SPECIES INFORMATION SHEET *Zostera noltii*

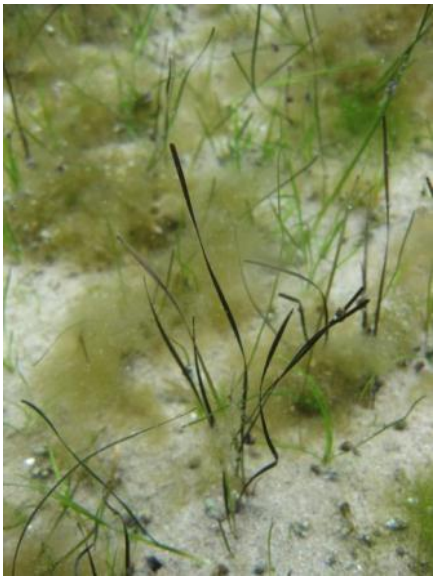
English name: **Dwarf eelgrass**	Scientific name: ***Zostera noltii***	
Taxonomical group: Class: Zosteraceae Order: Najadales Family: Zosteraceae	Species authority: Hornemann 1832	
Subspecies, Variations, Synonyms: *Zostera nana* Roth 1827	Generation length: >10 years (expert judgement)	
Past and current threats (Habitats Directive article 17 codes): Eutrophication (H01.05), Construction (D03, J02.01.02, J02.12), Water traffic (G01.01.01), Tourism (G05)	Future threats (Habitats Directive article 17 codes): Eutrophication (H01.05), Construction (D03, J02.01.02, J02.12), Water traffic (G01.01.01), Tourism (G05), Other threat factors (aquaculture, F01), Climate change (M01, M02)	
IUCN Criteria: **B2ab (iii, iv)**	**HELCOM Red List Category:**	**VU Vulnerable**
Global / European IUCN Red List Category LC / NE	Habitats Directive: –	
Protection and Red List status in HELCOM countries: Denmark –/LC, Estonia –/–, Finland –/–, Germany 1 (Critically endangered), part of a §30 biotope (Federal Nature Conservation Act), Latvia –/–, Lithuania –/–, Poland –/–, Russia –/–, Sweden –/VU		

Distribution and status in the Baltic Sea region

Zostera noltii is widely distributed along the European Atlantic coasts with the northern distribution limit in Shetland Islands and southern Norway and the southern limit on the coast of Mauritania. It also occurs in the Mediterranean and Black Sea. Within the Baltic it is restricted to the western Baltic. It has not been found east of the Darß Sill in the Arkona basin.

All recent and former occurrences are restricted to Denmark, Germany and the west coast of Sweden. Especially in Denmark and Sweden there are considerably more old records compared to new ones but this is probably explained only partly by genuine population decline and partly by decreased monitoring effort.

