

THE BALTIC CLIMATE SCHOOL

LIFE FOR DUNES PL PROJECT –
COMPREHENSIVE NATURE CONSERVATION ON THE
SOUTHERN BALTIC COAST

MAGDALENA LAZARUS

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Interreg
Baltic Sea Region



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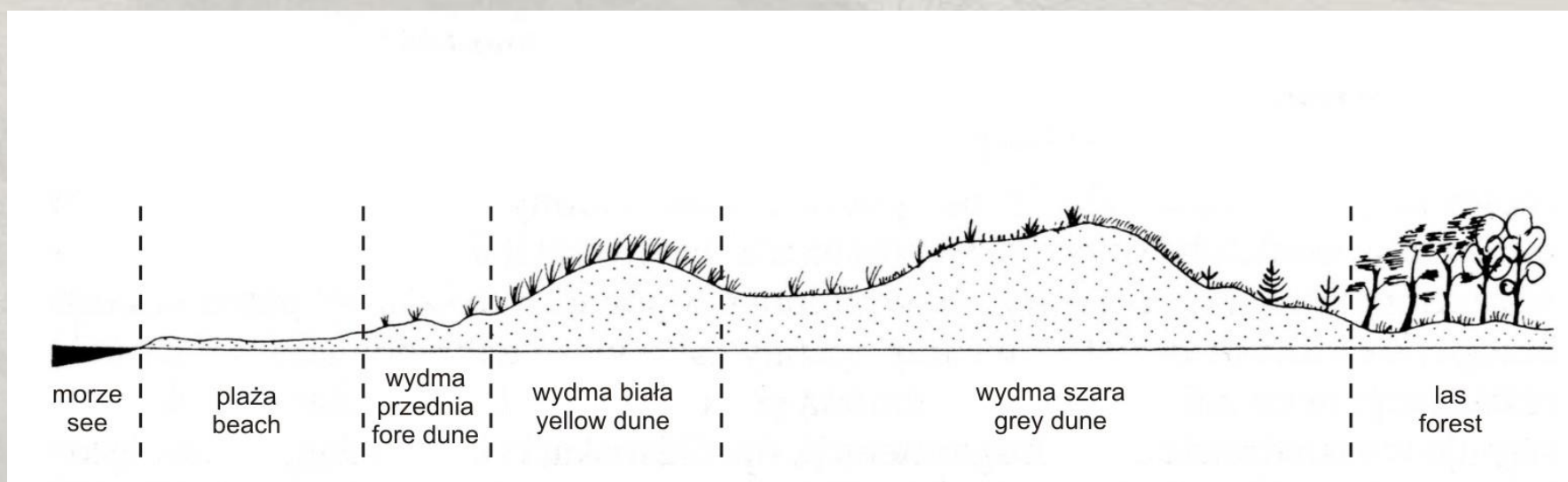
CIRCULAR ECONOMY

