



BIODIVERSITY POLICY AND ACTION

EIANZ Position Statement

The EIANZ believes that:

1. Nature, underpinned by biodiversity, provides a wealth of services, which are fundamental to economic, environmental, recreational, and cultural wellbeing.
2. These ecosystem services are multifaceted and include the production of food, fibre and water; regulation of climate; control of diseases; nutrient cycling and crop pollination; and provision of spiritual and cultural benefits.
3. Biodiversity loss is a critical issue facing Australia and Aotearoa New Zealand and it must be urgently addressed. Evidence suggests that pressures on biodiversity are increasing, despite the investments in management.
4. The major drivers of biodiversity loss are habitat loss and fragmentation, climate change and introduced species.
5. Biodiversity should be conserved *in situ* across all levels and scales; examples of all ecological communities should be adequately managed for conservation; ecological communities should be managed to support and enhance viable species populations and ecological functions.
6. In view of complexities in ecosystem processes, economic development pressures and regulatory environments, much further research, management tool development and stakeholder awareness, education and consultation is necessary to slow and ultimately reverse the loss of biodiversity.

Biodiversity is the term used to encompass the variety of all living organisms on Earth, including their genetic diversity, species diversity and the diversity of marine, terrestrial and aquatic ecosystems, together with their associated evolutionary and ecological processes.

Due to separation from other land masses for long periods both Australia and Aotearoa New Zealand have unique biodiversity. Australia is one of 17 mega-diverse countries – with over 80 per cent of its mammals, flowering plants, reptiles, frogs, fungi, molluscs and insects known to exist only in Australia. Aotearoa New Zealand is also a significant contributor to global biodiversity, with an estimated 80,000 species of native animals, plants and fungi. A comparatively large proportion are endemic.

Biodiversity is now declining globally at rates unprecedented in human history. The 2019 UN Report on the Sustainable Development goals found that around one million species of plants and animals are threatened with extinction.

The average abundance of native species in most major land-based habitats has fallen by at least 20 per cent, mostly since 1900.

The UN report identifies the major direct causes as: changes in land and sea use; direct exploitation of organisms; climate change; pollution; and alien invasive species.

The rate of biodiversity loss in Australia and Aotearoa New Zealand is no exception. Australia has lost more mammal and plant species over the past 200 years than any other country. Although about 44 per cent of Aotearoa New Zealand's land area is covered by native vegetation, almost 2,500 native land-based and freshwater species were listed as threatened in the decade to 2005.

During the same period, Australian terrestrial fauna species listed as extinct, threatened or rare rose by 41 per cent to a total of 169. Extinctions now total 116 species and counting.



Biodiversity protection, conservation and rehabilitation is complex due to: the complex and non-linear interconnections between and within social and biological systems; increasing demands from human development; and, more recently, from the impacts of climate change.

Formal efforts to conserve nature date back to at least the 19th century (e.g. through the establishment of national parks). And today there are diverse conservation measures internationally (e.g. UN CBD and RAMSAR convention), nationally (e.g. Environmental Protection and Biodiversity Conservation Act (1999)), provincial and locally and through voluntary undertakings. These provide a solid framework and have achieved much. However, the trend of biodiversity loss largely continues unabated.

Role of decision makers

All economic activity ultimately depends on services provided by nature. It's estimated that, globally, nature provides services worth around US\$125 trillion a year. Decision makers in governments, business and the finance sector should be questioning how global environmental risks such as extreme weather events, water shortages and land degradation, will affect the economic performance of countries, sectors and financial markets.

Biodiversity must be conserved at all levels and scales – that is, structure, function and composition should be conserved at site, regional, state, national and international scales.

- **International actions** – Australia's and Aotearoa New Zealand's governments should maintain and extend their national and international actions, and improve the design and implementation of international biodiversity and conservation agreements to protect biodiversity across borders and migration routes.

- **Protection** – formally protect representative and adequate examples of species and ecosystems in national reserve systems. Connectivity between intact areas of habitat is critical to allow species migration and adaptation along temperature and rainfall gradients. Conservation planning must incorporate a landscape level approach, and connect across different land tenures, including private lands.
- **Climate change** – improve understanding of the impacts of climate change on biodiversity and implement adaptation and mitigation actions. Policies and practice in designating and managing protected areas need to consider the impact of climate change on the distribution of native and introduced species, species composition and ecosystem dynamics.
- **Implementation** – assist landowners to actively manage and enhance biodiversity; develop and implement action plans for threatened species and ecosystems.
- **Measurement and reporting** – set realistic and meaningful indicators and targets and improve coordinated reporting on protected and off-reserve areas; develop consistent baseline data across users; adopt national systems for assessing the status of biodiversity and ecosystem health.
- **Research** – accelerate taxonomic studies on micro-organisms, fungi and lower organisms; further assess threatening processes; develop the knowledge for the conservation and sustainable use of biodiversity; improve understanding of Australia's and Aotearoa New Zealand's unique ecological systems and species.
- **Regulation** – design, implement and adequately resource policies, legislation and regulations that protect and enhance biodiversity, recognising that biodiversity and human wellbeing are inextricably linked



Policy into practice

The EIANZ has a clear interest in environment protection and sustainable development, and to applying objective professional standards for conservation and sustainable use of biodiversity.

The EIANZ continues to:

1. **Educate** – train and certify environmental and sustainability professionals to build capacity and capability that addresses biodiversity issues.
2. **Engage** – work with peer institutes and associations to promote sound outcomes and accelerate improved biodiversity management.

The EIANZ encourages environmental policy makers and practitioners to undertake:

1. **Risk assessment** – Embed assessment of biodiversity related risk into strategic decision making and planning.
2. **Informed decision-making** – consider biodiversity from the earliest of stages in all environmental planning and impact assessments; include national or regional decision-making contexts in project and site scales; use consistent decision-making processes at all analysis levels; adopt adaptive

management approaches to mitigate inherent risks and uncertainties.

3. **Capacity** – strengthen professional biodiversity assessment and management capacity and capability in industry and government; develop best practice guidelines and competency frameworks.
4. **Valuation** – estimate and describe the economic, social and cultural benefits of protecting, and enhancing biodiversity.
5. **Monitoring** – implement adaptive management; consider a range of spatial and temporal scales and performance measures; develop consistent but flexible ways of evaluating biodiversity change, accounting for the impact of external influences such as climate.
6. **Coordination** – foster information sharing networks across Governments, non- government organisations, land and water users and the public; recognise natural catchment or bio-regional boundaries; promote stakeholder understanding; ensure regional natural resource management bodies include spatial and temporal biodiversity issues in their work.

The EIANZ is a not for profit, professional association for environmental practitioners from across Australia and Aotearoa New Zealand. The Institute has a certification scheme that recognises ethical and professional practice which assures government, industry and the community of practitioners' professional standing. It is represented by jurisdictional Divisions, a New Zealand Chapter and supported by Special Interest Sections covering climate change, heritage, contaminated land, ecology, environmental accounting, and impact assessment. Its membership is drawn from all areas of environmental practice, and includes practitioners with industry, government, community and academic careers.