



**INQUIRY INTO THE EFFECTIVENESS OF THREATENED SPECIES AND
ECOLOGICAL COMMUNITIES' PROTECTION IN AUSTRALIA**

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Re: the effectiveness of threatened species and ecological communities' protection

SOCIETY OPERATES ON the “pre-Copernican” view that the environment revolves around us, to such an extent that climate change and other forms of environmental degradation, including species extinction, are to all effects and purposes, generally ignored. Humanity, however, like all forms of life, is entirely dependent on natural resources. If our resource use exceeds regeneration, then society will decline.

Australian society has generally failed to replenish its natural resources, but we have succeeded to preserve to some extent parts of the natural environment for the future. This inquiry should note that some vested interests are now attacking the credibility of publicly-owned protected areas, including the benefits of these areas to wildlife.

The primary reason wilderness should be protected is to ensure that at least some parts of the natural environment are managed for nature. There is nothing racist about the wilderness concept. The protection of large intact natural areas for the benefit of the native plants, animals and landscapes that exist within them cannot be intrinsically a racist concept, any more than the existence of a building or a plant can be a racist concept. Large intact natural areas exist in an external reality separate from our concepts of them. Ignore wilderness, as governments in Australia are tending to do, and they will go away, and far more rapidly than is believed. The loss of wilderness will have a significant adverse impact on the management of biodiversity, including on threatened species and communities.

Protected wilderness, where humanity needs are a secondary consideration, is where visitors to it can reflect upon our relationships with nature. Whether those visitors are of the view that we be caretakers or gardeners or a mixture of both, wilderness is essential to our understanding of nature. Without opportunities to experience what it means to place the needs of other species and of landscapes embodying ecological communities before our own, must reduce the chance of success of any threatened species management regime.

This inquiry should acknowledge that the presumption of nature being but just a resource for human exploitation is wrong. Nature has intrinsic value; and too few rights. Wild nature and large intact natural areas have a right to exist.

This Inquiry should recommend that those community organisations who seek to defend nature, in this case threatened species and ecological communities, should be granted the legal powers (e.g. third party rights under the EPBC Act) and financial capacities to do so (e.g. enhanced GVESHO grants).

The Nature Conservation Council of NSW in its February 2011 submission to the *draft Biodiversity Strategy for NSW* noted ‘the long-standing tension in conservation planning

between rarity/threat and resilience. Given the current knowledge about the trajectory of climate change and the severe threat that it represents to biodiversity, we believe that it is crucial that conservation planning at this point moves beyond just addressing threat and also properly considers conservation priorities in relation to resilience.’ In the long run, it is in resilient landscapes that threatened species and ecological communities should be most secure.

Soule et al, 2005 states that *‘Conservation planners, too, must consider climate change scenarios in developing plans for the persistence of biodiversity. First, major, climatically-driven biome changes cannot be accommodated by small isolated protected areas’*.

The Hawke Review of the Federal Environment Protection and Biodiversity Conservation Act (the EPBC Act) found that the conservation of biological diversity and ecological integrity be the fundamental consideration in that Act. Protection of ecological integrity is fundamental to threatened species conservation. These remarks have implications for the management of the National Reserve System.

It would be, for example, a disaster to apply multiple use concepts to the National Reserve System as some advocates are proposing. Society should not exploit its national parks and reserves, but instead continue to encourage sustainable multiple use of farms, forests and Crown reserves. It is on these lands where nature conservation goes hand in hand with primary production and conservation management practice.

For example, tree plantations on grazing land should be facilitated to arrest soil salinity and erosion. The 15-20 million trees estimated to be required would also provide ample timber for prosperity and to a small extent help to slow climate change.

The multiple use paradigm and initiatives like the National Wildlife Corridors Plan are appropriate approaches to land resource conservation and management on private lands, State Forests and Crown reserves. In national parks and nature reserves, however, a multiple resource use philosophy would defeat the purpose of setting lands aside from development for nature.

National Parks are the very last places on earth where nature-centred values prevail over use-centred perspectives. They remain places for nature conservation, where natural beauty and ecological integrity are valued above profit and use. Such a land management practice is the most practical approach to nature conservation for our urban-industrial society. Without wilderness, our urban-industrial culture becomes an inescapable prison without boundaries across Australia.

The continued expansion of our economy will place ever more demands on natural resources, produced from once natural lands that were cleared for farming or other forms of exploitation. It follows that the pressure on remaining natural areas is also ever increasing, which is why national parks and laws protecting threatened species and ecological communities are essential bulwarks to hold back these economic pressures. **In this context of increased pressure on the natural environment, it is essential that Federal environmental powers are not delegated to the states, as the states do not have a duty under international law to protect the biodiversity. This duty falls on the shoulders of the Federal Government.**

Wilderness is the word used by the Colong Foundation to describe the larger remnants of the natural environment. It is generally accepted that the minimum area of such remnants is about 5,000 hectares.

The reservation of smaller remnants is very desirable, and sometimes essential for the preservation of some threatened species, ecological communities and outstanding scenery, but the smaller areas, though they preserve flora and some fauna, are more vulnerable to the intrusion of both human and feral predators. The changes of protecting threatened species in wilderness are generally greater. The margins of wilderness areas are equally vulnerable, from too frequent fire for example, but most wilderness areas afford good, healthy habitats for native wildlife.

It is a national disgrace that wilderness is being lost from the National Reserve System, and the best chance of survival for many species is being lost with it. Wilderness is part of the International Convention on Biological Diversity, a fact that is regularly overlooked (and a Federal Statute precedent for wilderness under this Convention already exists¹).