BALTIPLAST

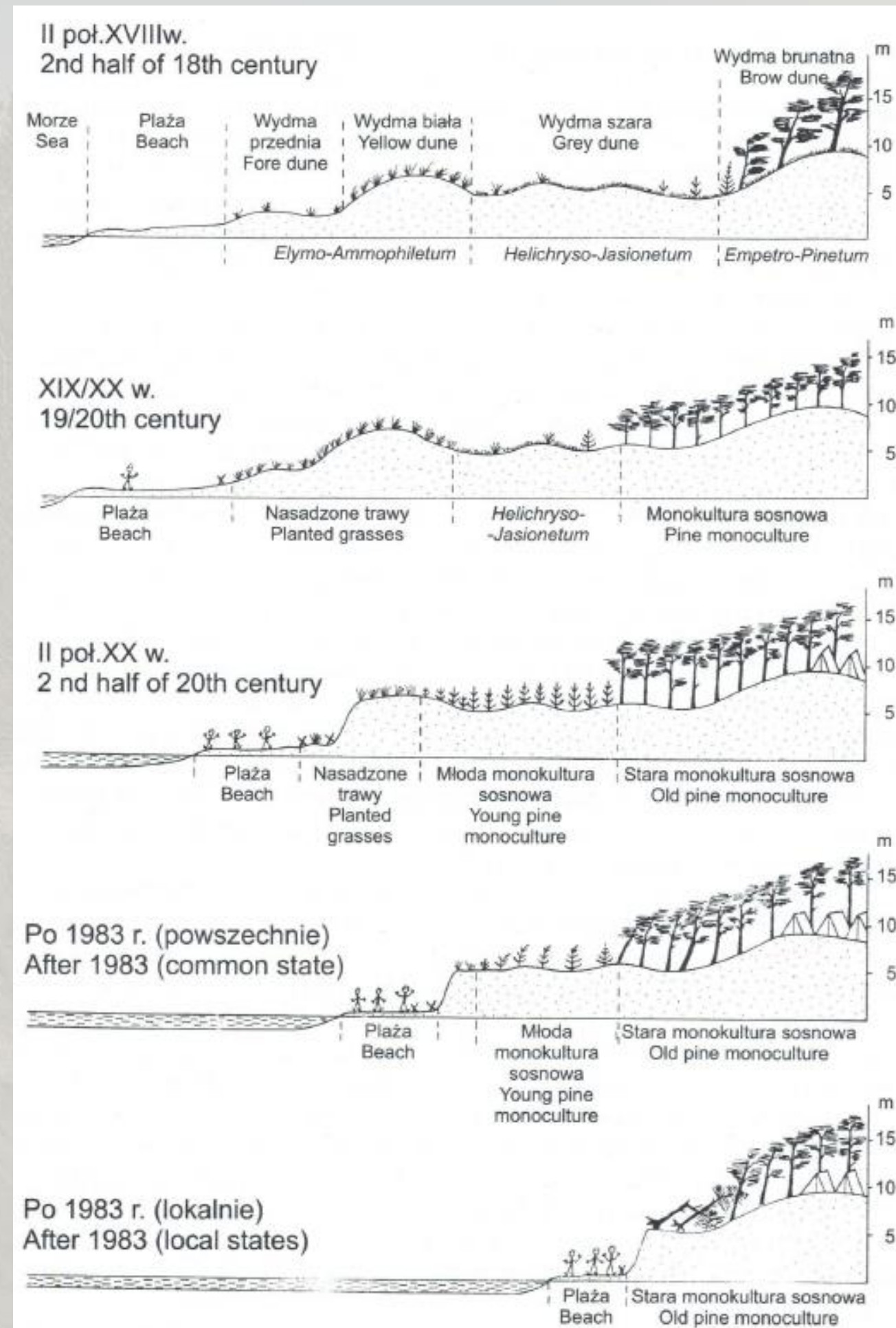


Dune habitats

- ✓ fragile
- ✓ dynamic
- ✓ important in coastal protection
- ✓ appear in places attractive to tourists
- ✓ subject of interest to various authorities and social groups



Source: Piotrowska 2002



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Threats to coastal dune habitats

INVASIVE SPECIES



AFFORESTATION



RECREATIONAL PRESSURE



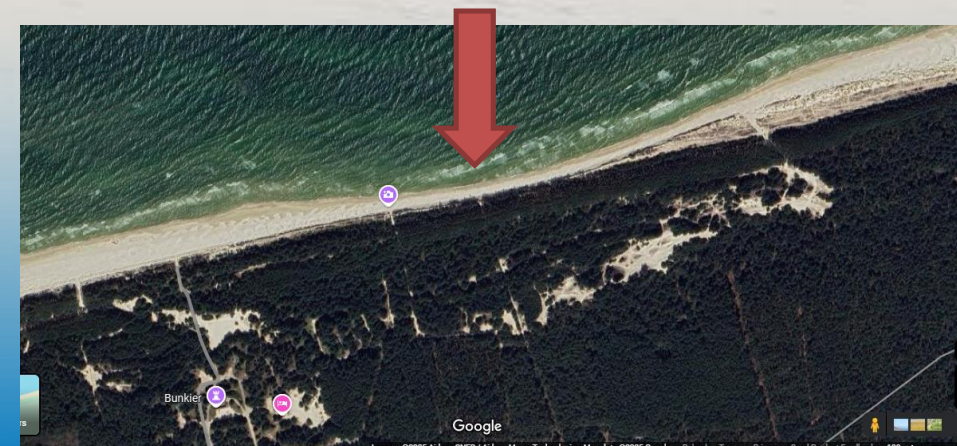
STORMS AND EROSION



INSUFFICIENT COOPERATION IN MANAGEMENT



LACK OF SPACE FOR HABITATS AND PROCESSES DUE TO DEVELOPMENT OF THE SHORE



Threats to coastal dune habitats

DUNES AS HYDROTECHNICAL STRUCTURES



Threats to coastal dune habitats



<https://poradnikogrodnicy.pl/>



Invasive species

Rosa rugosa Thunb. – one of the most problematic invasive species on dunes along the North Atlantic, North Sea and Baltic coasts. It spreads through vegetative shoots and by seed dispersal. It causes a decline in the species richness of dune habitats.



Threats to coastal dune habitats

Invasive species

Salix acutifolia Willd. and *Salix daphnoides* Vill. – fascine fences are built from the shoots of both species to provide a barrier to the sand, thus stimulating the formation of dunes. Willow thickets develop in rows from willow shoots in many places. As with Japanese rose, the spread of willows results in species-poor scrub where dune habitats are present.



