Saltmarsh

Saltmarshes are highly productive habitats and are home to many invertebrates. They are areas with high plant diversity owing to the differing zones created between high and low water. Saltmarshes are important habitats for wintering and passage birds and in some areas, breeding waders. Historically, large areas of saltmarsh have been lost as a result of land claim.

1 Definition

Saltmarshes are areas of intertidal land colonised by halophytic plants i.e. plants adapted to high salinities and able to withstand immersion in seawater. They extend from the mean high water of neap tides to the mean high water of spring tides where only occasional inundations will occur. Saltmarsh occurs around coasts which have conditions suitable for the net accumulation of sediment and receive shelter from strong wave action. Species which are highly salt tolerant will be present along the lower pioneering edge of the marsh and will help to trap sediment. Further inland in the mid - upper marsh zone, more complex, species rich communities can develop. At the upper limits of the saltmarsh, transition communities may occur whose characteristics depend on the habitat type adjacent to the marsh and the physical characteristics of the transition zone, e.g. slope, presence of sea walls etc. Saltmarshes have traditionally been grazed and where this occurs vegetation will be shorter and dominated by grasses.

2 Current status

2.1 National

Saltmarsh is a relatively rare habitat in the UK with only around 40 000 ha remaining. A variety of factors are leading to the loss of around 100 ha per year nationally.

2.2 Local

Suffolk has 1107 ha of saltmarsh, which accounts for around 2% of the national resource. Between 1971 and 1998, 296ha of salmarsh are known to have been lost around the Suffolk coast. The table below summarises the areas of saltmarsh in Suffolk and indicates rates of loss. All of these estuaries are losing saltmarsh, the greatest loss being on the Stour estuary. The Deben estuary is also losing saltmarsh at a very significant rate.

Estuary	Total saltmarsh area (ha) 2006	Total saltmarsh Area (ha) 1998	Net change 1971-1998 (ha lost)
River Alde/Ore	334	257	8
River Deben	325	241	71
River Stour [1]	196	107	157
River Butley	105	87	9
River Blyth	73	63	5
River Orwell	74	54	46
Total	**1107**	**809**	**296**

(*Note: The apparent increase in saltmarsh area between 1998 and 2006 is due to a change in the survey method used, rather than an actual increase in the amount of saltmarsh).*

Pioneer vegetation on the Deben saltmarsh is only about 10% suggesting little accretion is taking place. Virtually all pioneer vegetation comprises of the introduced and invasive cord grass (*Spartina anglica*).

Suffolk saltmarshes are important for several nationally rare, scarce or threatened species of plant including the Dittander (*Lepidium latifolium*), Cord Grass (*Spartina maritima*) and Shrubby Seablite (*Suaeda fruiticosa*). As part of the estuarine ecosystem, saltmarshes help to support significant numbers of breeding waders such as Redshank and Oystercatcher and are grazed by wildfowl such as Wigeon and Teal. Twite spend the winter on Suffolk saltmarshes and are listed on the red list of Birds of Conservation Concern in the UK. The Deben Estuary is internationally important for the overwintering Dark-bellied Brent Geese which feed on saltmarsh. One of Britain's rarest land snails, the Narrow-mouth Whorl Snail (*Vertigo angustior*) (a Suffolk BAP species), occurs in the transition zone just above saltmarsh at Martlesham Creek, Deben Estuary.

3 Current factors affecting saltmarsh in Suffolk

- The main threats to saltmarshes in the region are associated with sea level rise. This problem is aggravated by the gradual sinking of south eastern regions of the country caused by isostatic tilt of the UK mainland. This process is predicted to occur at a rate too rapid for saltmarsh formation to keep pace with. Furthermore, the required saltmarsh retreat is prevented in many areas by embankments and floodbanks, which lead to a gradual squeeze of these habitats.
- Coastal defence works and dredging of shipping lanes may be affecting sediment cycles. Sediments are vital to the build up of saltmarsh.
- Port development and dredging, particularly on the river Stour have affected saltmarsh. These activities affect habitat directly but also sediment budgets and may cause loss of habitat though erosion.
- In-appropriately located managed retreat schemes may increase river flow. This may cause further erosion and alter sediment deposition.
- Pollution from agricultural runoff and sewage discharges can cause nutrient enrichment. Concern has been raised about industrial discharges in the

[1] The River Stour is partly in Suffolk and partly in Essex, but here figures for the entire estuary are included.

