

## Session 5: Views from Other Regions (III): Western Riverina Region NSW

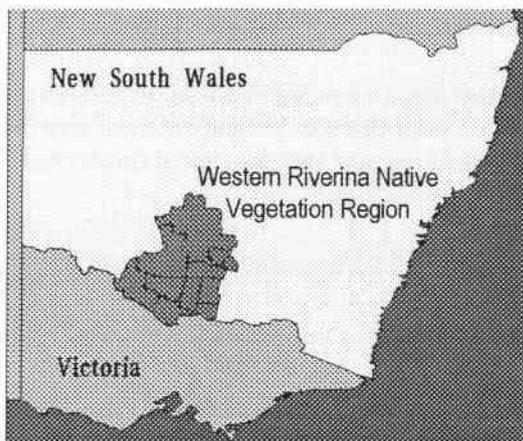
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### Western Riverina Region

In the Western Riverina Native Vegetation Region of NSW (the Region), there is considerable native grassland, both beyond the reserve and indeed beyond places that some people would never visit.

The Region lies in the south-west of NSW and covers a total area of about 6.5 million hectares, which makes it only marginally smaller than the State of Tasmania, but much flatter. The Region covers the twelve Local Government Areas of Berrigan, Carrathool, Conargo, Deniliquin, Griffith, Hay, Jerilderie, Leeton, Murray, Murrumbidgee, Wakool, and Windouran, and is the largest Native Vegetation Region in NSW approved under the *Native Vegetation Conservation Act, 1997* (NVC Act).

It has a semi-arid climate with hot summers, cool winters and a low average rainfall, ranging from 300mm to 450mm across the Region. Dry years are common and often result in prolonged droughts.



Some of Australia's major rivers, including the Lachlan, Murray, and Murrumbidgee Rivers traverse the Region. The Region is generally described as a riverine floodplain of low relief, composed of fluvial and marine sediments. It is dissected by prior streams, ancestral rivers and present day creek and river systems. Some rocky ranges are also present.

Vegetation along the waterways in the Region is dominated by River Red Gum and Black Box communities. Away from the rivers and streams, the Region has large areas of native grasslands dominated by *Danthonia* species and *Stipa* species, and shrublands dominated by Bladder Salt-bush. These are extremely variable in composition and contain a range of grassland species and

saltbush. Boree communities also occur, often in association with Belah and Old Man Saltbush. Cypress Pine, Yellow Box and Grey Box communities dominate the sandy and loamy soils. There are also significant areas of Mallee, Belah and Rosewood in the north and west.

Surface water from the creek and river systems is an important resource in the Region, as are the groundwater resources. Wise use of both surface and groundwater resources, including sound recharge management, is most important in respect to the rising watertables and salinity throughout the irrigation areas.

Despite some limitations, the Region is a very productive agricultural region, producing 19% of the NSW total agricultural production (1996). The Region supports extensive wool growing areas, cropping lands, cattle and is also characterised by highly developed irrigation areas growing horticultural crops, grapes, rice and cotton.

### **Grassland beyond the reserve**

Providing a complex and yet subtle background to the vast terrain of the Region is an estimated 700,000 hectares of native grassland,<sup>3</sup> mostly in the area known as the Hay Plains, which is one of the five recognised native grassland regions within NSW.

However, nearly all of the native grassland is beyond *any* reserve! Beyond any reserve at present because the vast majority of native grassland is on private land.

Of the Interim Biogeographic Regionalisation for Australia (IBRA) Bioregions that fall within the Region, the largest one is the Riverina Bioregion, which comprises about 84% of the Region, contains most of the native grassland and is typified by its lack of conservation reserves. Only 0.4% of the Riverina Bioregion is represented in conservation reserves.<sup>4</sup> Native grassland representation is either unknown or insufficient in these reserves.

From an ecological perspective there has already been too much clearing of native vegetation, including native grassland, and so any clearing associated with changes in landuse must now be minimised to preserve and protect unique grassland ecosystems, and the associated threatened flora and fauna species.

Private landholders therefore hold the management key to the future conservation of native grassland in the Region.

### **What is the vision in the region?**

The community-based Western Riverina Regional Vegetation Committee has developed the following vision for the Region:

*“A community committed to the stewardship of native vegetation ecosystems integrated with sustainable landuse.”*

It is worth dissecting this vision to analyse the intent behind it..