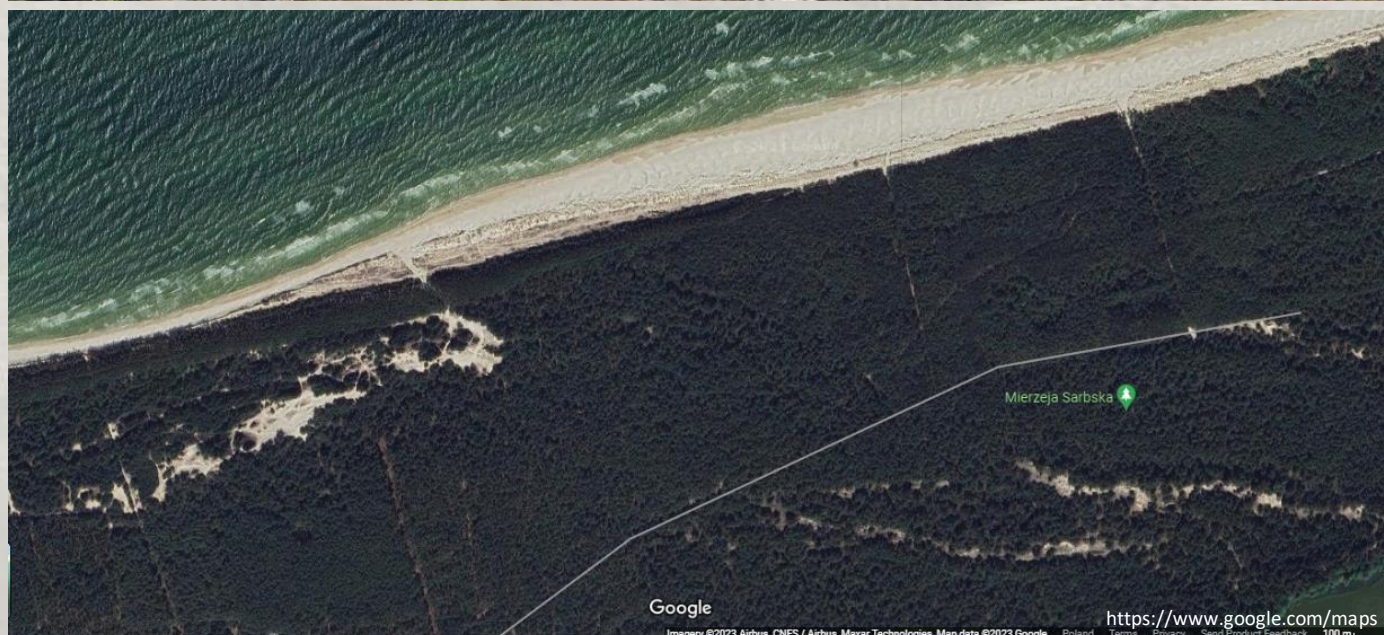
Invasive species

Padus serotina (Ehrh.) Borkh. – an invasive deciduous tree/shrub native to North America, problematic in some locations along the Baltic Sea dunes, competing with native plant species and forming monocultures.

And other species...



Afforestation of dunes, resulting in accelerated succession of plant communities





**Presence of ecologically
unsuitable species**



**Anthropopressure associated
with recreation – trampled
vegetation, litter, dune
fertilisation**

Toaleta z widokiem na morze

mak
10 września 2008 (artykuł sprzed 15 lat)

Opinie (67)



Toi toi na plaży w Orlowie.
fot. czytelnik trojmiasto.pl

Wtorkowy spacer po orłowskiej plaży nie należał do przyjemności. Każdy, kto n
zaczerpnąć świeżego powietrza i nacieszyć oczy pięknym widokiem spokojneg
zobaczyć zdewastowaną toaletę typu toi-toi - czyściutką, bo dokładnie obmytą

Nasz czytelnik zauważył ją we wtorek, ok. 500 m na
południe od moła w Orlowie.

Chcieliśmy wyjaśnić sprawę w Gdynskim Ośrodku
Sportu i Rekreacji, który opiekuje się plażami w Gdyni.
Pracownicy GOSIR-u, upewnili nas, że dostali

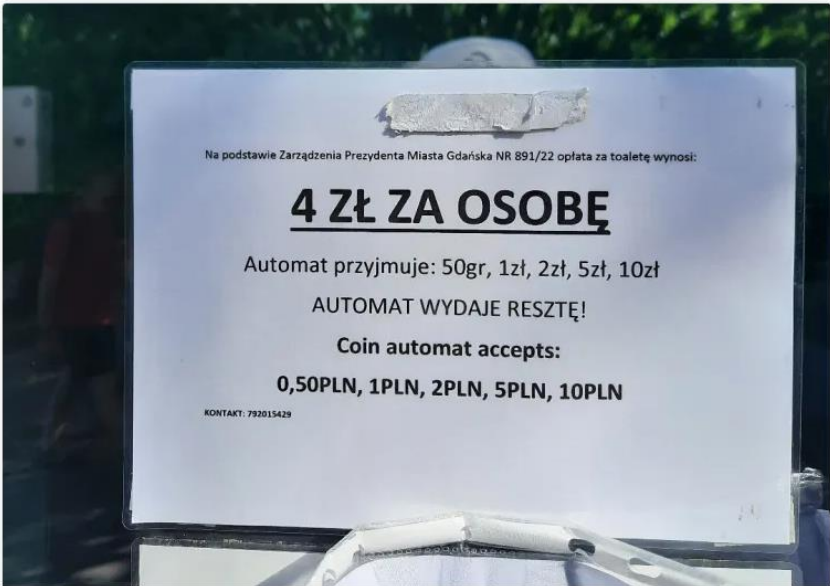


"Idź się wysikać na wydmy. Na toaletę wydałem już 30 zł"

Szymon Zięba
17 sierpnia 2023, godz. 07:00

► Słuchaj

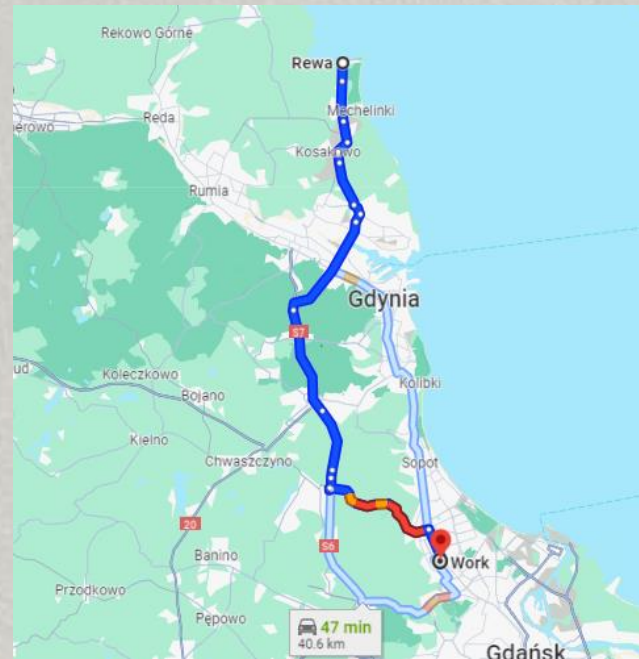
Opinie (454)