Brantham area of Stour Estuary and their effects on local saltmarshes. Oil pollution has been implicated in saltmarsh die-back and this may be a threat in the more industrialised Orwell and Stour Estuaries.

- Common cord grass (*Spartina anglica*) readily colonises mudflats and has been planted in the past to aid their stabilisation. This often produces extensive monoculture swards of little intrinsic value to wildlife and is considered a threat to bird feeding areas.
- Recreational activities such as walking and bird watching may disturb wader and wildfowl populations using the habitat. Footpaths allowing public access may cause or exacerbate erosion on sites. Water sports and boating on the estuary may disturb wildlife and increase wave action leading to erosion.

4 Current Action

4.1 Legal Status

- The Environment Agency (EA) and local authorities have a statutory duty to further conservation where consistent with purposes of enactments relating to their functions. All the Suffolk saltmarshes fall within Sites of Special Scientific Interest (SSSIs), and are also protected under Special Protection Area (SPA) under the 1979 EU Birds Directive and Ramsar designations under the 1971 Ramsar convention. In addition, parts of Alde/Ore Estuarine saltmarsh are located within the Orfordness - Shingle Street Special Area of Conservation (SAC), a National Nature Reserve (NNR) around Havergate Island and the Orfordness spit. The estuaries and their saltmarsh habitats are part of the Suffolk River Valleys ESA and the Suffolk Coast and Heaths Area of Outstanding Natural Beauty.

4.2 Management, research and guidance

- The Alde/Ore, Blyth and Deben Estuaries have been assessed by the EA with the aim of developing a long-term strategic plan for flood defence. The EA concede that there are likely to be further losses of current saltmarsh habitat, whichever management plan is initiated for these estuaries. They accept their statutory obligations under the EU Habitats Directive and UK Biodiversity Action Plan to maintain and enhance the area and quality of saltmarsh habitat. If sea levels rise as predicted, maintenance of saltmarsh at present levels would require managed retreat schemes, as accretion of new sediment is unlikely to keep pace with rapid erosion.
- The DEFRA Habitat Scheme has been taken up at two sites in the Alde/Ore Estuary, to re-create a total of 38.1 ha of saltmarsh by a managed retreat process. The work was carried out by the RSPB on Havergate Island and the National Trust at Orfordness**.** There has also been a managed realignment scheme at Trimley Marshes which has created 16.5 ha of intertidal saltmarsh.
- The Suffolk Coast and Heaths Management Strategy states a commitment to preventing further loss of intertidal habitat and where this does occur due to sea level rise, to replace these losses by creating new habitat.
- Managed grazing of saltmarsh has been reintroduced at Orfordness under ESA guidelines.

5 Action Plan Objectives and Targets

5.1 Maintain total extent of saltmarsh habitat (1107 ha in 2006), there should be no net loss subject to natural change by 2010. This takes account of the dynamic nature of the habitat.

5.2 Expand. Increase the area of saltmarsh in Suffolk by 50 ha by 2015. This will help to offset losses nationally in the recent past (100ha has been lost between 1992 and present) and to offset likely losses due to coastal squeeze.

5.3 Achieve condition - achieve favourable or recovering condition by appropriate management of XX hectares of saltmarshes currently in unfavourable condition by 2015.

