WWF

POLICY

2018

WWF-Australia's plan for our nation's iconic wildlife & oceans

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SAVE OUR SPECIES

The Australian Government *State of the Environment* Reports and a wide variety of other scientific evidence indicates that three Australian animal species have become extinct since 2009. Now, the koala and 2,000 other Australian animals and plants are threatened with extinction unless immediate action is taken. Three actions can stop and reverse this species decline:

- Targeted, measurable and realistic threatened species recovery programs;
- Effective control of foxes, feral cats, pigs and other 'invasive species';
- A comprehensive, adequate and representative system of national parks and protected areas.

Cover: A green and two hawksbill turtle hatchlings making their way to the ocean © WWF-Aus / Christine Hof

Presently only five cents out of every $100 spent by the Australian Government is used to conserve our unique and rich native animals and plants. This is the lowest proportion in more than a decade, with funding having declined by 37% on 2013 levels. Returning expenditure to 2013 levels can secure our species and protect the premier asset of the Australian tourism industry.

37%
DECLINE
IN CONSERVATION FUNDING OVER THE PAST FIVE YEARS

Recommended policy for the Australian Government:

1. **Threatened species recovery programs:** Programs should aim to increase the population, or reduce the threat status, of a species by a specified date and be accompanied by quantifiable and time-bound intermediate objectives and adequate funding. It is rare for existing threatened species recovery plans to set measurable time-bound goals and/or for adequate funding to be allocated to them.

   Cost: $250 million/year.

2. **Invasive species control:** A large proportion of threats to native animals are due to feral animals – foxes, pigs and feral cats in particular – and other 'invasive' and pest species. WWF proposes an initial program which focuses on feral fox, pig and cat control, by eradicating them on important offshore islands (thereby creating 'safe havens') and establishing feral predator-free areas in key locations on mainland Australia.

   Cost: $140 million/year.

3. **Investment in Australia's national parks and protected areas:** Protected areas safeguard Australia's native plants and animals against extinction and promote their recovery. They also secure ecosystem services that include water security, soil protection, species conservation, climate moderation, as well as providing social, cultural and health benefits. On land, it is estimated that these benefits are worth over $38 billion per year.

   The Australian Government has committed to bringing at least 17% of terrestrial and 10% of marine areas into ecologically representative, well-connected systems of protected areas by 2020. Although good progress has been made towards this target, the present system is not yet 'ecologically representative' nor 'well-connected'. An additional 25 million hectares of terrestrial, particularly within a framework of climate change and wildlife corridors, and 97 million hectares of marine protected areas would achieve an 'ecologically representative' and 'well-connected' reserve system.

   Cost: $170 million/year.

Biodiversity Sensitive Urban Design – Creating urban environments that are good for people and good for nature.

LOW-COST POLICY INITIATIVES FOR CONNECTING WITH WILDLIFE IN AN URBAN ENVIRONMENT

Overview

Almost 90% of Australians live in our cities and large towns. Sydney and Melbourne have more than 4 million people each, while Brisbane, Perth and Adelaide have populations of over 1 million people. A further 2 million people live in the large regional centres of the Gold Coast, Newcastle, Canberra, NSW Central Coast and the Sunshine Coast.

Despite these levels of urbanisation, our towns and cities are hotspots for biodiversity including some of our most iconic threatened species. Sydney and Brisbane support koala populations, flocks of endangered Carnaby's cockatoos still fly over Perth, small numbers of green turtles nest on the beaches at Townsville, critically endangered swift parrots feed in the gum trees around Hobart, while thousands of grey-headed flying foxes disperse across the night skies in Brisbane, Melbourne and many other cities and towns.

While our cities and towns still provide valuable habitat for biodiversity, these areas are under threat. Native vegetation continues to be cleared at an alarming rate and remaining habitat is fragmented and increasingly degraded. In addition, urban populations are suffering from an increasing disconnect from nature with many people unable to access distant natural areas or unaware of natural features in the urban landscape.

Protecting urban nature

Australia's cities and towns encompass areas of high biodiversity value, often of international importance. These areas such as Brisbane's Moreton Bay, Sydney's Royal National Park, Perth's Kings Park, and Hobart's Mount Wellington provide exceptional natural values within the heart or on the doorstep of our largest population centres.