*A community committed...* unless all levels of the community get involved and are willing to create change, progress will be very slow. Landholders need to be aware of the values of native vegetation and be passionate about its preservation and enhancement. Local government, state agencies and non-government organisations need to assist landholders in any way possible to ensure commitment. All levels of government must become com-

<sup>3</sup> In the Western Riverina Native Vegetation Region, native grassland refers mainly to ‘White Top/Stipa Grassland’ which is grassland dominated by *Danthonia sp* and *Stipa sp*. Many other species are also often found. ‘White Top/Stipa Grassland’ is the term used as a management unit by the Western Riverina Regional Vegetation Committee.

<sup>4</sup> Benson 1999

mitted to long term planning and support for environmental management. One-year programs of ad-hoc funding will achieve little because it takes time to develop programs, educate and to gain the confidence of landholders.

*...stewardship...* to have any chance of achieving sustainability the notion must be embraced that humans are only caretakers of all natural resources. There is still a long way to go in learning how to become a part of nature instead of viewing it as something 'over there'.

*...native vegetation ecosystems...* ecosystems are far more complex than one can begin to imagine. The interrelationships between flora and fauna species that have evolved over millions of years cannot be recreated by planting a few native trees, shrubs and grasses. This is why it is important to protect as much remaining native vegetation as possible, no matter how degraded it may be, and use this as the starting point to rebuild the ecosystems that once existed.

*...integrated with sustainable landuse.* The only hope for long-term survival on this planet is to respect nature. Current landuse practices must adapt to work with nature and fit amongst its functioning ecosystems. Cities have sustainability problems, as do current agricultural systems. Learning to operate within different boundaries, set by nature, is the challenge in maintaining life and the production of food and fibre long into the future.

### **What are the achievements to date in the Region?**

#### ***State Environmental Planning Policy No. 46 (SEPP 46)***

The introduction of SEPP 46 in August 1995 created much interest in native grassland in the Western Riverina. More specifically it was a section called Schedule 2 of SEPP 46 that generated the discussion. Schedule 2 listed five grassland regions in NSW that were to be protected and which would require a clearing application before being cultivated. As stated previously, the Hay Plains was one of these regions.

Political pressure was applied by landholders and Schedule 2 was amended to allow for the preparation of Grassland Plans of Management which would permit self regulation of native grassland. Community meetings were held, a committee formed and a Plan was developed, which was eventually approved in February 1996.

#### ***Western Riverina Grassland Plan of Management***

This Plan required the retention of 15% of the area of each property as native grassland, as well as the retention of high conservation value areas. Unfortunately, these two requirements did not result in any significant protection of native grassland because of the lack of knowledge about the location and quality of native grasslands, and the absence of adequate monitoring.

The *Threatened Species Conservation Act 1995* raised the profile of flora and fauna species conservation in the Region, but none more so than the endangered Plains-wanderer (*Pedionomus torquatus*) – a small ground-dwelling bird that inhabits scalded grassland areas. This has led to a much greater awareness of the Plains-wanderer habitat requirements and key threatening processes. Cultivation of some native grassland areas that were prime habitat has been prevented as a result of this awareness.

The Grassland Plan of Management expired on 31 December 1999 and from 1 January 2000 native grassland in the Region has been included with all other native vegetation under the NVC Act.

A clearing application must now be submitted to the Department of Land and Water Conservation (DLWC) before any clearing can occur in native grassland, apart from any clearing that is excluded or falls within the current exemptions under the NVC Act.

### ***Western Riverina Regional Vegetation Management Plan (WRRVMP)***

The Western Riverina Regional Vegetation Committee (the Committee) was formed under the NVC Act in August 1998. The primary role of the Committee is to develop the WRRVMP which allows for the protection and management of all native vegetation in the Region.

The Committee released a Discussion Paper in January 2000 to seek community comment and involvement in the development of the WRRVMP. The next stage involves the release of a 'pre-draft' WRRVMP in December this year to seek further community comment, followed by a series of community meetings. The draft WRRVMP will then be completed by March 2001, in readiness for formal public exhibition as an Environmental Planning Instrument.

The WRRVMP will contain both regulatory and advisory components. It is the intention of the Committee that education about native vegetation and incentives for conservation will be the key platforms for implementation of the Western Riverina Regional Vegetation Management Plan.

### ***Interim Policy on the Management of Plains-wanderer Habitat***

DLWC has prepared this Interim Policy to enable clearing applications to be dealt with in a uniform manner where Plains-wanderer habitat is involved. A feature of the Policy is the ability to recognise and negotiate 'trade-offs'. This Policy has been endorsed by the Committee but it is envisaged that the Policy will lapse once the WRRVMP is gazetted.

