

Programme/Goals ²	Action/Monitoring	Problems	Successes
<p>WANGANUI CONSERVANCY Paengaroa Scenic Reserve, Mataroa Restoration of habitat for threatened plant species</p>	<p>Weed control; possum control; eradication of ivy; recovery work for <i>Olearia hectorii</i> and <i>Pittosporum obcordatum</i>. Monitoring of numbers of threatened species and of indices of possum impact.</p>	<p>Initial lack of success in promoting regeneration of <i>O. hectorii</i>. Difficulty with measuring benefits of possum control.</p>	<p>Very large reduction in ivy and some other weeds; large reduction in possums. Many <i>O. hectorii</i> in cultivation awaiting replanting into the reserve or nearby land.</p>
<p>Whangaehu River mouth* Restoration of dune communities</p>	<p>Weed control, especially pampas and boxthorn. Control of off-road vehicles and exclusion of cattle. Continued mapping of positions of problem weeds. Exclosure to demonstrate effects of removing grazing animals, including rabbits.</p>	<p>Widespread nature of weeds, continuing impacts of stock and off-road vehicles. Too many entry points to reserved area to achieve total control.</p>	<p>Almost complete control achieved for pampas, boxthorn, gorse, brier, blackberry and old man's beard. Increased public awareness of values of dunes. Establishing a benchmark for protection (or restoration) of other degraded dune systems.</p>
<p>WELLINGTON CONSERVANCY Kapiti Island* Island restoration</p>	<p>Eradication of introduced mammals; introduction of selected threatened species. Quarterly bird counts at c.60 permanent stations by OSNZ. Quarterly index trapping of rats. Species-specific monitoring of threatened bird species: stitchbird, kokako, takahe, saddleback, little spotted kiwi. Monitoring to assess response to possum eradication.</p>	<p>Feasibility of rat eradication yet to be established. Iwi yet to be convinced of the desirability of eradicating kiore and Norway rats. Uncertainty over future of weka if rats eradicated. Lack of funds for monitoring work that would be needed for rat eradication proposal.</p>	<p>Regeneration of palatable plant species after eradication of possums; increases in most bird species. Introductions of takahe, stitchbird and kokako since eradication of possums.</p>

¹ Included in this table are DoC restoration programmes and others in which the Department has at least some involvement.

² Where goals have not been stated they have sometimes been inferred from other information supplied.

* Few programmes listed are associated with clearly defined restoration goals. Those marked with an asterisk* seem to be particularly in need of goal clarification.

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Mana Island Island restoration	Planting of trees in coastal zone and in some valleys. Re-establishment of species either known to have been present or likely to have been present previously. Introduction of selected threatened species. Control of problem weeds. Systematic monitoring of four lizard species; quarterly bird counts; annual monitoring of sooty shearwater productivity; permanent transects/photopoints for vegetation. Limited vegetation trial.	Resources restrict planting to small areas. Development of an effective method of controlling and disposing of boxthorn. Lack of appropriate person to coordinate propagation and planting of threatened plants; unresolved debate over which threatened species to introduce; lack of knowledge of wetland restoration; techniques for attracting new seabirds.	Eradication of mice, apparently the largest in island in the world for which this has been achieved. Increases in numbers of all five resident lizard species. Increase in area of shrubland and scrub. Releases of three threatened bird species including takahe.
NELSON/MARLBOROUGH CONSERVANCY Cape Lambert Restoration of coastal kohekohe forest on a peninsula Motueka sandspit and estuary Restoration of tall forest to estuary fringes Wakapuaka sand flats* Restoration of estuarine habitat Stephens Island* Island restoration	Possum-proof fence across peninsula. Extensive tracking. Possum eradication begun. Monitoring of fence condition, possum bait stations and browsing of palatable species. Nursery production of required plants. Some plants established. Engineering and landscape report completed. Public involvement sought. Planting of trees; weed control.	Track cutting costing more than expected. Need for satisfactory living quarters in a remote area. Lack of funds, maintaining enthusiasm over a long period. – –	Goats eradicated, most possums eliminated, fencing and tracking completed. – –