However, these significant natural assets can't be taken for granted – they are at risk from a myriad of threats including fire, pollution, unregulated access, weeds, and inappropriate development in surrounding areas. There is also an ever-present danger of increasing isolation in an unsympathetic matrix of concrete, bitumen, and suburbia.

While under threat, these areas of urban nature present opportunities for communities to enhance, create and maintain healthy ecosystems and learn how to protect a thriving biodiversity. Community groups can plant native trees and shrubs, eradicate weeds, monitor water quality, install nesting boxes, collect and dispose of litter, and volunteer to undertake interpretive activities.

Specific examples include:

- The City of Onkaparinga's *Urban Creek Recovery Project* seeks to improve the health of watercourse vegetation condition so that the natural ecosystems can function better and provide critical habitat for native plants and animals. Project works are being undertaken across 35 creeks, nine catchments, and cover more than 61km of creek line reserves. Trained council staff, contractors and volunteers work hard to control weeds, remove rubbish, plant local native seedlings, and monitor bushland condition to track the success of on-ground works.
- Boondall Wetlands, located 15km north of Brisbane's CBD on the edge of Moreton Bay, consists of approximately 1,500 hectares of tidal flats, mangroves, saltmarsh, melaleuca wetlands, grasslands and open forest. Community volunteers at the *Boondall Wetlands Environment Centre* lead nature walks, greet and interact with centre visitors, learn about the unique flora and fauna and help with events and activities.
- *Protect Albury's Woodlands* is a local campaign run by the City of Albury to raise public awareness of the significance of the endangered Box Gum Grassy Woodland reserves in and around Albury. Through the campaign, people are encouraged to use the woodland reserves responsibly and be aware of the consequences of activities like collecting firewood, dumping garden waste, allowing weeds to spread, removing bush rocks, and 'cleaning up' woody debris. Residents are encouraged to keep native vegetation on their properties and use local native species in landscaping around the home; to install nest boxes for native animals; keep cats inside or in an approved cat pen at night; and consider a private conservation agreement for their land or to join a local conservation group.
- The *Herdsman Lake Wildlife Centre* within Herdsman Lake Regional Park - an oasis of nature right in the middle of one of Perth's suburbs - is a partnership between the WA Department of Education and the WA Gould League. The Centre presents a unique opportunity for schools and the community to reconnect and interact with nature by exploring a real Western Australian wetland while discovering scientific, historical, geographical and cultural concepts, skills and values at the same time.

Integrating nature into urban landscapes

Urbanisation can be catastrophic for Australia's wildlife, and is a well-known threat to biodiversity worldwide. The impacts of urbanisation can be mitigated by urban design and development improvements, but take-up of these practices has been slow. There is an urgent need to incorporate existing ecological knowledge into a framework that can be used by planners and developers to ensure that biodiversity conservation is considered in decision-making processes.

URBANISATION CAN BE CATASTROPHIC FOR AUSTRALIA'S WILDLIFE, AND A THREAT TO BIODIVERSITY WORLDWIDE

Some of the negative impacts of urbanisation can be mitigated by improvements to the design and construction of new developments, or through retrofitting existing development – a process referred to as 'biodiversity sensitive urban design (BSUD)'.

Five principles for embedding BSUD into urban development are presented here:

1. *Maintain and introduce habitat.* Plan to avoid habitat loss by prioritising development in areas of low ecological value, enhance existing habitat through diverse plantings, and create new habitat, including within grey and green infrastructure.
2. *Facilitate dispersal.* Dispersal can be facilitated by adding animal movement infrastructure, or establishing habitat connectivity corridors.
3. *Minimize threats and anthropogenic disturbances.* The impact of weeds and exotic predators can be reduced by landscaping with indigenous plants and establishing pet containment programs.
4. *Facilitate natural ecological processes.* The effects of urbanization on natural cycles and ecological processes can be mitigated by providing adequate resources for target species, protecting and enhancing pollinator habitat, and planning to safely enable natural disturbance events.
5. *Improve potential for positive human–nature interactions.* BSUD can help facilitate local stewardship of biodiversity by creating opportunities for positive interactions with nature, and addressing conflicts between biodiversity and humans.