4 zł za skorzystanie z toalety? Dla wielu to zachęta, by za potrzebą udać się na wydmy lub do lasu przy plaży.
fot. czytelnik/Raport z Trójmiasta

Tytuł tego felietonu to słowa pewnego mężczyzny, najpewniej głowy czteroosobowej rodziny, którego dzieci na plaży w Brzeźnie domagały się kolejnej wizyty w toalecie. I choć wysyłanie dzieci "za potrzebą" w krzaki czy na wydmy trudno pochwalać, jestem w stanie to zrozumieć. Toalety przy plażach płatne były od dawna, ale podwyżki za skorzystanie z WC sprawiają, że całodzienny koszt wyprawy nad morze rośnie o dobre kilkadziesiąt złotych.

Anthropopressure associated
with recreation – trampled
vegetation, litter, dune
fertilisation



**Anthropopressure associated
with recreation – trampled
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**Anthropopressure associated
with recreation – trampled
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Effects?

Tab. Conservation status of dune habitats according to the latest assessment published by the EC for the 2013-2018 period
S&F – Structure and functions, FP – Future prospect, OAss. – Overall assessment, “-“ trend deteriorating

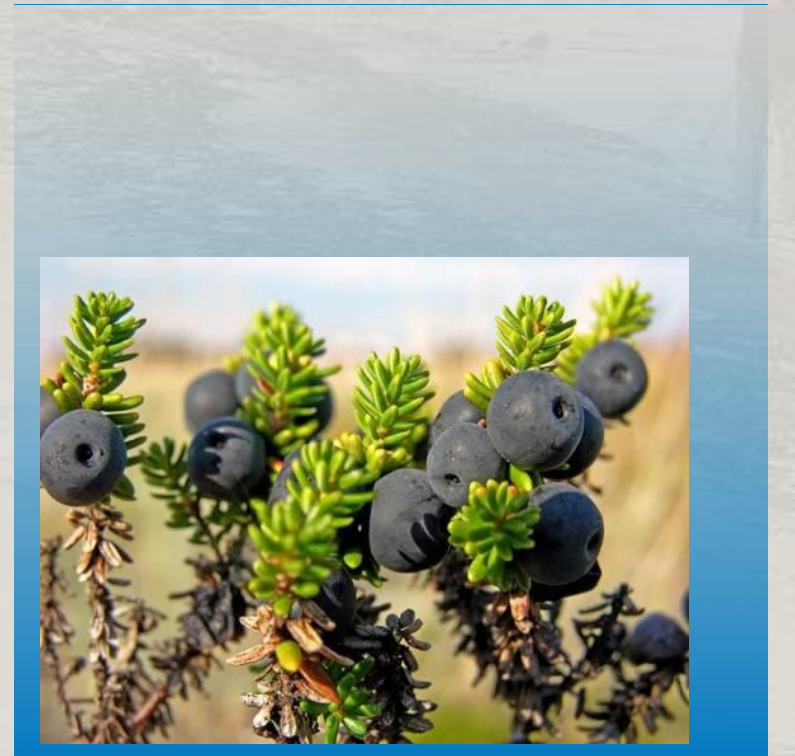
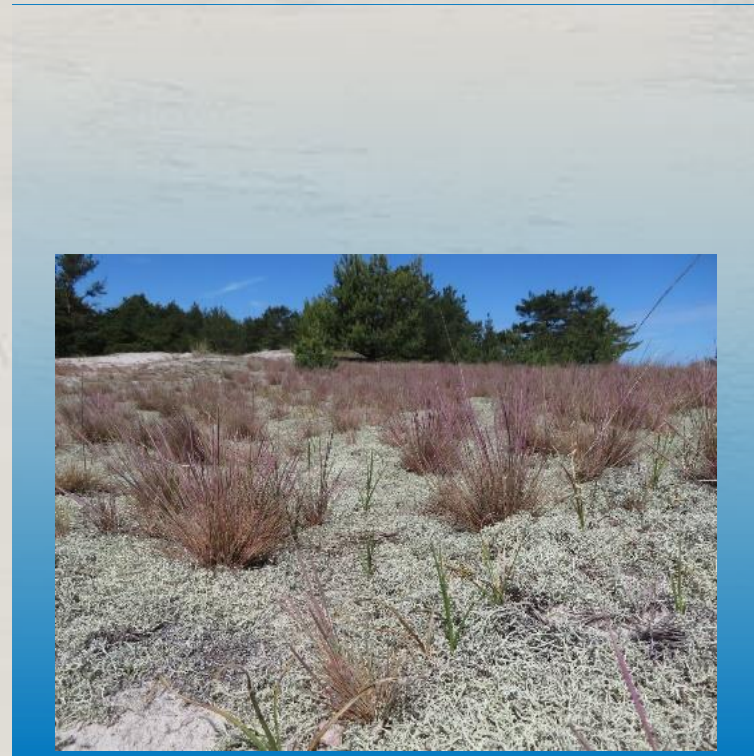
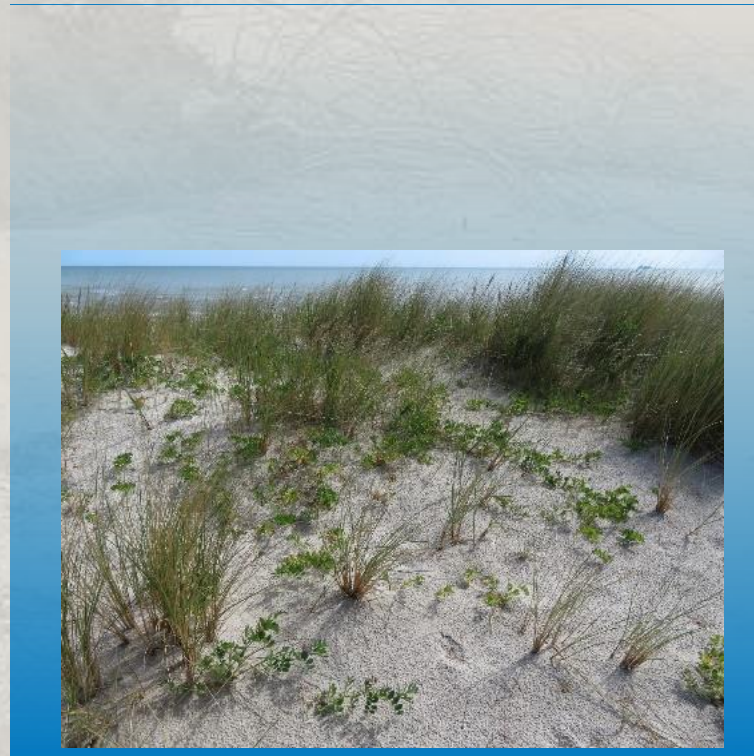
	DE			PL			CON	LT			BOR
Habitat code	S&F	FP	OAss.	S&F	FP	OAss.	OAss.	S&F	FP	OAss.	OAss.
2110	U1	U1 -	U1 -	U2	U2	U2	U2 -	XX	FV	FV	U1
2120	U1	U2	U2 -	U2	U2	U2 -	U2 -	XX	FV	FV	U2 -
2130	U1	U2	U2 -	U2	U2	U2 -	U2 -	U1	U1	U1	U2
2140	U1	U1	U1	U2	U2	U2 -	U1 -	U2	U2	U2	U2 -
2190	U2	U2	U2	FV	FV	FV	U2 -	XX	FV	FV	U1



