

## Session 3: Off-reserve Conservation of Land, Water and Vegetation

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### Introduction

In this talk I will explain the motivation and efforts of the Department of Land and Water Conservation (DLWC) in relation to off-reserve conservation of the States natural resources. I will explore the motivation that forms the basis of the Departments involvement in long term sustainable land and water management (DLWC's principal charter).

In order to understand the motivation I will explore the philosophy of thinking that enables Government to claim a right to involvement in natural resource management. The basic concepts of habitat destruction and fragmentation will also be touched on.

From this philosophical base a review of the relevant NSW legislation will be undertaken to help define the policy responses that have resulted in the last 10 years in relation to natural resource issues.

### Motivation and Philosophy

*What right does the Government have to get involved?*

The Government of NSW has been involved in natural resource management since the early 1900s. Examples are the Water Act 1916, and the Soil Conservation Act 1938. More recently legislation to protect ecological function has also resulted. Examples include, Clean Waters Act 1970, Threatened Species Conservation Act 1995, and the Native Vegetation Conservation Act, 1998.

Historically the Government has claimed authority to become involved when:

- Access to resources needs to be equitable without reducing the long term function of the resource;
- Actions are undertaken today that reduce the long term function of the resources beyond our life time; and
- The actions of neighbours impact on a landholder's use of their own land.

An example that fits the above philosophy is the Water Act controlling the access and defining the rights of use of water. Another example is the Soil Conservation Act, which places restrictions on a landholder's right to degrade the soil resource to the point where a piece of land is useless for future generations. Off site impacts of erosion are also legislated against such as the resulting sediment smothering a neighbour's crop.

The above thinking is fairly easy to accept as it involves impact on human beings to the point where the impact is of a personal nature. For example, land clearing controls as they relate to soil erosion are easier to accept due to the potential personal impact. When land use impacts on biodiversity the degree of understanding becomes less, as the results are less personal than those mentioned before. Thus controls on vegetation clearing as it relates to habitat destruction is for some harder to fathom as an excuse for the implementation of legislation and policy.

However, habitat destruction and habitat fragmentation are well known ecological impacts that are chiefly responsible for driving certain species of animals and plants towards extinction. Other impacts that result from clearing for example are a contribution to the greenhouse process, and a reduction in basic ecological processes such as water purification and 'air cleaning'. There are also issues of the basic right of biodiversity and its ecosystem function to exist.

These issues have been recognised by the Government as concerns identified by growing sections of the community. It is at this point that the Government takes the right to implement leg-

isulative and policy controls in order to maintain and protect the basic ecosystem functions that we rely on for our survival.

It is also known that the creation of national parks over land will not lead to the automatic conservation, preservation or protection of all of the natural systems that are required to be maintained for ecosystem function. So often in the past a national park has been declared over Crown Land that no one has wanted for another land use. Yet the lands preserved have often represented the last area of habitat for many fauna and flora species in an area.

Often entire ecosystems are not preserved in nature reserve areas. An example is native grassland, where there are only a couple of small reserves in the Cooma area ('Kuma Reserve', Radio Hill). It is also recognised that the rate of change of native grassland to improved pastures has resulted in a significant reduction in the total area of this ecosystem. This has been highlighted by Benson (1994), who shows that many of the best remnants are located on TSRs, roadside reserves, church yards, cemeteries and railway reserves.

It is not feasible to create reserves over the remaining areas located on private land, but there is a need to achieve 'conservation' of the remnants by encouraging the private landowner to participate in the determination of the appropriate management of these lands. Thus the concept of *off-reserve conservation* is used to help achieve the desired conservation of these lands.

In effect DLWC has a major contribution to make to *Off-Reserve Conservation* beyond the boundary of national parks. This is principally achieved through the Department's operation of the Native Vegetation Conservation Act, 1998, and in turn that Act's interaction with the Environmental Planning and Assessment Act 1979 and the Threatened Species Conservation Act 1995. However this is not to say that the Department's aim is to run off-reserve lands as national parks. The principle aim is to achieve the balance between the need to undertake production for today's needs and the need to protect basic ecosystem function as well as conserve resources for future generations.