6 Saltmarsh: Proposed Action with Lead Agencies

Action	Date	Partners
POLICY AND LEGISLATION		
Ensure that saltmarshes of nature conservation importance are granted appropriate designation.	2007-2011	**NE**
Ensure the implementation of more environmentally sensitive coast protection measures through the Shoreline Management Plan and Suffolk Coast and Heaths Management Strategy.	2007-2010	**EA,** SCDC, WDC, BDC,
Investigate opportunities for saltmarsh creation as part of local flood defence schemes.	Annual	**EA,** SCDC, WDC, BDC, DEFRA, SCHU
Ensure that nature conservation interests and issues are fully represented in relevant Local Development Frameworks and Community Strategies.	2007-2011	**SCDC, WDC, BDC**
SITE SAFEGUARD AND MANAGEMENT		
Ensure where possible, coastal defence or other construction works avoid any disruption of coastal or other natural processes which might lead to the loss of saltmarsh.	Annual	**EA**, NE, SCDC, WDC, BDC
Consider available mechanisms for the creation and management of saltmarsh when developing strategies for the management of coastlines, including the use of dredged material.	Annual	**EA, NE,** SCDC, WDC, BDC, SWT, RSPB, HHA
Create saltmarsh on seaward side of retreated defence line at Kessingland Levels, as identified in Suffolk SMP.	2010	**EA**, WDC, NE, SWT, RSPB, landowners.
RESEARCH AND MONITORING		
Identify suitable sites for recreation of saltmarsh habitat. Complete study into regulated tidal exchange and seek sites for practical demonstration.	On-going	**EA, NE**, SCDC, WDC, BDC, SWT, RSPB, HHA

Carry out a wildlife survey of saltmarshes, including NVC mapping, invertebrate survey and breeding and roosting birds.	2007-2010	EN, SWT, RSPB, Local specialists, SCDC, WDC, BDC, SBRC
Collect information on changes in the extent and quality of saltmarsh resource in Suffolk.	2007-2011	**EA**, NE, SWT, RSPB, SBRC
Research saltmarsh formation and erosion including estuarine dynamics and sediment cycles, to identify physical factors affecting the habitat.	2007-2011	**EA**, NE
ADVISORY		
Encourage the appropriate management of saltmarsh through the dissemination of guidance material and advice on grants/schemes, to key organisations and landowners and managers.	2007-2011	EA, **NE**, FWAG, SWT, RSPB, NT
Promote and develop demonstrations sites and good examples of creation, eg; Havergate Island and Orfordness.	2007-2011	**RSPB, NT**
Establish local or regional links to technical experts on the relationships between saltmarsh, nature conservation and flood defence.	2007-2011	**NE,** EA, , SWT, RSPB, SCHU
Encourage coastal defence management partnerships to participate in the implementation of the plan, emphasising saltmarsh as a flood defence resource.	2007-2011	**EA, NE**, SWT, RSPB, SCDC, WDC, BDC, SCHU
COMMUNICATIONS AND PUBLICITY		
Raise public awareness of the nature conservation importance and mobile nature of saltmarshes and their value for coastal processes, flood defence, fisheries and amenity and recreation.	2007-2011	**SCHU,** EA, NE, SWT, RSPB, DEFRA.
Develop education activities relating to saltmarsh and hold education event.	2007-2011	**SCHU, SWT**

Monitoring of progress:

Reported annually on the UK BAP reporting system BARS Biodiversity Action Reporting system.

Consultation:
Organisations that have been consulted regarding this plan and have agreed to aim to deliver their organisations commitments:

RSPB Ian Paradine
Natural England John Jackson and Darren Kidney
Suffolk County Council Sue Hooton
SWT Dorothy Casey
Suffolk Biological Records Centre (SBRC) Martin Sanford
Suffolk Coasts and Heath Unit Simon Hooton
Environment Agency Julia Stansfield
National Trust Grant Lohoar
Waveney District Council Sara Nicholls
Suffolk Coastal District Council John Davies
Babergh District Council Peter Berry
FWAG Diane Ling