### ***Plains-wanderer Recovery Plan***

A Recovery Team set up by the NSW National Parks & Wildlife Service (NPWS) under the *Threatened Species Conservation Act 1995* consists of ecologists, agency representatives and landholders. This group is developing a Recovery Plan for the Plains-wanderer. NPWS has also engaged a contractor to map the habitat of the small ground-dwelling bird using aerial photograph interpretation and ground-truthing. The WRRVMP must make provision for the same level of protection and conservation as that provided for in the Recovery Plan.

### ***Native vegetation mapping***

DLWC is presently undertaking extant (current) native vegetation mapping in the Region with a team of people. This team is based at Wagga Wagga and is comprised of botanists, mappers, field officers and a geographic computer specialist. This team is also involved in an initial twelve month research trial using 'real-time' satellite imagery and field survey to assist in the process of locating and mapping native grassland within the Region.

### ***Pre-European vegetation mapping***

The NPWS has engaged a contracting team of botanists and ecologists to produce a pre-European vegetation map of the Region. The data from this will assist the Committee in setting targets and priorities for the protection and conservation of native vegetation, including native grassland. The data from this mapping will be available for analysis during December 2000.

### **What Resources are Available in the Region?**

Aside from the Committee members of the Western Riverina Regional Vegetation Committee who provide a substantial resource throughout their respective communities on native vegetation, and the resources of the projects mentioned above, other resources are used.

### *Wildlife Extension Officer*

A joint initiative between NPWS and Greening Australia has seen the employment of David Parker in this part-time position, based in Deniliquin. The primary role of the position is to work with landholders to create awareness of native fauna and such issues as habitat requirements and threatening processes. A significant proportion of time is spent dealing with the Plains-wanderer and its habitat management.

### *Greening Australia Fencing Incentives Scheme*

This has been operating in the DLWC Murray Region for some time and more recently in the DLWC Murrumbidgee Region. These incentives have led to significant areas of High Conservation Value native vegetation being fenced, and more importantly, managed for conservation. However, little native grassland has been protected within the Region under this incentives scheme.

### *Native Vegetation Management Fund*

This Fund was established by DLWC under the NVC Act to deliver \$15 million over three years to landholders across NSW to manage native vegetation for conservation through Property Agreements and Management Contracts. At present all funds are fully committed and there has been no confirmation yet of future allocations to this Fund. Money has been available for activities such as fencing, weed control, revegetation and, where appropriate, the provision of alternative watering points. Some native grassland areas in the Region have been protected under Property Agreements.

### *World Wide Fund (WWF) for Nature Australia/Natural Heritage Trust (NHT) Grant*

A funding grant was received this year from the NHT through the WWF under the Grassy Ecosystems Community Grants scheme. Funding is to employ a Project Officer in the Riverina Grasslands project to help generate awareness and understanding of the values of native grassland and to achieve long-term protection and conservation management of significant native grassland sites. Another outcome of the project is that a photo standards booklet will be developed to aid the identification and management of the different native grasslands.

It is envisaged that this will be more of a three-year project because of the need to develop rapport with landholders within the Region so that assistance and genuine partnership agreements can be developed.

### **In Trying to Conserve Native Grasslands, What Works and What Doesn't Work in the Region?**

These two questions are more difficult to answer than at first glance because the Western Riverina Regional Vegetation Committee is part-progressed on several projects in data collection, and is also drafting plans in both a regulatory and advisory capacity. Already indicated are some achievements in the Region that have highlighted native grassland. These achievements unfortunately have not always translated into significant conservation outcomes, nor increased our knowledge about the dynamics or the location of grassland.

Presented here instead are some of the issues that would assist the effective conservation of native grassland and issues that negatively impact on their conservation beyond 2000.

### *Defining native grassland*

Having a reliable definition of native grassland would assist. One of the problems with defining and describing native grassland, is the seasonal nature of grassland. Native grassland varies im-

mensely in species composition, density and growth patterns. This combination can vary, not just between the seasons of one year but from one year to the next. It may even take five, ten or twenty years for the seasonal conditions to emerge that favour particular species. Evidence also suggests that much of the current native grassland in the Region has been 'derived' from salt-bush shrubland due to a combination of excessive grazing by sheep, cattle and rabbits. This also exacerbates the problem in defining native grassland.

### *Value of native grassland*

There has been little research undertaken on the value of native grassland of the Region. Also the lack of awareness and knowledge of the ecosystem values of native grassland is apparent. The significance of native grassland needs to be demonstrated in terms of flora and fauna biodiversity and the importance of this biodiversity. This would then make it much easier to work with landholders in valuing, retaining and actively managing native grassland.