This is nice in theory but a lot harder in practice.

**What does DLWC do in relation to *off-reserve conservation* of land, water and vegetation?**

### ***Land and Vegetation***

I will deal with land and vegetation together. The issues relating to land and vegetation dealt with by the Department include:

- Soil erosion and sediment control in urban infrastructure development and rural settings;
- Habitat protection and maintenance of ecosystem function.
- Administration of Crown Land resources.

The Departments response is defined by the legislation that it administers. The two principal Acts that relate to land and vegetation are the Soil Conservation Act 1938, and the Native Vegetation Conservation Act 1998.

### ***Soil Resource Management***

The Department is involved in various programs designed to help soil resource users achieve long-term sustainability. These range from:

- Basic extension services to landholders giving advice on erosion and sediment control, land management advice, soil acidity and salinity management;
- Soil management advice in relation to crop and grazing systems;
- Specialist soil management advice to the construction industry;
- Specialist soil management advice on problem soils such as beach and sand dunes;
- Soil management advice for the rangeland areas of the State;

- Mapping, monitoring and development of Soil Landscape Reporting and Soil Data systems; and
- Involvement in inter agency and State wide programs such as Farming For the Future, Save Our Soils and the Acid Soils Program and the recent Salinity Strategy.

### *Vegetation Management*

The Department is the principal control authority when it comes to the clearing of the States vegetation. A brief history of development of clearing control follows.

In 1972 the then NSW Government introduced Protected Lands within the Soil Conservation Act 1938. Restrictions were placed on the destruction of timber on land defined and mapped as Protected Lands. Land steeper than 18° was mapped. An application process applied for clearing proposals beyond what the exemptions allowed.

In 1998 Protected Lands was removed from the Soil Conservation Act and relocated into the Native Vegetation Conservation Act. The Act legislates the protection of native grassland on all land in NSW.

### *Native Vegetation Conservation Act 1997*

For example the objectives of the Native Vegetation Conservation Act 1997 give an indication of how the Department responds to native vegetation issues:

- To provide for the conservation and management of native vegetation on a regional basis,
- To encourage and promote native vegetation management in the social, economic and environmental interests of the State,
- To protect native vegetation of high conservation value,
- To improve the condition of existing native vegetation,
- To encourage the revegetation of land, and the rehabilitation of land, with appropriate native vegetation,
- To prevent the inappropriate clearing of vegetation, and
- To promote the significance of native vegetation

in accordance with the principles of ecologically sustainable development.

Specifically the Act defines native grasslands and imposes restrictions on the clearing of Native Grasslands in NSW.

The Act makes provision for the creation of Regional Vegetation Management Plans, (RVMP) a component of which is the management of the native grassland resource.

To date a RVMP has not been produced to cover the local area (ie Monaro). The local community operates under the exemptions allowed by the National Vegetation Act.

If a landholder wishes to alter an area defined as native grassland beyond the thresholds set by the exemptions then a Development Application is required. The Department's assessment of the Development Application determines if consent is to be given to the proposal.

### *Crown Land*

The Native Vegetation Conservation Act also places obligations on how DLWC manages Crown Land under its control. Thus native vegetation issues must be considered when a piece of Crown Land is assessed for its most appropriate land use. For example, if a block of vacant Crown Land is assessed for conversion to freehold, native vegetation issues must be dealt with.

An example of DLWC management of native grasslands on Crown Land is Middlingbank Peninsula. A Management Plan has been written which recognises the value of the native pasture, and has attempted to set adaptive management recommendations that will through monitoring

allow for changing grazing management that recognises the time of year and the life stage of the native pastures. Thus it is hoped through the management of the Peninsula to be able to develop general management recommendations applicable to a broader Monaro area. This should be achievable through a combined effort with WWF and NPWS staff and expertise.