In the absence of a practical framework for incorporating existing urban ecological knowledge into urban design and development, planners and developers have little guidance about how to design and build cities that support biodiversity. There is now an urgent need for governments to prioritise the links between urban design and biodiversity outcomes through the following options:

- *Active encouragement:* the Australian Government instigates a national competition to raise the awareness of and annually reward the best examples of BSUD.
- *Incentives:* the Australian Government funds a program to support efforts by urban planners and developers to incorporate BSUD into new or existing developments
- *Regulation:* working with state and local governments, the Australian Government requires all new developments in target areas of high biodiversity value in our cities and large towns to incorporate BSUD principles.
- *Setting industry standards:* developing minimum standards to require BSUD as an intrinsic part of new developments in areas of high biodiversity value in our cities and large towns

The need for a connection to nature

Integrating 'everyday nature' into our cities and large towns through BSUD presents numerous opportunities and challenges. Access to natural features in our urban environments will provide solutions for liveability in the face of climate change; extreme weather events; population growth; and help to maintain health and well-being.

TREE COVER CAN REDUCE THE 'HEAT ISLAND' EFFECT, our immune systems as a whole are stronger and work better when we're near nature, and children who are exposed to biodiversity in their school grounds have substantially better cognitive development

To achieve biodiversity benefits, BSUD seeks to mitigate the detrimental impacts of urbanisation, while encouraging community stewardship of biodiversity by facilitating positive human–nature interactions. In doing so, it will require a shift in many people's attitudes to human-wildlife interaction and the view that nature is a constraint on urban development. Access to nature should not be confined to our houses or in our backyards but should be part of the urban matrix - innovation should be encouraged to provide incidental access to nature along bike paths and walking tracks, in shopping centres, in playground and parks, and as part of active streetscapes.

However, a growing movement in urban social-ecology holds that city building requires a green lens—that urban design with, and not against, nature improves both the global environment and the lives of people. Human well-being, social justice and effective urban design are intimately connected to the health of urban ecosystems. Cities are habitat for people, and urban design with nature at the centre is essential to resilience, sustainability, liveability, and justice.

Recent reports have shown that tree cover can reduce the 'heat island' effect, that our immune systems as a whole are stronger and work better when we're near nature, and that children who are exposed to biodiversity in their school grounds have substantially better cognitive development. There could be massive advantages for Australia's threatened species and biodiversity in general by creating neighbourhoods that are much more attractive, resilient to climate change, healthier and safer.

The Australian Government could support the development of an Urban Biodiversity rating system to recognise developments that have incorporated the key elements of BSUD and encourage the property market to factor in 'everyday nature' as a significant part of urban development in the 21st century.

Re-connecting urban Indigenous communities

While being highly successful, the *Working on Country* Indigenous ranger program is focussed predominantly on Indigenous communities in the Kimberley, Northern Territory and north Queensland.

A concentration on these areas is appropriate but fails to recognise that the largest populations of Indigenous people are found in Australia's cities and towns. Contrary to the view that dysfunctional remote communities are the main cause of Indigenous disadvantage, urban populations also struggle to meet the *Closing the Gap* targets for employment, education, housing, and health services. An increasing disconnection with culture is serving to exacerbate these issues and is best demonstrated by the observation that currently there are no *Working on Country* rangers in the greater Sydney region, the ACT, and only one group each in Victoria and south east Queensland.

Despite many decades of settlement, Indigenous culture still persists in Australia's urban areas. In many instances though, there are few resources available to protect and manage these cultural sites and the ability of Indigenous people to connect with these sites wanes as these sites deteriorate and degrade. An opportunity exists, in conjunction with an expansion of the *Working on Country* program into urban areas, for funding and resources to become available for Indigenous communities to re-connect with culture and work together to save these sites. Such sites include rock engravings throughout the Sydney region, burial sites and other important pre-contact areas along the Yarra River in Melbourne, and ceremonial grounds and axe grinding grooves in suburban Brisbane.