Z. noltii was included in the previous HELCOM list of threatened and/or declining species (HELCOM 2007).

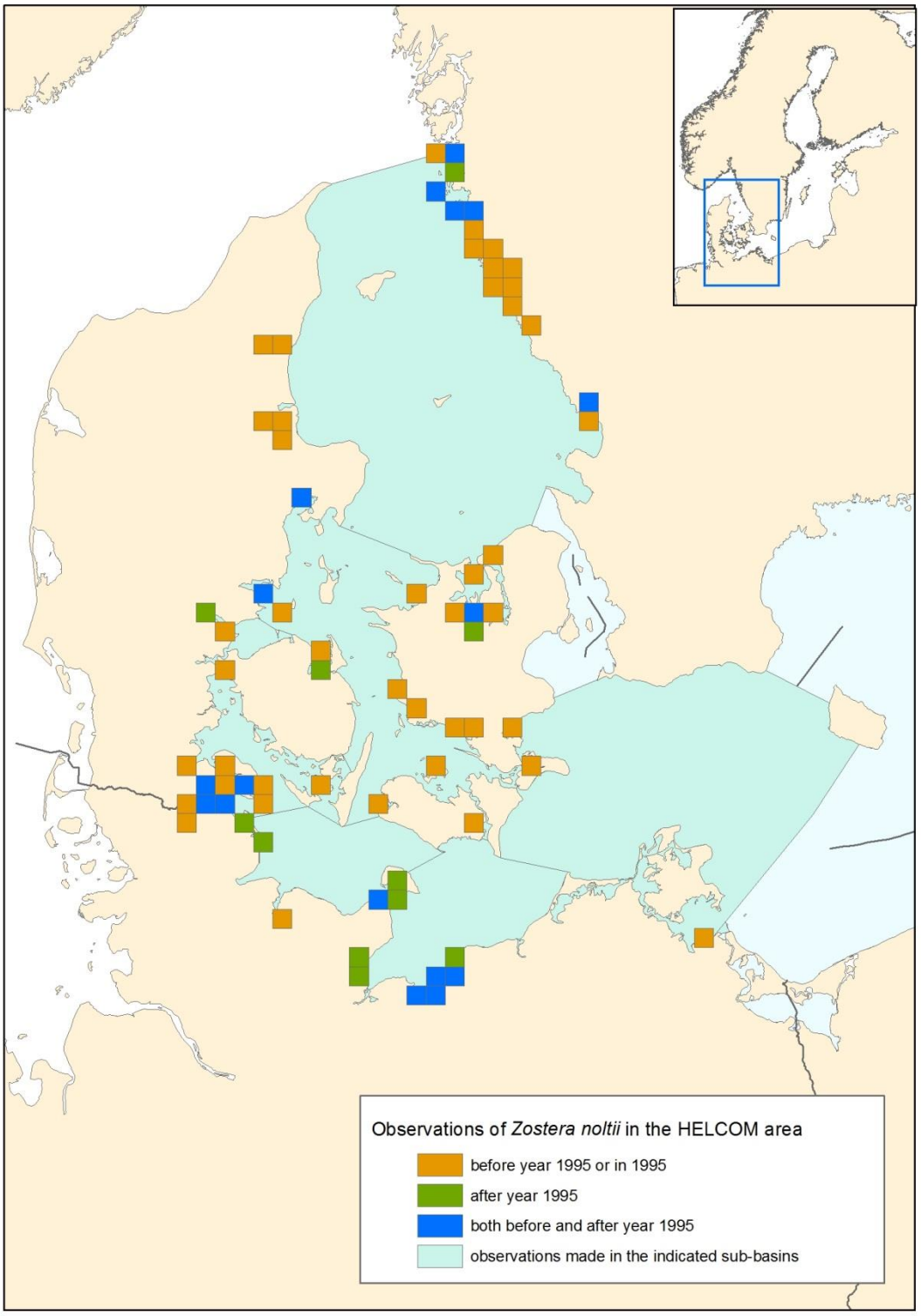


Zostera noltii – dark green plants growing within young *Zannichellia palustris* plants (light green) and epiphytes by Karin Fürhaupter.

SPECIES INFORMATION SHEET *Zostera noltii*

Distribution map

The records of species compiled from the Danish national database for marine data (MADS), the German database for macrophyte occurrences (MARIDATA) and Swedish Species Gateway (www.artportalen.se).



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Habitat and ecology

Zostera noltii occurs in intertidal flats of Atlantic coasts. In the Baltic Sea it is a characteristic component in shallow, sheltered bays, inlets and fjords where it grows on sand and muddy sand. It is a marine species, which occurs in brackish environments down to about 9–10 psu. Its upper and lower growth limits shift downwards with decreasing salinity. Therefore in brackish waters, it may become permanently submerged, whereas in marine waters it grows in the intertidal zone. However, the growing sites of *Z. noltii* in the uppermost sublittoral (0,25–1 m) may fall dry time to time also in the Baltic Sea (wind-induced). Although *Z. marina* occurs at same locations with *Z. noltii*, the species do not mix with each other, as *Z. marina* occurs deeper than 1 m. *Z. noltii* is associated more often with *Ruppia spp*. and *Zannichellia palustris* or some charophytes. It can easily be overlooked due to resemblance with *Ruppia spp*. (unfertile plants). It serves as an important food source for migrating water birds such as brent geese and widgeons (MarLIN).

Description of major threats

The species is restricted to very shallow bays, inlets and fjords with high eutrophication loads from agriculture. Those bays are often affected by coastal defence constructions, harbour constructions and high impact from beach tourism and sport activities. Eutrophication together with these activities cause a decline of habitat quality and destruction of suitable habitat of the species. In the future higher water temperature and changes in the salinity range due to climate change may also threaten the population.

Assessment justification

The geographic range of the species is considered restricted and continuingly declining, mainly due to eutrophication. All recent and former occurrences are restricted to the west coast of Sweden, Denmark and Germany. The extent of occurrences (EOO) is estimated < 50 000 km², and the area of occupancy (AOO) < 2 000 km². In Germany, where there is regular monitoring for this species, its disappearance has been evidenced e.g. in several lagoons. Local extinctions may have happened also in other countries but there is no data to show that due to the lack of proper monitoring. It should be noted that the AOO may be even lower in reality. The population is also fragmented. The continuing decline of the population is assumed to concern at least AOO, the quality of the habitat, number of locations, but it may concern also EOO. The species most probably meets the criteria for Vulnerable (B2ab (ii,iii,iv).

Recommendations for actions to conserve the species

Mitigation of eutrophication by controlling local sources of nutrient run-off. Conservation measures, such as restriction on coastal construction, dredging and beach tourism in shallow coastal lagoons, bays and fjords.

Common names

Denmark: dværg-bandeltang, Estonia: –, Finland: pikkuajokas, Germany: Zwergseegras, Latvia: –, Lithuania: mažasis andras, Poland: zostera drobna, Russia: –, Sweden: dvärgbandtång

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MADS, The Danish national database for marine data. NERI: University of Aarhus; National Environmental Research Institute. Downloaded in August–September 2010.

MARIDATA, the database of MariLim GmbH including all German literature references given in Nielsen (1995), Blümel et al. (2002), Schubert et al. (2003), Kiel herbarium references and all occurrences of the German HELCOM, BSPA and WFD monitoring.

MarLIN, The Marine Life Information Network - information to support marine species and habitat conservation, sustainable management, protection and planning (www.marlin.ac.uk)

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