

Short notes from the Special Session

Coastal dunes and beaches

The past & challenges for the future

Held at Littoral 2022, Costa Caparica, Lisbon, Portugal,
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Vs 17-10-2022

The workshop was organised by Luc Geelen (Waternet, Netherlands) and Frank van der Meulen (formerly Deltares, Netherlands).

The workshop was a plenary session in the conference program and attended by almost all participants, which was a very positive sign of the importance of the subject. It was an open discussion in which everyone could participate. Maike Isermann (Germany) joined the workshop online.

Aim of the workshop was to discuss past and future of European dune and beach habitats. What have we gained in the years since the start of EUCC (starting as EUDC in 1987) and what are the main items (still) standing out for the future?
Create an opportunity to strengthen the European dune network (EUCC-EDN)

Introduction To start off, Luc Geelen sketched the history of the EUCC-conferences and the places/countries that were the venues, since the first one in Leiden, Netherlands, in 1987. Proceedings of all these meetings are available, either in print or online. Birth of the EUDC/EUCC was at the Symposium in Leiden in 1987. Many Littorals followed, although the scope of the EUCC broadened to Coastal issues, ICZM, Coastal Marine Planning, Climate Change, Ecosystem Services and Nature Based Solutions, dunes still get extra attention.

Although progress has been made, across all habitat groups, dunes (21 coastal and inland habitat types), along with bogs, mires and fens, have the highest percentage (>50%) of bad assessments and a low number of good assessments. These 'dune habitats' include the 10 habitats making up the Habitats Directive sub-group Sea dunes of the Atlantic, North Sea and Baltic coast, 7 habitats in Sea dunes of the Mediterranean coast and 4 habitats in Inland dunes, old and decalcified.

From 2012 onward EDN further developed through the 'Dune Roadmap'. The dune roadmap is a grassroots approach – from nature conservation agencies, scientists and managers. The process was led by John Houston for the Atlantic Biogeographical Process of the European Commission. This process was helped by many dune management related LIFE projects that have contributed to the Roadmap including: LIFE09-NL: Dutch Dune Revival; LIFE11-NL: Amsterdam Dunes; LIFE12-DK: REDCOHA-LIFE; LIFE12-DK: LIFE WETHAB; LIFE12-BE: LIFE FLANDRE; LIFE13-ES: LIFE+ARCOS; LIFE13-DK: REWETDUNE-LIFE; LIFE17-UK: Dynamic Dunescape; LIFE17-UK: Sands of LIFE; LIFE20-BE: LIFE DUNIAS

Discussion Only the main points are mentioned here.

Dynamic dunes Dunes are dynamic by their nature and the subject has had attention throughout the years. Factors that have led more and more to a “frozen” landscape were an increasing use, stabilisation for coastal defense and (in some countries) a high atmospheric deposition of N and P, causing encroachment of some grasses and woodies, like *Calamagrostis epigejos* and *Prunus*, *Populus* and *Hippophae*. During the years many rejuvenation projects have been carried out with varying success. It was felt that “dynamic dunes” still needs our attention. The need to preserve biodiversity of the dunes is closely linked to this.

Proces- versus pattern-management. Also linked to this subject is the difference between proces- and pattern-management. The former has more focus on the abiotic processes of wind, rain and ground water. They are reflected in the physiognomy of a particular landscape. Focus on the proces usually leads to focus on the dynamic character and generally requires a larger scale of space and time. Focus on the pattern almost leads to the landscape as being an “album with a collection of stamps” to say it slightly caricature-wise. Pattern-managment generally can be done on a smaller scale in time and space. The choice for either the one or the other, or a combination of both, depends on the management goal. The EU-habitats directive could lead to pattern management and a stamp-album.

Ecology-physical geography Some people mentioned the gap between ecology and physical geography. This hampers proper research for management because of the one-sided scope. Dunes should be perceived and managed more as a whole organic entity.

Scope for use Others would like to see the scope for dune use to be widened. For example golf should be included. A lot of golfcourses are on dunes and many golf terrains have dunes on their property. Proper management of these dunes should not be forgotten by the golfers and their clubs.

Awareness and lobbying These factors have always been important in the concours between science and management. How to bridge the gap between these two was the subject of many congresses and it should continue to be. Awareness and lobbying can help to bridge this gap.

Coastal defense Many dune terrains fringe low-lying coastal flats. Coastal defense therefore is a main use. In the past this has lead to stabilised and frozen landscapes with immobile stuctures. Building with nature has changed this development. More use should be made of the local natural processes and elements. Sand nourishment is one of the options. Others are planting indigenous species and making use of longshore transport to feed erosional coasts with sand. This principle is seen at the Sandmotor in the Netherlands.

General feeling The general feeling after the discussions was that actually none of the items that were in the past are to be given up in the future. Building with nature is a welcome new way of thinking and acting in coastal management. It leads to a form of management whereby foreshore, beach and dune are seen as one organic system.

The EUCC can facilitate the exchange of ideas between policy-makers, researchers and managers. The European Dune Network is a relatively loose network.



photos F. Elshof