KIJA RANGER SURVEYING FOR GOULDIAN FINCH © SCOTT VAN BARNEVELD / KIMBERLEY LAND COUNCIL / WWF-AUS

Recommended policy for the Australian Government:

- An *Urban Habitats* program to assist urban community groups to restore bushland, monitor water quality in waterways and wetlands, install nesting boxes, and re-establish native vegetation.
- Support urban nature centres to provide opportunities for schools and the broader community to connect with nature.
- Implement a framework for biodiversity sensitive urban design through actions such as:
    - Supporting a national competition to raise the awareness of and annually reward the best examples of BSUD;
    - Promote efforts by urban planners and developers to incorporate BSUD into new or existing developments; and
    - Work with state and local governments, to phase in standards that require all new developments in target areas of high biodiversity value in our cities and large towns to incorporate BSUD principles.
- Work with industry to support the development of an Urban Biodiversity rating system to recognise developments that have incorporated the key elements of BSUD and encourage the property market to factor in 'everyday nature'.

BUCCANEER ARCHIPELAGO, KIMBERLEY, WESTERN AUSTRALIA © PAUL GAMBLIN / WWF-AUS

MAJOR MITCHELL'S COCKATOO (LOPHOCHROA LEADBEATERI) © MOLLY GRACE PHOTOGRAPHY

LAWS THAT PROTECT NATURE AND THE PLACES WE LOVE

The Australian Government and our national environmental laws have played a critical role in protecting the places and wildlife Australians love. However, since the laws were passed 20 years ago, a variety of new issues have arisen or changed, and the laws need to be strengthened to improve our water, land and biodiversity, including by:

- Ensuring clean and healthy rivers and groundwater;
- Regulating large-scale tree-clearing;
- Protecting our climate.

For a detailed assessment please see report *'A new generation of national environmental laws'*.[1]

Recommended policy for the Australian Government:

1. Enact the strengthened and improved national environmental laws and institutions described in the report *'A new generation of national environmental laws'*.[2]
2. Establish an independent national environmental agency to administer these strengthened and improved national environment laws.

   Cost: $20 million/year x three years in new funding (together with $120 million funding re-profiled from the Department of Environment and Energy Outcomes 1.5 and 1.6).

1 Available at: http://www.placesyoulove.org/wp-content/uploads/2018/05/New-national-environmental-laws_Policy-Paper-FINAL-WEB3.pdf
2 Available at: http://www.placesyoulove.org/wp-content/uploads/2018/05/New-national-environmental-laws_Policy-Paper-FINAL-WEB3.pdf

INDIGENOUS RANGERS CARING FOR COUNTRY

Indigenous rangers bring unique land management skills to the nationally and internationally important task of 'Caring for Country'. The Australian Government's *Working on Country* program provides meaningful and stable jobs for Indigenous people to be proud of and is one of the few programs which shows significant measurable improvements in Indigenous health and well-being.[3] A recent Australian Government-commissioned report found that for every $1 invested in the Girringun Indigenous Protected Area, north Queensland, approximately $2.2 of social, economic, cultural and environmental value has been created.[4]

FOR EVERY $1 INVESTED IN GIRRINGUN

APPROX. $2.2 HAS BEEN CREATED IN SOCIAL, ECONOMIC, CULTURAL AND ENVIRONMENTAL VALUE

The *Working on Country* program supports 800 Indigenous rangers but job security is low because funding is only secured to 2020. Plus, only a third of those rangers are women. Working on Country rangers are largely absent in south-eastern Australia where Indigenous populations are highest, with no rangers in the greater Sydney region, the Australian Capital Territory, and only one group each in Victoria and southeast Queensland. Rangers are only sparsely distributed in areas facing some of the greatest environmental challenges – there are only two groups on the Great Barrier Reef south of Cairns, one group in southern Western Australia, and only six ranger groups in the whole of the Murray Darling Basin.

The *Working on Country* program has been an unparalleled success, and provides significant social and community benefit in remote and isolated communities. However, enthusiastic and highly motivated urban Indigenous communities have been overlooked. By working alongside local governments and NGOs, these urban communities could support ranger groups that focus on issues such as waterway and bushland restoration, cultural site restoration and maintenance, wetland management, and threatened species conservation.

There is a significant conservation need for more Indigenous rangers and a strong desire from Indigenous communities to participate. This provides an excellent foundation for the Australian Government to significantly expand the program, with a focus on women rangers.

