

DYNAMIC DUNESCAPES

NEW POLICIES ON THE MANAGEMENT OF COASTAL

THE MAIN CURRENT PROBLEM WITH UK COASTAL SAND DUNE BELTS AND ECOSYSTEMS

OVER-STABILISATION

- Dune systems are overgrown with vegetation
- Biodiversity is decreasing
- Natural dune processes are not operating
- Invasion of foreign species



Coastal sand dunes in the early succession stages with grasses, open areas of sand meaning that sand continues to move and the dunes continue to evolve as biodiversity increases



Coastal sand dune succession from the initial embryo and foredunes to fixed mature dunes. Present policies try to slow down succession or go back to earlier stages in the succession



Over-stabilised mature dunes which have become overgrown with vegetation leaving no open sand, no mobile dunes and lowered biodiversity. Small numbers of species, in this case sea buckthorn, dominate and out-compete normal dune species

THE CAUSES OF OVER-STABILISATION

1. Nitrogen pollution leading to higher soil fertility and greater/faster plant growth
2. Reduction in grazing which allows certain species to dominate and reduce diversity
3. Reduction in dune management which allows rapid succession to later less diverse stages
4. Climate change. Particularly warmer temperatures that lead to greater plant growth
5. Visitor pressure leading to habitat damage and increased erosion of dune habitats
6. Falling water tables due to climate change, management processes or abstraction of water. Leading to a loss of dune slacks, a key dune habitat, and reduction in slack species
7. Links golf courses which stabilise sand dunes and lead to a loss of habitats and dominance of fairways and greens where fertiliser is added
8. Forestry. Historic conifer plantations which lead to lower diversity, falling water tables, increasing acidity and loss of habitats

