

## Site 23 – Grüner Brink

### 23.1 Change of the site by project activities:

The site Grüner Brink is well known for lagoons with quite natural hydrology in a dynamic coastal landscape. Within a small fresh water dominated lagoons in front of the dike *B. calamita* has one of the remaining sub-populations of the island of Fehmarn meta-population. Rare plant species occur here, as e.g. *Gentianella baltica* and *Dianthus superbis* and the site was a former Dunlin breeding site. The site was managed for many years by the partner NaBu. The integration into the Baltcoast project made it possible to exchange experiences about targeted management for habitats and plants, toad- and bird species.

*Scirpus maritimus* and *Phragmites australis* dominated edges and breeding site of *B. calamita* was opened by an increase of grazing pressure. Further recommendations from expert visit were to integrate more areas to grazing especially the dunes and the former Dunlin breeding sites where most of the banks were overgrown by tall vegetation. In the dunes *Rosa rugosa* was dominating sections within the grey dunes.

With additional funds the dunes were fenced and already two summers with grazing reduced the *Rosa rugosa* dominance especially of older scrubs. The *Rosa* scrub height was shortened by 50%.

The local manager Martin Altemüller became aware by talking to Amhi Consult herpetologists that a breeding pond above salt water flood level with all time fresh water will be needed for cases when the lagoon breeding site is too salty. With add. funds an additional pond was made which was available exactly in that spring when a winter flood made the old breeding site a small lagoon too salty. The reproduction success was very good also in that year and during the project the population can be kept stable even after dry springs which were unsuitable for such rain-dependent amphibian species as Natterjack toad.



On a spit developing by coastal processes in 2005 a Little Tern colony started to breed with 36 pairs. In this year they were very successful with 56 hatched and more than 25 fledged chicks. Predation was not very significant. In 2006 again 28 pairs started to breed, but the first clutches were predated by foxes. A mobile electric fence was installed soon and was successfully in function for 30 days - then foxes managed to enter through shallow water outside the fence line. Although 49 Little Tern chicks hatched and again more than 25 fledged successfully. In both years the colony was also used by Common Terns.



Spit with breeding terns

In spring 2007 no Common Terns bred at the spit and the Little Tern breeding population decreased to 11 pairs. Although the electric fence was optimized by a swimming fence for the shallow water areas, there was no breeding success at all. Seven pairs of Common Terns tried again in July 2007 to breed, but they also failed. Main problem was the abundance of kite surfers disturbing the colony, so avian predators as Gulls and Carrion Crow had an easy job. In the following years Little Tern colony decreased again and the remaining pairs had no breeding success. Some nests of Great Ringed Plover could be protected by nest cages. Outside avian predation from 2009 on also stoat and weasel became common visitors at the spit and for these predators the nest cages also didn't help.



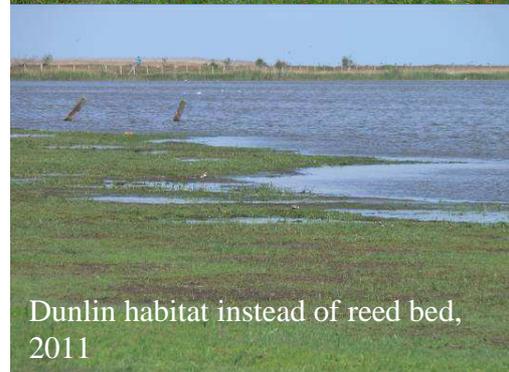
Electrical swim fence

The vegetation monitoring indentified positive effects of the grazing for vegetation on the lagoon edges as *Salicornia europaea* and *Bassia hirsuta*. In dry habitats *Armeria maritima*, *Sedum acre* and *Ranunculus bulbosus* and others are increasing due to reduced litter layer on the soil.



Increased Armeria

In 2011 during breeding season at least one Baltic Dunlin was present at Grüner Brink. The southern edge of the lagoon presented perfect conditions for Dunlins in 2011. Reed bed had been turned into short grazed salt meadows with open mud flats. On this area also a – at the German Baltic Sea coast- rare plant *Bassia hirsuta* grew in big number.



Dunlin habitat instead of reed bed, 2011

Even in dry springs the taod population seems to be stable. Additional ponds created out side the project site behind the dike seem to compensate for salty conditions in the lagoon.

A rare plant was re-found for Germany again at the site. A few plants of *Silene viscosa* were found at the site in 2011. It seems to be the only place in Germany at the moment.

### **8.2 Remaining challenges and actions:**

The good results can be improved by increased grazing pressure and the grazing should be extended to other sites in the Nature reserve. Especially the sites of *Gentianella baltica* and *Dianthus superbis* are not integrate in the grazing area and therefore are threatened by succession. The further management will be discussed with the permitting authorities in 2011.



### **18.3 Public perception:**

The municipality administration of Fehmarn is positive about the project activities, because nature is one of the most mentioned values why tourists visit the island. The site is a since long time accepted Nature reserve. In the meeting on site presenting the results of the project in 2011, the representative of the town offered the option to increase the grazing further to the east and include public owned sites at the Eastern end of the nature reserve. This is planned now for 2012/2013 to be implemented by additional funds.