Effects?

According to the **Red List of habitats** enhanced by EEA 2022 overall category within EU28 for Atlantic and Baltic dune habitats is:

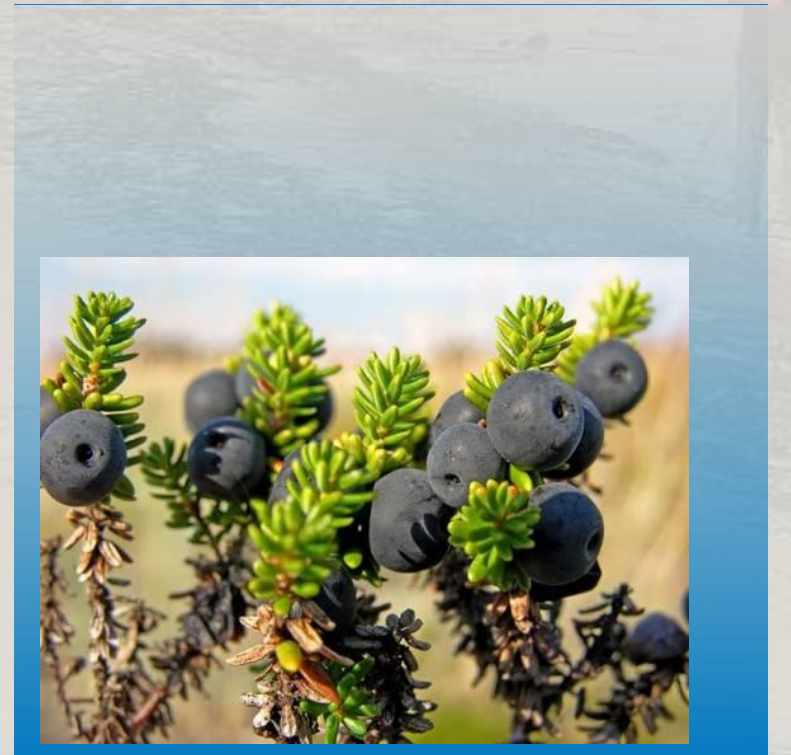
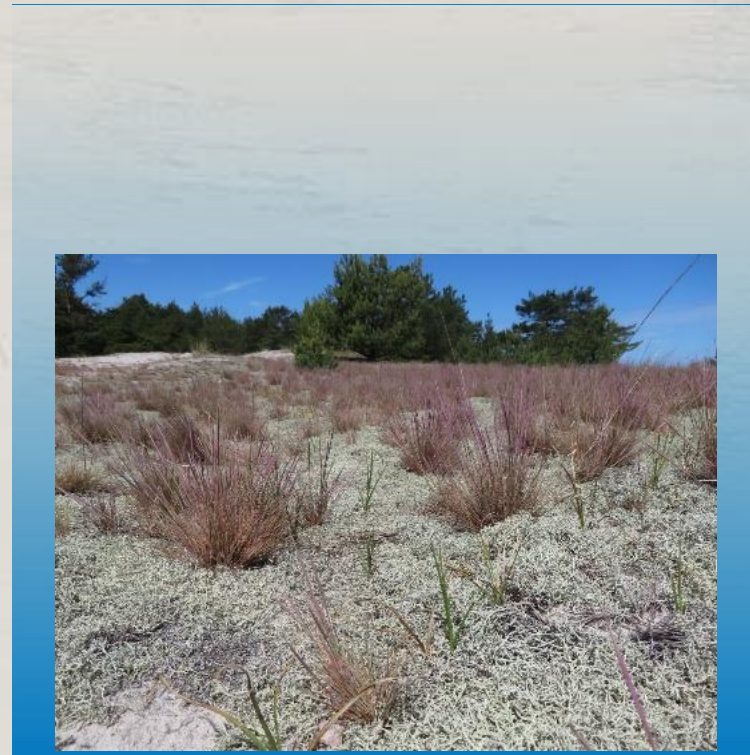
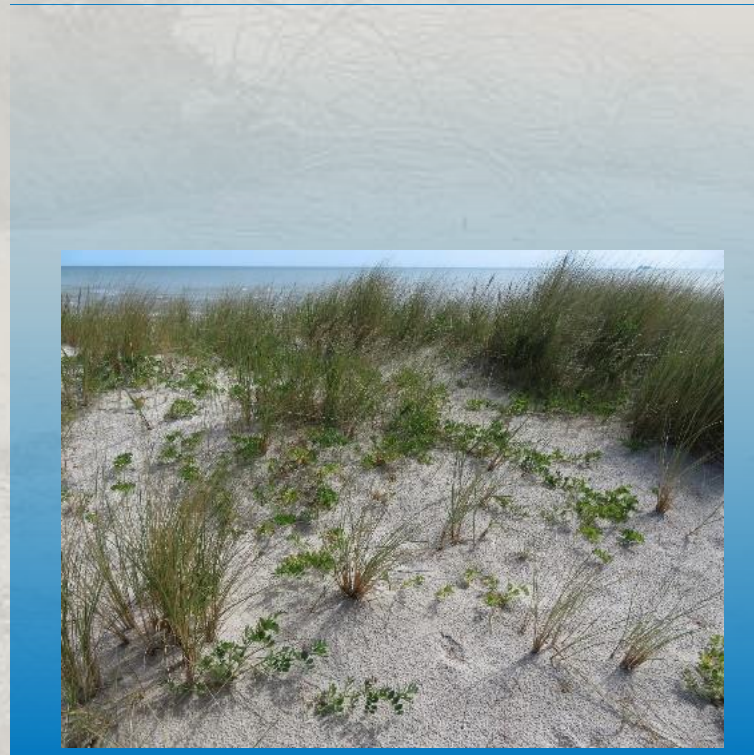