3 http://www.socialventures.com.au/assets/Consolidated-SROI-Report-on-IPA-WoC.pdf
4 http://www.socialventures.com.au/assets/Consolidated-SROI-Report-on-IPA-WoC.pdf

Recommended policy for the Australian Government:

- Increase the number of *Working on Country* rangers to 2,000 and achieve gender equality by 2022 (including through strategies like 'women ranger only' programs).

  Cost: $140 million per year, increasing to $200 million per year by 2022.

- Increase the numbers of *Working on Country* rangers in the Great Barrier Reef, southern Western Australia, Murray-Darling Basin and areas facing the greatest environmental challenges.

  Cost: Covered by existing increase in positions, cost outlined above.

- Establish ranger groups in Sydney, Melbourne and Brisbane and other large urban and regional centres with the highest Indigenous populations, including Townsville and Palm Island, through a *Healing Country* program.

  Cost: $30 million.

ALEC ECHO, KIJA RANGER HOLDING A TINY BLIND SNAKE DURING BIODIVERSITY SURVEYS ON VIOLET VALLEY STATION. KIJA COUNTRY, EAST KIMBERLEY, AUSTRALIA © SCOTT VAN BARNEVELD / KIMBERLEY LAND COUNCIL / WWF-AUS

REDUCING GREENHOUSE POLLUTION AND INCREASING RENEWABLE ENERGY

At the Paris climate conference in December 2015, 195 countries adopted the first ever universal, legally-binding global climate agreement. The governments agreed to:

- a long-term goal of keeping the increase in global average temperature to well below 2 °C above pre-industrial levels;
- aim to limit the increase to 1.5 °C, since this would significantly reduce risks and the impacts of climate change;
- the need for global emissions to peak as soon as possible, recognising that this will take longer for developing countries;
- undertake rapid reductions thereafter in accordance with the best available science.

Recommended policy for the Australian Government:

1. Adopt greenhouse gas pollution reduction targets that will achieve the Paris Agreement:
    a. Reduce emissions below the 2005 Australian baseline:
        i. By 45-55% by 2025 (40-50% below present);
        ii. By 65-85% by 2030 (60-80% below present);
        iii. To 'net-zero' between 2034 and 2040, with the electricity/energy sector emitting zero emissions and the emissions of all other sectors credibly 'offset';
    b. By setting the 2025, 2030 and 2034 targets not more than five years before the relevant date (the final 2025 goal should be set in 2021 and so on) and only after an independent review of global and domestic climate policy and new technology.
2. Adopt renewable energy targets of 100% renewable electricity by 2035, and 100% of the rest of the energy system (industrial, etc.) by 2050, and restore funding to ARENA.

    Additional cost: $500 million in 2019-20, $237 million in 2020-21, $468 million in 2021-22 and $135 million in 2022-23.

    Australian expert reports have demonstrated that this is technically possible and financially affordable.[5]
3. End the construction or expansion of thermal coal mines, legislate for the closure of all coal-fired power stations by 2035 and provide structural adjustment assistance, reskilling and regional economic diversity plans for affected workers and communities.

    Additional cost: $2 million to establish an Energy Transition Advisory Group to develop a national energy transition plan.
4. End excessive tree-clearing in Australia, including through a 'climate trigger' in federal legislation, and develop a national plan to reduce agriculture and land emissions which maximise benefits to the natural environment, landholders and regional communities.

    Additional cost: Covered by a reallocation of existing priorities and funds within the Department of Environment and Energy and the Department of Agriculture.
5. Phase out fossil fuel subsidies by 2019.

    Savings: $9 billion over three years and $13 billion over the forward estimates.

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5 Climate Works (2014), Pathways to deep decarbonisation in 2050. How Australia can prosper in a low carbon world; McKibben Software Group (2015), Report 2: 2015 Economic Modelling of Australian Action Under a New Global Climate Change Agreement; Jotzo, F and Kemp, L (2015), Australia can cut emissions deeply and the cost is low, Centre for Climate Economics and Policy for WWF-Australia; Teske, S, Dominish, E, Ison, N and Maras, K (2016) 100% Renewable Energy for Australia – Decarbonising Australia's Energy Sector within one Generation. Report prepared by ISF for GetUp! and Solar Citizens, March 2016; The Climate Institute (2015), Growing the economy while reducing pollution: The economic impacts of climate policy, Factsheet September 2015.

