
The Parliament of the Commonwealth of Australia

Case Studies on Biodiversity Conservation: Volume 2

**Second interim report of the inquiry into Australia's biodiversity
in a changing climate**

House of Representatives
Standing Committee on Climate Change, Environment and the Arts

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Canberra

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Cover images courtesy of committee secretariat

Front cover (L-R): Committee members in the Lower Lakes region; Committee members being briefed on Reef HQ Aquarium's coral propagation program; lotus flower in Kakadu's Yellow Water Wetlands.

Back cover (L-R): Reef HQ Aquarium's coral reef exhibit; Committee members at Melbourne Museum's *Wild* exhibition; bird amongst salvinia in Kakadu's Yellow Water Wetlands.

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Foreword

Since the June 2011 referral of this inquiry into Australia's biodiversity in a changing climate, the Committee has engaged in an extensive evidence-gathering process to adequately address the broad terms of reference. The Committee has travelled around the country to ensure a broad representation of issues relevant across Australia, inspecting many ecosystems of national importance and visiting research and other facilities relevant to the inquiry's terms of reference. I am pleased to note that the Committee has conducted inquiry activities, including site inspections, briefings and public hearings, in each of Australia's states and territories.

Although the Committee has completed its formal program of interstate site inspections, it continues to gather evidence to the inquiry through briefings and hearings. This second interim report is therefore intended to provide an update on the progress of inquiry and the important themes canvassed during site inspections since the Committee's last report to the Parliament in May 2012.

Following on from the first interim report, which covered the first half of the Committee's site inspections, this second interim report discusses the issues explored by the Committee during its inspections in Victoria, South Australia, the Northern Territory and Queensland.

Throughout the site inspection program, the Committee has been struck by the vast range of ecosystem types that exist in Australia, including those in terrestrial, marine and freshwater environments. The diversity of ecosystems has highlighted the different challenges facing natural resource managers across the country.

At the same time, however, the site inspections have also reinforced the fact that there are many challenges common to biodiversity conservation across the country. The threats that climate change poses – including changes in temperature, rainfall patterns, and sea levels – are likely to have implications for the way biodiversity is managed in all ecosystem types, albeit to varying extents and with different results. The uncertainty associated with the impacts of climate changes is also a common challenge for natural resource managers and policy

makers across the country, perhaps signalling the need for a new approach to natural resource management in an unpredictable climate.

Finally, I would like to take this opportunity to place on record my thanks to all of the local experts who met with and briefed the Committee during the site inspection program, and to all those who facilitated the Committee's visits. I also appreciate the cooperation of my fellow Committee members and acknowledge the significant commitments they and the committee secretariat have made in engaging in this important site inspection program.

Tony Zappia MP
Chair

Membership of the Committee

Chair Mr Tony Zappia MP

Deputy Chair Dr Mal Washer MP

Members Ms Jill Hall MP Mr Wyatt Roy MP

Ms Nola Marino MP

Committee Secretariat

Secretary Ms Julia Morris

Inquiry Secretary Ms Peggy Danaee

Senior Research Officers Ms Susan Dinon (from 28/5/12)
Mr James Nelson (to 25/5/12)

Administrative Officers Mr Peter Pullen
Ms Jessica Hargreaves (from 9/8/12)

Terms of reference

The Committee will inquire into and report on biodiversity in a changing climate, in relation to nationally important ecosystems. The inquiry will have particular regard to:

- terrestrial, marine and freshwater biodiversity in Australia and its territories
- connectivity between ecosystems and across landscapes that may contribute to biodiversity conservation
- how climate change impacts on biodiversity may flow on to affect human communities and the economy
- strategies to enhance climate change adaptation, including promoting resilience in ecosystems and human communities
- mechanisms to promote the sustainable use of natural resources and ecosystem services in a changing climate
- an assessment of whether current governance arrangements are well placed to deal with the challenges of conserving biodiversity in a changing climate
- mechanisms to enhance community engagement.

The scope of the committee's inquiry shall include some case studies of 'nationally important ecosystems', as defined by submissions to the inquiry.

List of abbreviations

AIMS	Australian Institute of Marine Science
CAP	Community Advisory Panel
CCEA	Climate Change, Environment and the Arts
CLLMM	Coorong, Lower Lakes and Murray Mouth
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEH	Department for Environment and Heritage (SA)
DEWNR	Department of Environment, Water and Natural Resources (SA)
DNA	Deoxyribonucleic acid
DRO	Daintree Rainforest Observatory
DSEWPAC	Department of Sustainability, Environment, Water, Population and Communities
ENSO	El Niño-Southern Oscillation
GBRMPA	Great Barrier Reef Marine Park Authority
IEP	Indigenous Employment Program
JCU	James Cook University
KNP	Kakadu National Park

KNYA	Kungun Ngarrindjeri Yunnan Agreement (Agreement between the Ngarrindjeri people and the Government of South Australia)
KRAC	Kakadu Research Advisory Committee
LED	Light-emitting diode
Lower Lakes	Lakes Alexandrina and Albert
NERP	National Environmental Research Program
NRA	Ngarrindjeri Regional Authority
OZCAM	Online Zoological Collections of Australian Museums
Ramsar	The Convention on Wetlands (Ramsar, Iran, 1971)
REDMAP	Range Extension Database and Mapping Project
Reef HQ	Reef HQ Great Barrier Reef Aquarium
UNESCO	United Nations Educational, Scientific and Cultural Organization
WTMA	Wet Tropics Management Authority