

22. Restoration

Explanation

Restoration in its widest sense is the active intervention and management of degraded biotic communities, landforms and landscapes in order to restore biological character, ecological and physical processes and their cultural and visual qualities.

The umbrella term “restoration” includes a range of management activities: “ecological restoration” refers to the restoration of particular biotic communities to a former condition; “rehabilitation” is to return a degraded biotic community to a condition that is not identical with the original; “enhancement” refers to an increase in the quality or quantity of some characteristic of a site or area.

Restoration can occur on the following areas and include the following activities:

- 1 *Terrestrial (dry land) areas*: This represents a range of activity involved in restoring, rehabilitating, or enhancing plant communities on terrestrial sites. The type of activities it could include are revegetation, animal and plant pest management (with the intention of protecting restoration work), controlled fires (clearing land for revegetation or plant pest control), and management of animals important in the dispersal of seed material. A restored plant community extends the size and value of the regional ecosystem and improves habitat for a variety of fauna and flora.
- 2 *Aquatic areas*: This includes a range of activities important in restoring, rehabilitating or enhancing wetlands and the terrestrial and aquatic communities associated with them. It includes dealing with water quality (pollution, sediment loading), water quantity (e.g. weir management for increasing and diverting water), waterway landforms and passages (to assist physical diversity of the habitat), waterway structures (to prevent or allow fish movement), riparian vegetation management, and aquatic vegetation management. Wetlands and associated areas have historically been high use areas for tangata whenua. The natural, historical and cultural values of these areas including present customary requirements in such places are fundamental considerations when establishing restoration management regimes.
- 3 *Landscapes*: This consists of restoration, rehabilitation and enhancement activities where the outcome is orientated towards restoring the landscape. It can involve the protection and restoration of key landscapes (landforms or other geological features, representative landscapes and areas of high visual value) but can also include measures to ameliorate the consequences of human activities and developments (e.g. logging of exotic forest crops and past and proposed recreational developments).

have been limited to reacting to development proposals that compromise landscape values.

Terrestrial restoration has concentrated on revegetation of areas damaged or degraded by some modifying agent (often natural) and which is exacerbated by human activities. Much revegetation has been designed to provide a screen for the periphery of an area to protect it from climatic impacts, or to accelerate the pace of revegetation where natural revegetation is slow and to reduce the establishment of plant pests.

Revegetation has been strongly influenced by Department guidelines on using local plants for revegetation, to restrict the spread of plant genetic material outside the ecological region or district. Defining the type of community sought for revegetation is determined by assessing adjacent plant communities (to act as a model for restoration) and the overall programme's objectives (e.g., to reconstruct a representative plant community or for the specific requirements of a threatened animal or plant species).

Wetland restoration has concentrated on establishing water level regimes. Wetlands which have retained sufficient elements of naturalness to warrant their protection are frequently surrounded by a landscape in which the original hydrology has been substantially modified for agriculture or to reduce flooding. This greatly accelerates succession from wetland to terrestrial species and habitat. Therefore, to ensure the survival of wetland communities, water levels often have to be artificially maintained.

Landscape restoration has focused on ameliorating the visual impact of human activities and facilities (e.g., the impacts of exotic forest crop harvest and use, and development of recreational huts and tracks).

Private individuals and other organisations are also involved in restoration activities. For instance, the Royal Forest & Bird Protection Society (RFBPS) is involved in revegetating Somes Island. RFBPS members, as planting volunteers, are also an important part of the effectiveness of revegetation work on Mana Island, and RFBPS manages the Pauatahanui Inlet Wildlife Management Reserve.

[refer Sections 6.4, p 61; 9.3, p 115; 9.4, p 119]

Some of the regional councils' soil conservation programmes and river control works to protect soil resources have significant conservation benefits because existing natural areas are often incorporated into the soil protection area. Revegetation work carried for soil conservation does not, however, always use species native to the area. Where appropriate, the Department will advocate that native species are used as substitutes for exotic species for this work.

Local authorities are also involved in revegetation work, in particular, of areas devegetated following old man's beard weed control.

Management Issues

Policy and Implementation Guidelines

The present definition of restoration is adequate for giving guidance on the scope of restoration activities, but there is a need to provide some guiding principles under which the Department should operate and to develop policy and guidelines for the full range of restoration activities. The expense of restoration on any scale means any works undertaken must be carefully evaluated and maintained. The effectiveness of restoration is dependent on the proposed restoration outcomes, its function within the ecosystem in which it is operating, the economics of the outcomes and the implementation, planning and project management. In the interim the Department will adhere to the following principles for restoration:

- Restoration work will be undertaken in a manner that is physically and biologically compatible with its surroundings.

The focus of this approach will be on establishing plant communities, although restoration will also involve restoring or enhancing the appropriate native invertebrate and plant communities as part of the attention required to restoration of ecological processes.

Species native to the local area will be used although in some instances other plants may be used for short-term management.

- Restoration outcomes will be ecologically sustainable and provide an extension of established ecological continua.
- An assessment of the need for and consequences of restoration will be a precondition of any new work or activity undertaken by the Department within the Conservancy.

Conservancy Restoration Requirements

The absence of a summary of regional restoration needs limits knowledge of potential programmes and the capacity to evaluate proposals fully.

The Department will undertake a survey to identify and rank the potential of restoration on areas managed by the Department in the Conservancy. It will also identify the significant ecosystem requirements for these areas. The areas managed by the Department, on the mainland, are in many instances small 'islands' of remnant ecosystems. Restoration of them as sustainable natural areas often requires consideration of the wider environment.

When ranking areas, the Department's priorities for restoration will be: (1) off-shore islands (their physical isolation gives them high prospects for ecological restoration); (2) mainland areas which contain representative or rare natural ecosystems in the Ecological Region or District and/or provide habitat for threatened indigenous plants and animals.

Community Involvement

Restoration programmes provide opportunities for the community to participate in conservation management. The Department will seek to involve local communities in enhancement work in natural areas.

Objectives

- 1 Implementation of programmes on areas managed by the Department which restore identified priority sites to an ecologically sustainable natural state.
- 2 Restoration of any areas, where appropriate, that are detrimentally affected by any new work or activity in areas managed by the Department.
- 3 Advocacy for the restoration of natural ecosystems using the principles in this CMS.
- 4 Increased public awareness (including local government and other organisations) on the principles and purposes of restoration, important ecosystems and biodiversity, and general public involvement in restoration projects.

Implementation

- 1 Survey and evaluate restoration requirements in the Conservancy.
- 2 Produce detailed restoration policies and procedures to complement the policies established in this CMS.

- 3 Identify significant ecosystem requirements for areas managed by the Department, and where appropriate, restore, rehabilitate, or enhance priority areas.
- 4 Seek legal protection of areas beyond those managed by the Department that are important to the sustainability of areas managed by the Department.
- 5 Seek the protection of any areas not managed by the Department but which are important for restoration programmes, e.g., areas that supply seed, water, etc.
- 6 Involve other organisations and the public in restoration projects on areas managed by the Department, and liaise, assist and co-operate where appropriate with other organisations undertaking restoration projects on other lands (where these are compatible with Department objectives and priorities).
- 7 Encourage the use of plant species native to the local area in the restoration programmes of other bodies and individuals.
- 8 Monitor the effectiveness of restoration procedures and provide for the management of restored areas.
- 9 Assess the need for restoration resulting from any new Department work or activity and include provisions for restoration in all work projects.
- 10 Advocate for restoration of habitat of threatened species, plant communities, wetland areas, margins of waterways and landscapes, and provide appropriate assistance.

[refer Section 18, p 173]