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CANTERBURY CONSERVANCY Ahuriri/Tekapo Rivers Restoration of open gravel riverbed communities in lower Ahuriri R. and in Tekapo R. delta ("Project River Recovery")	Removal of crack willows, Russell lupins, gorse and broom from riverbed. Recovery programmes for threatened or potentially threatened birds: black stilt, wrybill, black-fronted tern.	–	Negotiation of a co-op. agreement between DoC and Electricorp. Provides for restoration of lost riverbed habitat in conjunction with water rights for hydro generation over a 21-year period.
Avon/Heathcote estuary Wetland restoration	Supply of appropriate wetland plants for habitats around the estuary margin.	–	–
Kaitorete Spit Restoration of a gravel/sand mining area	Planting of pingao. Reduction of marram and exclusion of rabbits is planned. Regular inspection to determine spray/planting needs.	Some vandalism; theft of fencing materials.	–
Otukaikino (a Tu Kakariki project) Wetland restoration	20-year plan developed to convert a willow-dominated reserve to native wetland and swamp forest.	–	–
Cape Young beach, Chatham Island Dune restoration as breeding habitat for Chatham Island oystercatcher	Fencing to exclude stock; localised spraying to control marram grass; planting of native herbs planned. Breeding success of oystercatcher is closely monitored.	–	–
Mangere Island, Chatham Islands Island restoration with goals that include establishment of habitats for threatened species	Planting continuing with trials to test effects of different weeding and fertiliser regimes.	Plant material not always up to required standard.	Planted scrub now used as major habitat by black robins. Robins reached a total of 35 birds for the island in 1993.

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WEST COAST CONSERVANCY Wadeson's Island Restoration of coastal forest	Planting underway.	–	–
Note: Numerous projects in the West Coast Conservancy involve rehabilitation of land after mining. Some of these have a significant component of ecological restoration but the information available to the writer was insufficient to identify them separately.			
OTAGO CONSERVANCY Burns Park Scenic Reserve Restoration of coastal forest	Planting of native trees. Monitoring of photopoints.	Some damage to seedlings by goats, possums and hares.	Survival rate for plantings is about 85%.
Moeraki Boulders Scenic Reserve Restoration of coastal forest	Monitoring by photopoints.	–	Survival rate for plantings is about 85%.
SOUTHLAND CONSERVANCY Fortrose spit Dune restoration	Local eradication of marram grass. Annual planting of 500 pingao plants.	–	–

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**APPENDIX 3 Checklist of landforms for classification of island habitats
(from Atkinson 1992).**

Landform Name	Dominant processes operating at landform surface
A. Widespread landforms	
1. RIVER/STREAM CHANNELS 2. FLOODPLAINS 3. RIVER/STREAM TERRACES 4. RESIDUAL HILLSLOPES 5. COLLUVIAL HILLSLOPES 6. BEDROCK HILLSLOPES 7. PEAT HILLSLOPES 8. COLLUVIAL STEEPLANDS 9. BEDROCK STEEPLANDS 10. CLIFFS 11. RIDGETOPS (including summits) 12. PLATEAUX	Fluvial processes Periodic flooding and aggradation Fluvial downcutting/weathering Chemical weathering, soil creep and sheet erosion Mass-movement, soil creep and sheet erosion Physical weathering and/or mass movement Weathering, peat accumulation, mass movement Mass movement Mass movement and physical weathering Fluvial or marine undercutting, fault movement and structural control, mass movement Sheet erosion, wind erosion, weathering Weathering, wind erosion/deposition
B. More localised landforms	
13. BOULDER/GRAVEL BEACHES & BARS 14. SAND/MUD BEACHES, BARS & FLATS 15. DUNES 16. SAND PLAINS/HOLLOWS 17. COASTAL TERRACES 18. LAKES 19. WETLANDS 20. FANS 21. SCREES 22. ROCKFALLS/TALUS SLOPES 23. LANDSLIDES (incl.peat slides) 24. EARTHFLAWS 25. LAVA FLOWS/PYROCLASTIC FLOWS 26. CINDER CONES	Deposition/erosion by wave action Deposition/erosion by wave action Wind erosion/deposition Wind erosion/deposition Weathering, wind erosion/deposition Various Various Fluvial and debris flow deposition/erosion Mass movement Rapid mass movement Mass movement Slow mass movement Weathering Weathering