### *Location of native grassland*

Much more work is required to ascertain the location and quality of native grassland in the Region. This is so that a strategic approach can be developed to manage and conserve the native grassland where possible, before it is too late. The NPWS Plains-wanderer habitat mapping and the DLWC Native Vegetation Mapping projects under way in the Region have already been very useful. However it is an extremely large project area and the riverine plains grassland vegetation is arguably the most difficult native vegetation to map, and so this process takes time. Simply put, this native vegetation mapping is a priority regional activity as 'you can't manage what you can't measure'.

### *Sustainable grazing*

Current grazing management on many properties appears to be based on levels that are sustainable for the native grassland areas. Excessive grazing pressure however leads to a decline in the condition and diversity of native grassland. It also exposes the soil to wind erosion particularly, and invasion by exotic plants and noxious weeds. The condition of native grassland in the Region can be maintained and improved by the broad scale adoption of sustainable grazing practices.

Native grassland on public lands, such as travelling stock reserves, also needs to be well managed.

### *Funding assistance*

The majority of landholders (particularly graziers) in the Region are more focused on short-term financial survival than on long term conservation management of native grassland. The employment of a Project Officer in the Riverina Grasslands project will help to generate awareness about native grassland and will lead to negotiated conservation agreements of some significant native grassland sites.

However, if gains are to be made for conservation of native grassland on a significant scale, there should be adequate funding available to enable landholders to achieve that outcome.

Financial arrangements from market-based incentives through to property-based incentives should be made widely available.

### *Development pressure*

Gradually more areas of irrigated crops, horticulture, and dry land cropping are extending into previously uncultivated native grassland. The consequence from an ecological perspective is that this cultivation will be terminal for native grassland that has been converted to irrigated ag-

riculture. In many cases this diversification and often cultivation of only a relatively small area of a large property has enabled financial survival, particularly as wool prices have been depressed and irrigation commodity prices elevated. This allows some landholders to conservatively manage the remainder of their property, including the native grassland areas.

The change of land use can also cause an increase for example, in fox numbers, introduced plants, weeds and non-indigenous birds, with consequent pressure on native fauna.

Further, if dry land cropping becomes more economically viable, large areas of previously uncultivated grassland may be put under pressure to be cleared, posing a further threat to the survival of native grassland.

### *Clearing*

Some people have expressed concern that native grassland has been cleared and developed for cropping without development consent in the Region. Unfortunately the ephemeral nature of grassland means that the structure and composition can vary greatly season to season in response to rain. Further, some grassland areas that are overrun by exotic species during winter and spring are difficult to determine whether they are in fact a native grassland. Complicating the matter is that there is no detailed mapping of the location and quality of native grassland and the lack of understanding and knowledge of the complex grassland ecosystem. It is technically very difficult to monitor native grassland clearing in the Region. Further education and research in this area will assist.

### *Weeds*

A continuing major threat to native grassland in the Region is the invasion by many weeds, particularly African Boxthorn. Its distribution and density has increased dramatically over the last ten years. It is no coincidence that this parallels the downturn in the wool growing industry where landholders have access to significantly fewer staff, and less cash is available to spend on activities like weed control. This situation highlights the need for 'active' management of native grassland ecosystems just to retain them in their current state.

### **Conclusion**

All landholders ultimately have an obligation to comply with the various national and international agreements that have been established on environmental protocols.

Landholders, both public and private, need to operate within the principles of ecologically sustainable development around which the NVC Act legislation has been framed. The core objectives of ecologically sustainable development require provision of equity between generations and the protection of biological diversity.

Regional Vegetation Management Plans such as the one for the Western Riverina allow the regional community to take control and design a future for the native vegetation specific to their region.

The Western Riverina Regional Vegetation Management Plan will have the status of a Regional Environmental Plan and as such will be a very important instrument in the state's planning hierarchy.

The Regional Vegetation Management Plan will also be the primary focus for the attraction and delivery of funding for native vegetation initiatives in a strategic manner.

Landholders have a responsibility to manage their land in a sustainable way and meet normal costs associated with on-farm management. This responsibility can be termed a 'duty of care'. On-farm conservation beyond this 'duty of care' can be termed a 'public conservation service'.

The broad adoption of a public conservation service will require the support of the community at large, industry and all levels of Government.

Private landholders in particular hold the key to the future conservation of native grassland in the Western Riverina Region.

If gains are to be made for the conservation of native grassland on a significant scale on private land, there should be adequate funding to enable landholders and the community to achieve that outcome.

Financial support ranging from payment-based incentives, such as the provision of grants, and market-based incentives, which attempt to increase the market value of lands on which native vegetation is conserved, right through to a range of property-based incentives, including education and Property Agreements, should be made readily available.

This will ensure:

**“A community committed to the stewardship of native vegetation ecosystems integrated with sustainable landuse”.**

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