

Workshop 4 – Tourism/recreation and nature restoration in coastal dunes

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Introductory statements (for full-text articles see Proceedings)

1. The Abbey of the Dunes (Koksijde) and Noordduinen: the environmental link restored (*Van de Steene et al.*)
2. The opening to the French public of ‘natural’ sites of coastal dunes: the choice between ‘over-visiting’ and ‘over-protection’ of a shared natural heritage (*Meur-Férec and Favennec*)
3. Ecological aspects of vegetation removal from the coastal sand dunes of Israel (*Tsoar et al.*)

Major questions/provocative statements

1. Should we limit the number of *people visiting the coastal dunes* or should we restrict people to certain zones?

2. How can we preserve *high-water drift lines* and hence stimulate the development of embryonic dunes, without interfering with the recreational function of the beach?
3. Should we be afraid of *shifting sand*? Should we *remove the vegetation* and turn the artificially stabilized coastal dunes into active ones?
4. How can we *harmonize historical/archeological/cultural landscape* conserving activities in dune areas and estuaries with nature restoration?

Discussion/answers to questions

1. Should we limit the number of people visiting the coastal dunes or should we restrict people to certain zones?

Sub-questions

Is trampling a problem? Yes for flora, but what about fauna? What to do about education (visitor centers, excursions)?

Discussion

It is important to make a distinction between local people and tourists from outside the area when we want to change habits. Local people have certain traditions (and traditional rights) and will not accept restrictions that external visitors may accept easily. On the other hand, it depends on the countries, the importance of the sites and on the extent of the sand dunes area. In vast 'wild' dunes we can give the visitors some liberty to walk around. In urban dunes (such as those of Belgium) we must enforce restriction, fence the area and guide the public. Dune Parks can be used for education ('ecological gardens'). Policy of access is a question of both biodiversity and social matters. Are we going to improve biodiversity if we close the area? In the Belgian dune area the Westhoek, there was a change in the public habits over the past few decades. The area is no longer freely accessible these days, although several paths cross the area. More people are visiting the Westhoek today than before. What they see from the path is 'undisturbed' nature. Therefore, they want to keep staying on the path.

Many think that some perturbation is necessary in order to get dune dynamics. In each region we want a dynamic landscape. More and more ecologists and managers are recognizing the value of coastal dunes as a dynamic landform and became aware of the important effect of disturbances on the landscape and on the communities in the landscape. Some trampling can be useful as a management tool. In other parts (for example with climax vegetation) trampling cannot be accepted.

15-20 years ago people didn't appreciate the importance of the sand dunes. Experiencing nature is important, also for educational purposes. Public awareness is increased by education. For this and other reasons, an intelligent zoning – in time and space – is needed. For instance infrastructure (parking lots, tracks) is compatible with areas where strong recreation pressure can be allowed. In various Dutch dune areas (e.g. National Park Zuid-Kennemerland, Terschelling,...) there are access points with lots of

possibilities and quiet zones with restrictions. Tourists can also be influenced by the design of the infrastructure. The dunes of Flanders are probably too busy for birds to breed.

Conclusion

Restricting access for people to certain dune areas, can be a useful tool in balancing biodiversity and social needs. People should be limited in certain areas while other areas should be closed during the breeding season. This zoning is also different from place to place, and can change over time.

2. How can we preserve high-water drift lines and hence stimulate the development of embryonic dunes, without interfering with the recreational function of the beach?

Discussion

In Germany there are locations with small beaches and fenced dunes. People stay in front of the fence. The drift line is within the fenced zone, so the embryonic dune zone is protected. In France the main problem is the intensive mechanical cleaning for tourism, taking away all organic material and destroying eventual newly formed embryonic dunes. Although it is evident that it is necessary to clean beaches from plastic debris etc., more and more people realize that the natural beached organic material should not be removed always and everywhere. In the Gironde (France) for instance, the financial support by the ‘Conseil général’ for the non-selective mechanical beach cleaning (50%) is lower than for manual, selective cleaning (80%). As a consequence, cleaning operations are changing. Moreover, less ‘clean’ beaches are accepted, as long as it refers to organic litter. Also education took place, with a look on the ecology of drift lines. Near the cities, the war is lost, but in between the cities there are some possibilities for success. Changes can also be seen on a beach that is closed for 2-3 years as it was at Stefton, England. At Heist (Belgium) people can now see the difference between the recreational beach and the vegetated, fenced beach nature reserve. In Koksijde (Belgium), near the sea-site resort, the beach is completely cleaned but there is a section with manual cleaning. Small parts are fenced to show what the effect of the restriction of trampling is. At the start this caused a lot of trouble, but now it seems that some equilibrium was reached. That brings us back to the question of zoning. There should be zonation where each zone has a different function. However, there is some danger in zonation, especially when the beach is mobile. We have to learn how to plan mobile zones.

