COASTAL RESTORATION TRUST OF NEW ZEALAND

Tāhuna Ora

Technical Article No. 14.2

On-line guidelines for community-based monitoring of dune vegetation

INTRODUCTION

The Coastal Restoration Trust in collaboration with Cerulean Design and Development have developed an easy-to-use method for quantifying the vegetation cover and profile of sand dunes that can be undertaken by anyone from coast care groups to management agencies.

Consistent repeatable methods for quantifying vegetation cover by species will assist Coast Care groups and agencies in setting priorities for restoration and management of their dunes, and assessing the effectiveness of their interventions.

The monitoring system has been designed to be accessed and used online. This article provides a brief overview of this user-friendly inter-active capability that is available on the Coastal Restoration Trust's website for those undertaking dune monitoring.

Refer to Technical Handbook Article No. 14.3 - Managing dune monitoring data for restoration programmes which outlines a system for handling and interpreting monitoring data.

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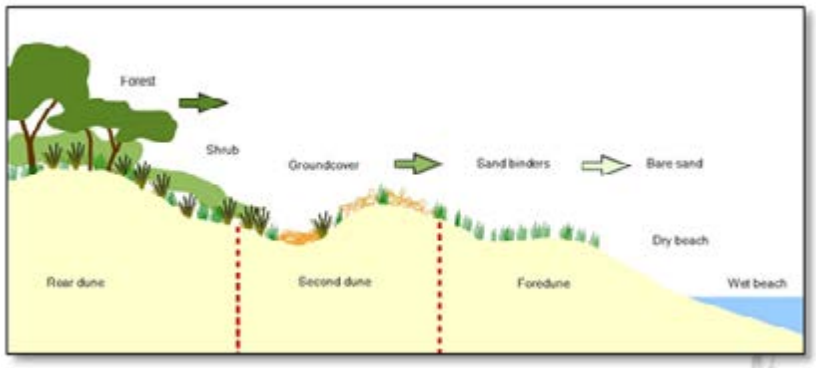
ZONATION AND DUNE MONITORING

A key feature of dune vegetation is the sequence of different vegetation communities or zones that occur with increasing distance landward as key environmental stresses decrease landward. Depending on site and management history, several broad vegetation types run parallel to the shoreline - seaward foredune zone of sand binders, mid-dune with increasing diversity of low-growing species, and backdunes with shrubs and trees.



A dune profile from sand binding grasses on the most seaward foredune zone, to increasing ground cover and shrubs on the mid-dunes zone, to forests on the most landward zone. This continuum reflects the change in environmental conditions from seaward to landward dunes.

RAPID-POINT SAMPLING METHOD

The basis of the dune monitoring method is the use of transects placed perpendicular to the coast sampling across the range of zones from foredune to landward. Key factors surveyed are vegetation cover, species composition and dune profile.

A proven Rapid-Point sampling method is used involving placement of a sample pole at fixed intervals along the transect tape and recording the uppermost species that intersects with the pole at each point.

A practical method has also been developed to map the contour of the dunes that can be matched to the survey of vegetation cover.

A rapid point sampling method using a transect set up across the dune perpendicular to the coast.

ON-LINE GUIDELINES - see the COASTAL RESTORATION TRUST'S WEBSITE

A complete guide to setting up a dune vegetation monitoring system based on the rapid-point sampling method along transects is provided in the monitoring section of the Coastal Restoration Trust's website https:// monitoring.coastalrestorationtrust.org.nz/
A step-by-step overview is provided for users to set up a monitoring programme:

1. Creating a new site
2. .Printing survey sheets
3. Gathering survey equipment
4. Identifying plants
5. Locating or establishing transects
6. Surveying vegetation cover
7. Recording dune profiles
8. Establishing photopoints.

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"To see the majority of New Zealand dunes restored and sustainably managed using indigenous species by 2050".