HUMPBACK WHALE © CHRIS FARRELL NATURE PHOTOGRAPHY / WWF-AUS

PROTECT OUR MARINE LIFE

Australia's oceans contain some of the richest, most diverse life on Earth. Globally, we have the third largest marine territory and our continent borders three mighty oceans - the Pacific, Indian and Southern Ocean. WWF-Australia's oceans program works toward implementing solutions that will result in more productive and resilient marine systems which not only support conservation of biodiversity but also contribute to local food security and improved human livelihoods. Marine protected areas, sustainably managed fisheries, enforcement of environmental protections and community empowerment are all proven solutions in the fight to protect Australia's oceans, and the marine environments across our region.

Australians are increasingly concerned about the extent of plastic pollution in our oceans. It's an enormous problem. We need to slash the amount of plastic pollution entering our waterways and reaching our oceans by 2020, commencing immediately with all single-use and disposable plastics.

GLOBALLY, AUSTRALIA HAS THE THIRD LARGEST MARINE TERRITORY

Recommended policy for the Australian Government:

1. **Australia's marine parks -** By the end of 2019, restore the original 2012 zoning in the 44 Commonwealth marine parks which were suspended in 2013 by the then-government, make any further improvements to zoning which increase the health of the environment, and reinstate the original budget of $100 million for fisheries adjustment, management and engagement.

   Cost: $100 million over 3 years.

2. **Pacific coastal fisheries** – Few other aid initiatives currently prioritised in our region would do more to build the immediate social, environmental and economic resilience of the Pacific than doubling the proportion of aid to the Pacific allocated to sustainable fisheries management, with a focus on coastal fisheries. In the long-term, such investments would also be foundational in supporting the Pacific to develop a sustainable and inclusive blue economy.

   Cost: $12.5 million over 3 years.

3. **Antarctica** – The Australian Government should increase its international advocacy to establish the East Antarctic Marine Protected Area with France and the European Union. In addition, it is vital to increase funding for research in East Antarctica, which will enable effective design and implementation of this protected area. This is an area that is currently data poor, particularly on climate change impacts on krill and krill predators such penguins, seals, seabirds and whales that migrate between Australia and the Antarctic continent.

   Cost: $20 million over 3 years.

4. **Plastic pollution** - Implement and commit to a national plastic pollution accreditation program and plastic reduction target.

   Cost: $9 million over 3 years.

GREAT BARRIER REEF - AERIAL VIEW OF HARDY'S REEF © VIEWFINDER AUSTRALIA PHOTO LIBRARY

A FLOURISHING GREAT BARRIER REEF

The Great Barrier Reef is one of the natural wonders of the world. It is the largest living structure on the planet and provides a home to 1,625 species of fish, 30 species of whales and dolphins, and 215 bird species. The Reef also supports a global tourism industry that employs a full-time equivalent workforce of 69,000 and contributes approximately $5.7 billion to the Australian economy.[6]

The key threat to the Reef is climate change. In 2016 and 2017 the Great Barrier Reef experienced unprecedented back-to-back coral bleaching events due to warm waters. This resulted in around half of the Reef's coral dying. National and global action to reduce greenhouse gas pollution to achieve the objectives of the Paris Agreement is essential to the long-term health of the Reef (see *'Reducing greenhouse pollution and increasing renewable energy'* above).

Another critical threat to the Reef is water pollution, particularly from beef and sugar cane farms. Sediment pollution from beef farms washed into the Reef lagoon blocks light and smothers corals and seagrasses. Nitrogen pollution from sugar cane farms fuels crown of thorn starfish outbreaks. These outbreaks inflict severe damage on the Reef. In 2017 the World Heritage Committee *'strongly encouraged'* Australia *'to accelerate efforts'* to meet the water quality targets and requested a report demonstrating effective performance by December 2019.

Some of the measures to improve Reef water quality are identified in the *Reef 2050 Plan*, the report of the *Great Barrier Reef Water Science Taskforce* and the R*eef 2050 Water Quality Improvement Plan*. However, despite the existence of the information and modelling capacity, there is currently no document which sets out the full set of actions and investments that will deliver on the government's commitment to achieve ambitious pollution cuts by 2025.

