



# No time to LOSE

In his latest book, *On Borrowed Time*, leading Australian ecologist Professor David Lindenmayer writes that biodiversity loss is ‘the most significant environmental problem facing Australia’. In fact, he continues, we are ‘in the midst of the planet’s sixth great extinction event’, now being driven at alarming speed by human intervention. But while acknowledging the ‘good, bad and ugly’ news about Australia’s environment, Lindenmayer says we do have the knowledge and resources to tackle the problems. In the book’s final section, ‘The hero: fighting back against inadequate action’, Lindenmayer lists the 10 key environmental problems facing Australia and how we can tackle them. This edited extract highlights key points from two of the 10 problems.

The great news is that there is hope for our environment. Australia has some of the best environmental science minds in the world and we are a wealthy nation with the ability to contribute much more to resolving our environmental problems. Government, industry and business now

realise that we face a huge environmental and biodiversity crisis.

We have developed a reasonable reserve system in the past twenty years, a State of the Environment Report is produced every five years and environmental grants through bodies such as the Natural Heritage Trust have made some useful contributions. But much more real action and significantly higher levels of investment are needed to match the seriousness of our challenges.

Ecologically sustainable solutions will provide benefits to farm productivity, rural communities, resource-based industries and ecotourism while helping us maintain biodiversity and increase environmental resilience in the face of climate change. To realise these solutions now we have to:

- implement management actions, not commission more reports
- help landowners financially and technically to adopt ecologically sustainable practices
- communicate and extend environmental knowledge to ensure widespread adoption

**A drought-stricken grazing property near Hillston, NSW, showing severe vegetation loss.** Gregory Heath/CSIRO

- monitor management actions to gauge progress.

### **Problem 1: Failure to make appropriate investments in our environment**

Practical environmental actions are almost always substantial and costly. An example is the restoration of vegetation and repair of landscapes in the wheat and sheep belt at the scale needed to tackle the area’s major problems of salinity and soil erosion. Initiatives like LandCare have helped significantly, but we can and must do much better than this.

We need to prioritise investment so that resources are made available right now to implement environmental policy.

**Failure to implement industry reforms**  
Many natural resource-based industries need assistance in order to adopt sustainable management methods. Substantial reforms are essential in fisheries, forestry,

grazing and cropping. An example is forestry in Tasmania, which needs to move away from such no-win practices as clearing large areas of native forest to establish timber plantations.

#### **Failure to encourage environmental remediation**

'Stewardship' payments could be made to reward private landholders for better managing their properties for 'public good' outcomes such as revegetation, increased biodiversity conservation and improved water quality. As an example, stewardship payments might be given to dairy farmers who revegetate valuable grazing areas to improve stream quality and water supplies. Effective benchmarking and rigorous monitoring of progress would be essential to demonstrate the investment is justified.

#### **Failure to monitor and inform**

To gauge the success of management actions, and ensure their continual improvement, we must monitor them. Currently, we are unable to monitor the effectiveness of management activities such as weed control, prescribed burning and river restoration. Australian industries need knowledge, management skills and monitoring capability if they are to reach ecological sustainability.

#### **Failure to ensure biological security**

Australia's biosecurity must be upgraded. Invasive plants and feral animals can cause major environmental and biodiversity problems and they can be almost impossible to control. The best cure, of course, is prevention. Stronger regulation of industries such as the pet trade, which may cause the next wave of invasive species, is needed.

#### **Failure to provide adequate research**

Our ability to address many complex environmental problems has been reduced as scientific capacity wanes in wildlife research, environmental management and sustainable agriculture. This needs to be redressed if large losses of biodiversity and productive capacity are to be averted. Governments have failed to recognise the seriousness of our environmental problems, and the need for ecologically sustainable resource management. Governments are best placed to make the long term investment necessary to fund the majority of environmental management and research. The private sector and non-government organisations play an important role but the responsibility should not fall entirely on them.

#### **Some ways forward**

A permanent land-management levy could tackle the imbalance between the funds needed and the funds now available to seriously address our environmental problems. Similar to the Medicare levy, a land-management levy could generate funds, but to support environmental health.

Other options include:

- dedicating some GST revenue to environmental management
- providing significant tax relief in return for better environmental outcomes on private land
- encouraging superannuation funds to invest in major environmental projects
- holding environmental lotteries.

#### **Problem 2: Failure to achieve true sustainability by integrating production and conservation**

About 10 per cent of the Australian mainland is now protected by reserves – an essential component of ecologically sustainable resource management. However, 90 per cent lies outside the reserve system and is open to production. We need to ask ourselves how we can manage a natural resource such as timber harvesting, commercial fishing or cropping on both public and private land without significantly degrading environmental values, including biodiversity conservation.

#### **The native forest harvesting industry**

If significant changes to current practices are made, native forest harvesting could become ecologically sustainable. It currently isn't. Forestry on public land is heavily regulated, but there is almost no serious biodiversity or environmental monitoring on either public or private forestry land anywhere in Australia plus there is a shortage of data on logging impacts and effective ways to mitigate them.

Some native forest harvesting industries could become world's best practice if they:

- focus on high-quality building and furniture timbers that can be 'green-stamped' and sold for a premium price as ecologically sustainable
- support first-class monitoring and research programs
- continually improve management practices.

#### **Farm management**

Australian agriculture is undeniably highly efficient, but it is anything but ecologically

sustainable. Agriculture and grazing have had greater impacts on Australian ecosystems over the past 220 years than any other land use. Native species survival in these areas is threatened by salinity, over grazing, land clearing and firewood removal.

Setting aside large reserves will often be inappropriate as most of these areas are privately owned, although there may be opportunities to buy back land for conservation. A productive and sustainable agricultural and grazing sector is possible but it requires a serious commitment to change including limiting land clearing and large-scale revegetation.

If restored areas are designed and established correctly and in the right places, they can provide valuable habitats for many species. In some cases, carefully managed grazing regimes may even benefit both economic and conservation objectives! Not all native species can be adequately conserved under these approaches, but many of them can be.

#### **Some ways forward**

##### *Assistance schemes*

Landowners and others who are dependent on natural resource-based industries need assistance if they are to move towards ecological sustainability. Stewardship payment schemes could provide financial incentive to private landholders to retain biodiversity, such as populations of squirrel gliders or hectares of native grassland regeneration.

##### *Certification*

Certification can give ecologically sustainable industries market advantage over competitors that degrade the environment during production. The challenges of producing 'koala-friendly' or 'squirrel glider-friendly' wool and wheat in our agricultural lands should be recognised. Some of these schemes really do work – annual dolphin mortality dropped from 30 000 to 3000 following 'dolphin friendly' tuna.

##### *Promotion*

We need to publicise ecologically sustainable industries. When our industries follow world's best-practice we can't let them become the world's best-kept secrets! They need to set precedents so that other industries can be encouraged to follow.

To order a copy of *On Borrowed Time* and to view a video interview with Professor Lindenmayer, visit [www.publish.csiro.au/pid/5691.htm](http://www.publish.csiro.au/pid/5691.htm)