#### *Native Vegetation Incentive Fund*

The Native Vegetation Conservation Act has also made funding available for the establishment of the \$15 million Native Vegetation Incentive Fund (NVIF). This funding is designed to encourage private landholders to fence out and manage areas of high conservation value remnant vegetation. A NVIF proposal is either a Management Contract (<\$10,000) or a Property Agreement (>\$10,000). The funding will pay principally for fencing and weed and rabbit control of an area. In return the landowner agrees to manage the remnant differently to the rest of the property for an agreed period.

The agreed management conditions can range from prevention of firewood collection to very limited stock grazing i.e. sheep just off shears, and for fire hazard reduction. If the area is a high value remnant native grassland, conditions dealing with burning and controlled grazing can be determined to encourage the seed set of the grass species. Ms Rebecca Cole will give a more detailed presentation shortly.

#### *Water*

The control and management of the State's water resources has been vested in the State Government since early 1900's. Up until the early 1990s the control and management focussed to a large degree on provision of the water resource for the irrigation industry. A licensing system was developed, and non-irrigation access rights defined.

A number of events in the early 1990s (large algal blooms and surveys of the ecological health of rivers) began to focus water management onto the ecological function and health of the rivers, and as a consequence onto previous resource management.

The current NSW State Water Reform process was developed in order to realign water resource use mechanisms to give a greater account to the ecological function and processes of the State's rivers.

A number of reform activities have been undertaken. Some that you may have come across include:

- **Water Amnesty.** This was an opportunity for unlicensed water use activities that required a licence to seek and gain a licence.
- **Farm Dams Policy.** This defines the basic access right that a landholder has to the run off that is generated on a property.
- **Irrigation Embargoes.** The quantity of water available is a very finite resource. There comes a point where access to a very finite resource must be restricted. Thus that limit for the Murrumbidgee River Valley was reached in the early 1990s, and an embargo on future licences imposed.
- **Water Trading.** This allows for the trading of access licences to the 'ceiling' imposed by the embargo.
- **Establishment of Unregulated Flow Committees** that will determine on a catchment by catchment basis the most appropriate flow regimes that cater for local needs as well as the needs of the river, and how much flow will be contributed downstream.
- **Water Management Bill.** This Bill when amended and passed by Parliament, will enable an equitable access to the water resources of the State with the ecology of the rivers in mind.

How does this relate to *Off-Reserve management*? The history of European use of NSW's water resources has shown that our impact has been often detrimental to the ecology of the States rivers. For example, the construction of weirs for irrigation has been shown to act as an impedi-

ment to fish passage upstream to a species' breeding areas. The weirs have also detrimentally altered the flooding regime that much of the inland riparian vegetation has evolved to respond too.

The concept of *Off-Reserve Management* in relation to the State's water resources is dealt with in the incoming Water Management Bill. By implementing management mechanisms and access rules that aim to improve water quality and create flow regimes that are ecologically accurate, many of the recognised problems will diminish and human water use will move towards sustainability. Many streams may even move back towards their original 'pristine state'.

The incoming Water Management Bill will create mechanisms and management conditions that aim to improve water quality and flow regimes. Fundamental to this aim is water use that provides equitably for ecological functioning and human demands.

## Conclusion

From the above it can be seen that DLWC is involved in many situations that are related to the concept of *off-reserve management*. *Off-reserve management* is a function that has been handed to the Department as the community's understanding of ecosystem management and natural resource management increases. On the one hand the Department has to strike the balance between allowing for the needs of food and fibre production as well as protecting the long-term ability of the State's natural resources to continue that production. On the other hand the Department has to protect and conserve the functioning of ecosystems that we rely on for survival because our production systems will not function without them.

## References

Benson J.S., (1994) *The native grasslands of the Monaro region: Southern Tablelands of NSW*. National Herbarium of NSW, Royal Botanic Gardens, Sydney, *Cunninghamia* Vol. 3(3):609-650.

## NSW Legislation and Bills –

*Native Vegetation Conservation Act 1997, No 133*

*Soil Conservation Act 1938, No 10*

*Water Management Bill 2000*