Conclusion

High-water drift lines can be preserved, and hence the development of embryonic dunes, by protecting them from non-selective, mechanical beach cleaning. This can be achieved by applying a zoning (e.g. by restricting mechanical, non-selective beach cleaning to the

most visited beaches and the summer period) and by taking into account the various uses of the beach.

3. Should we be afraid of shifting sand?

Sub-question

Should we turn vegetated stabilized dunes into mobile dunes?

Discussion

The response to this question is linked to the way of thinking of a certain period. There is also a political response. Local communities respond differently than policy makers. We have to find out what is acceptable. Who is afraid? This depends on the specific interests people have. In Belgium some measures had to be taken when shifting sand became a real, local problem (e.g. a house near Koksijde started to be covered by sand). In the Westhoek dune reserve, the 'desert' (an open sandy area) is loved by the public, and it is not considered to be dangerous. The opposite is true with tourists being alarmed that the Westhoek starts to stabilize. A positive attitude is also possible if there is no direct danger. Shifting sand gives some 'wild' thing that the people like. In the Netherlands there are some small areas with spontaneous blow-out activity, close to villages. The inhabitants there are annoyed with the shifting sand, so in that case the sand is being stabilized. In another Dutch example, people living 3 km from a mobile dune complained about sand on their roofs. It may take many years until people realize the value of shifting sand.

Conclusion

The way people feel about shifting sand in dune areas depends on many things. Open sandy areas with shifting sand are often appreciated as 'wild' nature, a positive attitude that is linked to the fact that the people concerned do not experience any threat. However, when sand reaches nearby houses, the inhabitants often feel annoyed and ask for measures to stabilize the shifting sand. The main conclusion seems to be that, where possible, shifting sand should be allowed, compensating for areas where local hinder requires stabilization of dunes.

4. Shall we remove the vegetation and turn the artificially stabilized coastal dunes into active ones?

Sub-question

Artificial stabilization is now considered as wrong management. Do we need to repair it?

Discussion

There is also a change within the attitude of foresters. They begin to accept that a forest is not necessarily the best site in terms of biodiversity, and that stabilizing dunes may counteract the conservation of biodiversity. The public should be informed that maintaining a range of succession stages in vegetation (from open shifting sands towards afforested areas) is the best guarantee to preserve the entire ecosystem. Shifting sand can be a tourist attraction and is part of the dune system. But turning everything into open sandy areas will lead to a loss of biodiversity (on top of local inconvenience).

We don't know whether the artificially stabilized dunes were artificially destabilized before. Hence, the important question is if the remobilization can be durable. If it is durable, then why are the Westhoek dunes in a process of natural stabilization now? The Dutch experience teaches us that it can be durable if some kind of maintenance managements are accomplished at least for the first 5-10 years.

Many plants need input of fresh sand. Disturbance by tourists can be used to achieve this, although it also depends on the scale of the dynamics. Moreover there is a problem of connection with vulnerable parts, where you don't want any trampling. How can you zone it? Small scale dynamics can be created by walking people. On the other hand we have to be careful with trampling for dynamics. It can also lead to landscape destruction (small blowouts).

Conclusion

The main question is how to achieve a proper, sustainable management of dune areas in which biodiversity is protected and stimulated in an optimal way, tourists are allowed to enjoy the landscape – where possible – and management actions can be restricted as much as possible.

5. How can we harmonize historical/archaeological/cultural landscape conserving activities in dune areas and estuaries with nature restoration?

Discussion

In the Netherlands, the so-called 'Zeedorpen' dune landscape, is considered as being an important cultural heritage and has therefore been restored in some places (e.g. by allowing small scale agricultural activity, by restoration of dune slacks,...). In this restoration process of special historical landscapes, here and in other places, it is advisable to harmonize the historical, archaeological, cultural and ecological values as much as possible. Therefore, in case of restoration, we should always make an archaeological inventory. Another example of a special historical coastal landscape is the Atlantic wall, a series of bunkers and other fortifications from the Second World War along Europe's coastline. Here, one can choose to destroy only those bunkers that pose a threat to the public, but conserve e.g. bunkers as a valuable habitat for bats or lizards.

Conclusion

Particularly in restoration processes of special historical coastal landscapes, it is important to harmonize the historical, archaeological, cultural and ecological values as much as possible. This can be achieved by carefully planning the restoration process, and taking into account all available information from various points of view.