1. shifting coastal dunes (2110, 2120) – Near Threatened (NT)
2. coastal dune grassland (grey dunes) (2130) – Vulnerable (VU)
3. coastal *Empetrum* heaths (2140) – Vulnerable (VU)
4. moist and wet dune slacks (2190) – Vulnerable (VU)



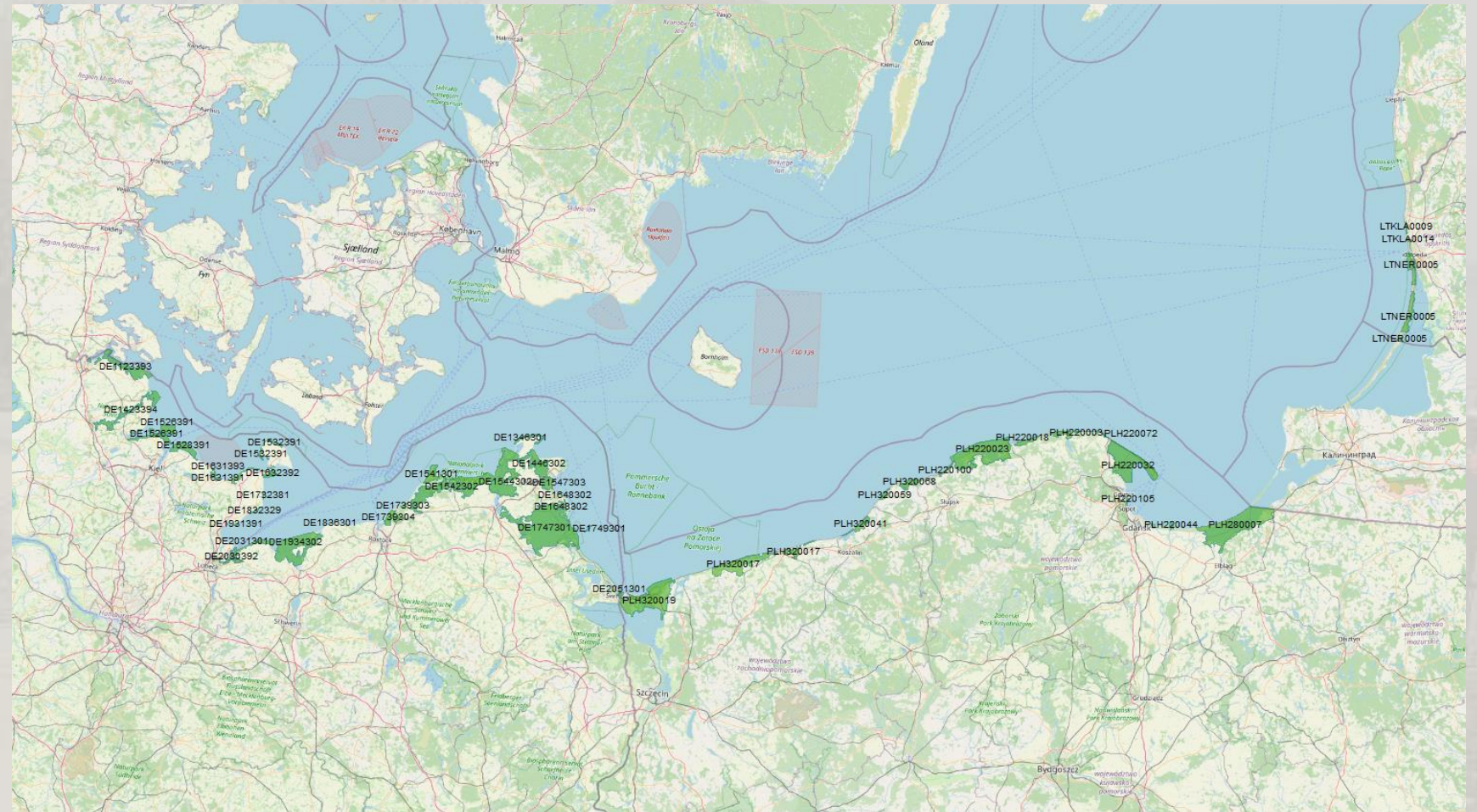
Effects?