In July 2016, the Queensland Government released a report, *Costs of achieving the water quality targets for the Great Barrier Reef* , which estimated it would cost $8.2 billion to achieve Reef water quality targets by 2025. Currently, the Federal and Queensland Governments have invested approximately $1 billion over 10 years.

New catchment water quality targets have revised and reduced the amount of pollution to be abated, and as a result, the amount of funding required has also reduced. However, governments are yet to assess the specific actions, and investment needed, to achieve the targets. Until these revised actions and associated funding costs become known, WWF recommends that Federal Reef water quality budgets initially be increased by $100 million per year for the next five years, over and above the existing budget level committed by the Australia Government to the World Heritage Committee[7]. This would act as a down payment of the investment that will be needed to achieve the 2025 pollution targets.

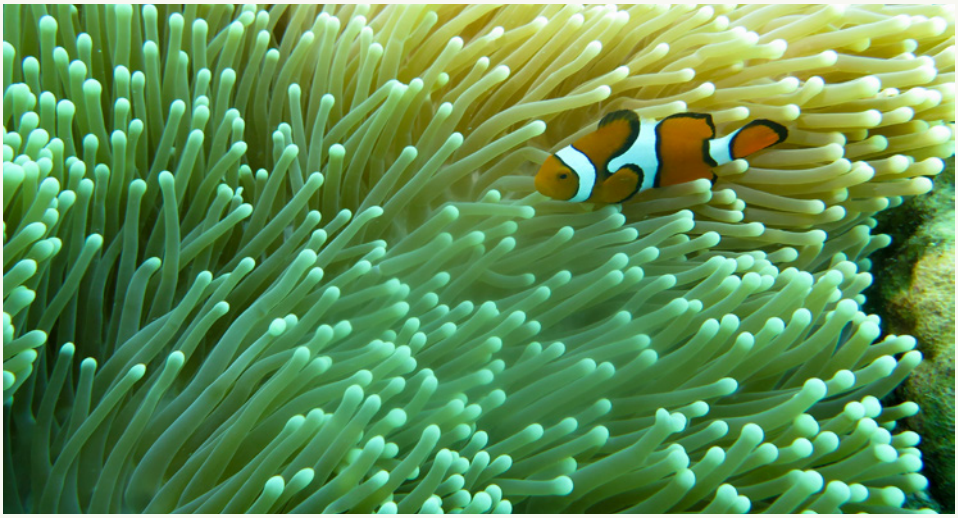
THE GREAT BARRIER REEF IS THE **LARGEST LIVING STRUCTURE ON THE PLANET**

and provides a home to 1,625 species of fish, 30 species of whales and dolphins, and 215 bird species

Recommended policy for the Australian Government:

1. Amend the *Reef 2050 Water Quality Improvement Plan* within the first six months of the term to identify the specific and measurable actions and investments needed to achieve the 2025 water pollution reduction targets – so there is a clear plan to implement the most cost-effective projects across Australian and Queensland Government programs, as well as those funded by the Great Barrier Reef Foundation.
2. Increase the Reef budget by $100 million per year for the next five years, over and above the existing budget level committed by the Australian Government to the World Heritage Committee[8], as a down payment of the investment needed to achieve the 2025 pollution targets (see point 1, above).
3. Match the Queensland Government's commitment to implement all the recommendations of the Great Barrier Reef Water Science Taskforce, including putting the new pollution load limits in federal law.
4. Establish an independent steering committee which draws on the expertise of the Reef 2050 Independent Expert Panel and the Reef Advisory Committee to ensure the independence and credibility of the 2019 Great Barrier Reef Outlook Report. As part of this, commit to GBRMPA undertaking a detailed re-assessment of the Outstanding Universal Value (OUV) of the Great Barrier Reef World Heritage Area to underpin the Outlook Report.
5. Establish a $1 billion Northern Australia Precision Agriculture Fund which provides low-interest loans to beef, sugar, aquaculture and other farmers who wish to purchase new machinery and/or adopt new practices to cut water pollution whilst boosting profitability.

Additional cost: This would be an 'off-budget' program.



