

DYNAMIC DUNESCAPES : NEW MANAGEMENT STRATEGIES FOR COASTAL DUNES

PAST MANAGEMENT

Stabilisation of dunes which forced the acceleration of the coastal dune succession. This involved fences, planting marram grass and afforestation to fix dunes and led to reduced biodiversity and loss of varied habitats

PRESENT MANAGEMENT

A reduction in the stabilising strategies used in the past to try to increase sand dune mobilisation. Some succession inhibitors allowed on a small scale such as turf stripping

FUTURE MANAGEMENT (DYNAMIC DUNESCAPES)

Holistic approach to inhibit succession and preserve the biodiversity of the dune habitats. To encourage a sand/wind/water self regulating system. Introduction of rejuvenation techniques to re-introduce earlier stages in the sand dune succession

NEW TECHNIQUES IN DYNAMIC DUNESCAPES

NOTCHING - Cutting a notch in the foredune ridge to funnel winds and increase wind speeds. This promotes the re-mobilisation of sand and moves sand to the rear of the dunes to encourage the re-introduction of earlier succession stages.

TURF STRIPPING - To increase bare sand and remove organic matter from the developing soil. This returns the dune system to an earlier stage in the succession, producing earlier habitats and slowing the succession.

Re-profiling may take place if the sand is stripped down to lower levels to produce dune slacks or seasonal ponds.

GRAZING - Using domestic livestock to control scrub growth and allow less competitive species to persist. Sheep are best as they cope better with steeper slopes and graze more specifically, but cattle or ponies can be used. Fences may be needed to control areas of grazing. Rabbits may invade if the grass is short enough or may even be re-introduced

MOWING / CUTTING - Similar to grazing it removes vegetation and increases the light to less competitive species. It will reduce the input of organic matter to the soil and stop soil enrichment and therefore slow the succession

SCRUB CLEARANCE - The normal succession of plants is grass - scrub - woodland. Clearance prevents dominant scrub vegetation from taking over and returns the dunes to an earlier stage in the succession. The soil is no longer enriched to the same degree and the water table may rise to give a greater chance of dune slacks forming

CONTROL INVASIVE SPECIES - These may outcompete the native and natural dune flora. Sea buckthorn tends to take over, so removal increases diversity and returns the dunes to an earlier stage of the succession

CAN YOU LINK THE TECHNIQUES TO THE IMAGES BELOW?