Polish red list of Natura 2000 habitats (Perzanowska, Korzeniak 2020):

1. Embryonic shifting dunes (2110) – Endangered (EN)
2. Shifting dunes along the shoreline with *Ammophila arenaria* (2120) – Critically Endangered (CR)
3. Fixed coastal dunes with herbaceous vegetation (2130) – Endangered (EN)
4. Decalcified fixed dunes with *Empetrum nigrum* (2140) – Endangered (EN)
5. Humid dune slacks (2190) – Near Threatened (NT)



Natura 2000 Special Areas of Conservation



What can be done?



Southern Baltic coastal biodiversity – dune habitat restoration and development of good management practices





The LIFE for Dunes PL project's main objective is to **prevent the loss of biodiversity** typical of **coastal areas**, mainly within selected sections of the coast that are protected under the Natura 2000 network in Poland, Germany and Lithuania.

This objective will be achieved through the use of **restoration treatments**, through **dissemination of project results** among people responsible for managing the sea shore zone and by **raising public awareness**. In addition, we want to prepare tools for further protection of dune habitats on the 242 km long Baltic coast, and ultimately the entire southern Baltic coast.





Project partners:

1. **University of Gdańsk, Poland - Coordinator**
2. University of Szczecin, Poland
3. Institute of Hydro-Engineering of Polish Academy of Sciences, Poland
4. EUCC - Die Kusten Union Deutschland EV, Germany
5. Klaipedos Universitetas, Lithuania
6. Pomorskie Voivodship, Poland
7. Słowiński National Park, Poland

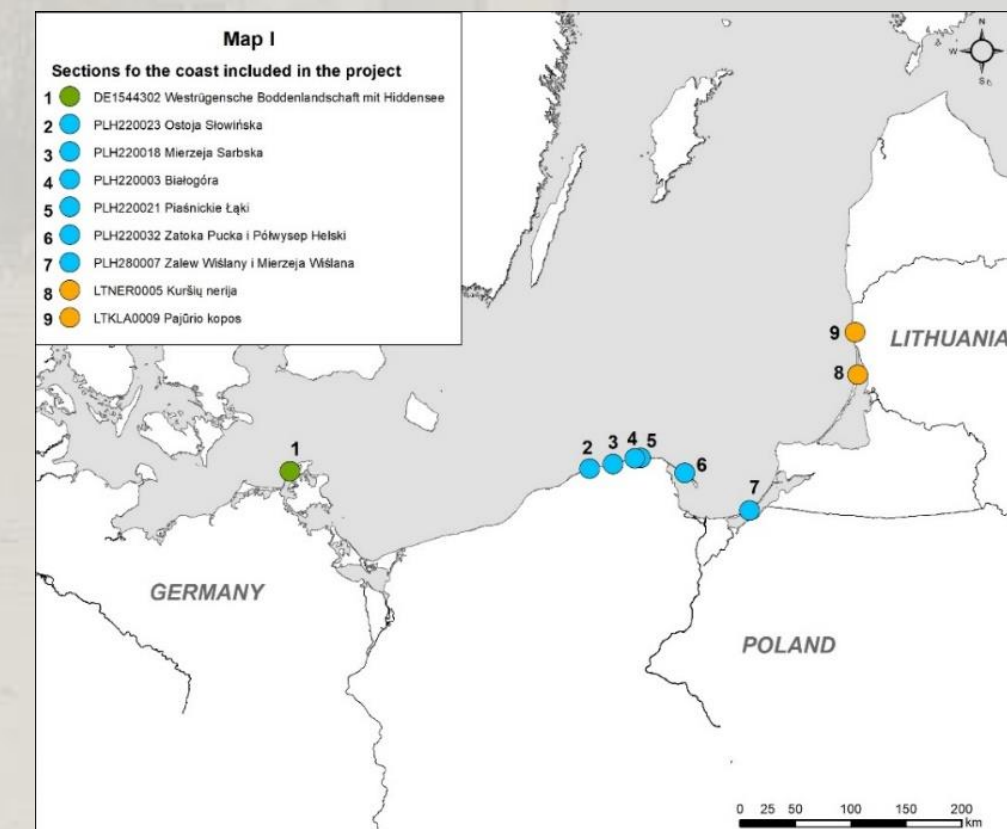


Associated partners:

1. Maritime Office in Gdynia, Poland, Nicolaus Copernicus University in Toruń, Poland, Institute of Botany of Polish Academy of Sciences, Poland, University of Greifswald, Germany, Curonian Spit National Park, Lithuania

Area of action:

1. DE1544302 Westrügische Boddenlandschaft Mit Hiddensee, 2. PLH220023 Ostoja Słowińska, 3. PLH220018 Mierzeja Sarbska, 4. PLH220003 Białogóra, 5. PLH220021 Piaśnickie Łąki, 6. PLH220032 Zatoka Pucka i Półwysep Helski, 7. PLH280007 Zalew Wiślany i Mierzeja Wiślana, 8. LTNER0005 Kuršių nerija, 9. LTKLA0009 Pajūrio kopos





Natural habitats targeted by project activities:

- 2110 – Embryonic shifting dunes
- 2120 – Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)
- 2130 – Fixed coastal dunes with herbaceous vegetation (grey dunes)
- 2140 – Decalcified fixed dunes with *Empetrum nigrum*
- 2190 – Humid dune slacks



photo by Magdalena Lazarus



Objectives:

- Improving the conservation status of coastal dune habitats through the removal of geographically and ecologically alien species and habitat rejuvenation
- Use of dune habitat conservation prospect analysis in relation to natural coastal processes and climate change in dune habitat conservation
- Dissemination of project results to those responsible for coastal zone management
- Raising public awareness of the specifics, threats and ways to protect coastal dune habitats through education and information activities.





Additional objective – to contribute to the discussion on the **methodology** for natural **habitats monitoring**, proposing modifications to this methodology (improvements), including the use of remote sensing methods





WP 2. Dune habitat restoration

Dune Patrol





WP 3. Assessment of dune stability in the context of dune habitat protection

- T.3.1 Analysis of local climate, coastal hydrodynamics, aeolian transport, morphodynamics and dunes morphometry in selected case study areas
- T.3.2 Study of the stability of dunes when removing alien species
- T.3.3 Modelling short- and long-term trends of sea shore changes and the impact of seasonal changes in the volume of the dune shore on the "backfilling" and "regeneration" of habitats in the coastal zone
- T.3.4 Implementation of monitoring and analyses to determine the possibility of preserving dune habitats in response to coastal processes



WP 4. Educational and communication activities

Articles for the local press regarding project activities

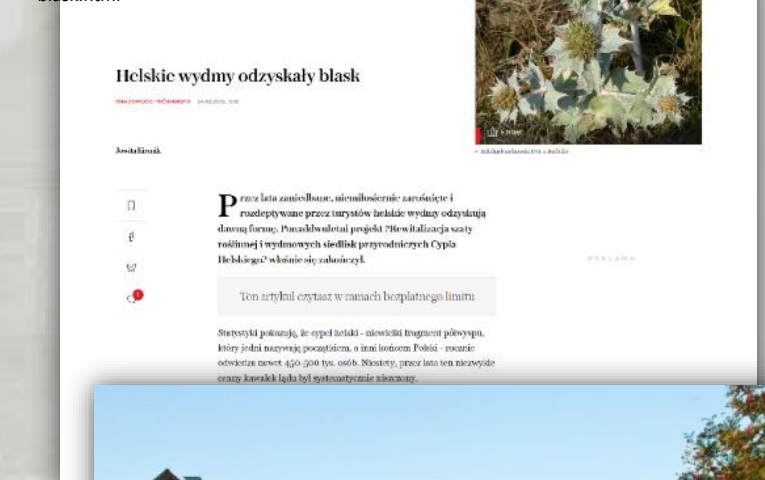
Non-specialized articles will be prepared and made available. Example topics:
“Meet dune species” “Invasive species”

A layman's report will be prepared, which will be available online in PDF format and will be advertised at all project events.

Promotional materials information leaflets and educational brochures - which will be propagated in seaside hotels, boarding houses guest houses, and other tourist/visitor hubs. Similar leaflets will be available for volunteers informing tourists on the beaches about the need to protect dune habitats and harmful effects of walking on a dune.

Information boards

<https://trojmiasto.wyborcza.pl/trojmiasto/7,35612,17464721,helskie-wydm-y-odzyskaly-blask.html>





WP 4. Educational and communication activities

Organisation of public awareness raising events

Organization of the festival as part of the **World Sand Dune Day** in June. In Poland, the festival will take place in Łeba, near the beach entrance.

Organization of stands as part of cyclical, successful events, e.g.: Fish Day, Biologists' Night, Garden Sundays, Bird Picnic, mobile workshops organised at various, highly frequented beach entrances in tourist villages in Poland



"Biologists' Night" 2025 on the Faculty of Biology of the University of Gdańsk



WP 6. Sustainability, replication and exploitation of project results

Project international conferences



THANK YOU

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