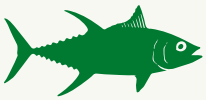
ORANGE CLOWNFISH (AMPHIPRION PERCULA), NEAR LIZARD ISLAND, GREAT BARRIER REEF © WWF-AUS / HOLLY SARA

6 Deloitte Access Economics (2013). Economic contribution of the Great Barrier Reef, Great Barrier Reef Marine Park Authority, Townsville.
7 Costs of achieving the water quality targets for the Great Barrier Reef, Alluvium, July 2016.
8 *The Reef 2050 Plan Investment Framework* (Australia Government 2016) sets out the five year funding commitment as $716.6 million.

SUPPORT SUSTAINABLE LIVELIHOODS

Around 70% of the world's poorest people depend on natural resources for all or part of their livelihoods. The world's poorest people are also disproportionately affected by climate change, and least able to afford to adapt.

In the Pacific, coastal fisheries are a key source of primary and secondary employment and provide most of the region's dietary protein. The economic value derived from marine fisheries, mangroves, coral reefs, seagrass, coastal tourism and carbon absorption is significant – and is broadly equivalent to the combined GDPs of Fiji and Solomon Islands in the Melanesian region alone. Between 2010 and 2015, global Official Development Assistance to fisheries declined by more than 30% while grants for non-fisheries sectors increased by more than 13%. Greater government support for the sustainable management and conservation of coastal fisheries is needed.



70%
OF THE WORLD'S POOREST PEOPLE
DEPEND ON NATURAL RESOURCES FOR ALL OR PART OF THEIR LIVELIHOODS

Recommended policy for the Australian Government:

1. Introduction of a target - that goes beyond environmental safeguards - to require more than 80% of aid investments, regardless of their objectives, to effectively address environmental issues and protect biodiversity in their design and implementation.
2. With a focus on finance for adaptation, scale-up Australia's public climate finance commitments to $600 million per annum, increasing to $1.6 billion by 2020.
3. Continue the aid program's focus on women's empowerment, with a stronger emphasis on addressing the structural and cultural obstacles to women's leadership in natural resource management.

9 Available at: https://consult.treasury.gov.au/budget-policy-division/2018-19-pre-budget-submissions/consultation/view_respondent?uuId=393953111

FINANCIAL COST OF PROPOSALS

Item	2019-20 ($m)	2020-21 ($m)	2021-22 ($m)	Program total (2019-22)
Threatened species recovery programs	250	250	250	**750**
Invasive species control	140	140	140	**420**
National parks and protected areas	170	170	170	**510**
Independent national environmental agency	20	20	20	**60**
Additional Working on Country rangers	140	170	200	**510**
Healing Country program in urban and regional centres	30	30	30	**90**
Restore funding to ARENA	500	237	468	**1205**
Establish an Energy Transition Advisory Group	2	-	-	**2**
Australia's marine parks	33.3	33.3	33.3	**100**
Pacific coastal fisheries	4.5	4	4	**12.5**
Research in east Antarctica	7	7	6	**20**
National plastic pollution accreditation program	3	3	3	**9**
Great Barrier Reef water quality	100	100	100	**300**
Australia's public climate finance				**1600**
Total	**1,400**	**1,164**	**1,424**	**5,588.5**
Savings				
Phase out fossil fuel subsidies	3000	3000	3000	**9000**

Further detail is provided in the Australian Conservation Foundation and WWF-Australia (2017) *2018-19 Pre-budget Submission to the Department of the Treasury*.[9]

HONEY POSSUM © HENRY COOK

#togetherpossible

GREAT BARRIER REEF

Saved more than 10,000 sharks, dugongs, turtles and dolphins, each year through the purchase of two shark net fishing licences.

ANTARCTICA

1.5 million-square-kilometre Marine Protected Area declared in the Ross Sea.

PACIFIC

Over 1,000 women in PNG and Solomon Islands empowered to improve their livelihoods and the sustainability of coral reefs.

CREATING A LOW CARBON FUTURE

250+ companies now form part of WWF's Renewable Energy Buyers Forum.

INDIGENOUS PARTNERSHIPS

We work with 100 Indigenous rangers in the Kimberley and northern Queensland to protect the bilby, Gouldian finch, northern bettong and turtle.

WWF

Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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