoons at Snettisham and Benacre.

**Author:** Jennifer I Fincham, Natural England, Dragonfly House, 2 Gilders Way, Norwich, Norfolk, NR3 1UB  
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**References :** (1) JNCC. (2004). *Common Standards Monitoring Guidance for Lagoons*. JNCC.