In wilderness native species are safe in natural habitats that not yet fragmented for our purposes. The hostile wilderness critics wish to permit further fragmentation and foster the use of protected areas for the usual economic and social imperatives. So in many protected areas in the National Reserves System, native plants and animals are now unsafe as our needs are becoming a primary consideration.

Wilderness in the National Reserve System is not adequately protected under law. Wilderness in the National Reserve System should be bastions for nature. These areas are our bequest to nature and our future generations.

Once we begin to exploit these precious protected areas, society is set upon the downward spiral into decline. Developing protected areas, for whatever reason, is the environmental equivalent of selling cheap Government Bonds to gain cash flow; it heralds decline.

The only secure habitat is a fenced area within which all feral wildlife has been eliminated and the fence is adequately maintained. As the troubles of Earth Sanctuaries prove, this is beyond the capacity of private enterprise, and an outlay not favoured by governments. A more recent example from July this year is the predator fence constructed by volunteers around Queensland's Currawinya National Park. It was damaged by the recent floods allowing feral cats to nearly wipe out the bilbies protected inside.

The protection afforded to native flora and fauna in national parks and wilderness is the best practical alternative to intensive wildlife management methods that rely on uncertain, much greater inputs of capital and human resources.

This inquiry should recommend that wilderness areas within National Reserve System should be identified and protected from fragmentation and degradation.

This inquiry should recommend that wilderness areas in the National Reserve System should be matters of national environmental significance, so that proposed development in these "protected" wilderness areas could be deemed controlled

¹ By way of precedence, this provision in the Convention was used for protection of wilderness in the Telecommunications (Environmental Impact Information) Regulation 1997 No. 252.

actions when appropriate. In this way the loss of wilderness within our wonderfully protected areas in the National Reserve System can be curbed.

At the Kyoto Conference 31 developed nations agreed to limit their emissions by the year 2012 to targets below the levels of 1990. Australia, Ireland and Norway were allowed to increase their emissions. The targets, however, were only allowed to be increased if additional emissions were offset by the establishment of “carbon sinks”, which Australia was to achieve by stopping land clearing.

Vast areas of Australia are subject to serious environmental degradation. Most of Australia’s cropping soils have probably lost about half their original topsoil organic matter. Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO) estimates that land degradation has cost Australian’s about \$1 billion annually. In temperate ecosystems, less than 2% of the original grasslands remain. The clearing of native ecosystems must cease.

Society needs, we all need to continue to make greater efforts to restructure its unsustainable systems to address the pressing environmental imperatives that face us. To this end, Australia has an international obligation to ensure land clearing is permanently banned.

This Inquiry should recommend that any clearing of not only threatened species and ecological community habitats but also large intact natural areas should be matters of national environmental significance.

This inquiry should encourage habitat connectivity by endorsing the National Wildlife Corridors Plan.

MECHANISMS TO IMPROVE FUNDING FOR PROTECTED AREAS AND THREATENED SPECIES MANAGEMENT

Improved management of parks and reserves should be funded by the elimination of public expenditure on environmentally destructive activities, like logging native forests, particularly on public lands, and the imposition of taxes on polluting activities, like the carbon tax.

Such mechanisms enable society to restructure towards ecological sustainability, the sustainability upon which our economic (pre-Copernican) lives depend. When such reform is undertaken during times of economic wellbeing, those who are disadvantaged can be more than adequately compensated, just as the compensation that accompanies the carbon tax is being provided for low and middle income earners.

By devoting a realistic amount of the government income created through reducing environmental destruction and pollution to nature conservation, national parks and threatened species management could have an enhanced income stream. It would also build a stronger relationship between the tax-payer and the National Reserve System, threatened species and ecological communities and nature generally.

These two mechanisms (elimination of subsidies for environmental destruction and introduction of pollution taxes) would ensure that the economic surplus gained by depleting or degrading natural resources fairly compensates the natural environment.

This inquiry should recommend that the National Wildlife Corridors Plan be integrated into the Carbon Farming Initiative through appropriate allocation of carbon credits, recognised offset and sequestration projects.

PEST SPECIES MANAGEMENT

Pest species are animals (including invertebrates) and plants that have negative environmental, economic and social impacts. In parks, pests may have impacts across the range of park values, including impacts on biodiversity, cultural heritage, catchment and scenic values.

It is estimated that Australia gains around 20 new pests or diseases each year. Some well-known examples include cane toads, rabbits, willows and, more recently, black striped mussels and red fire ants.

There are very serious vertebrate pest problems across the entire continent. It's not a problem restricted to national parks. A rational response to this environmental threat requires well-planned and coordinated programs with specific goals of environmental impact reduction, using effective and humane methods, and with monitoring to assess whether goals are being met.

Pests are among the greatest threats to biodiversity. In New South Wales, by 2007 they had been identified as a threat to 657 of 945 (70%) species, populations and communities listed under the *Threatened Species Conservation Act 1995*; more than any other process except the destruction and disturbance of native vegetation. Minimising the impacts of pests on biodiversity is thus the main objective of pest management.

The mantra of wilderness opponents, that wilderness is a refuge for weeds and pest animals is generally incorrect. Pests are controlled in wilderness as they are on all public lands, and are less prevalent in well managed wild places.

Wilderness is not pristine but it is the best, least disturbed bush that is left, and society should do all it can to protect these areas, including statutory protection and adequate pest management. Eradicating wilderness by opening it up to horse riding, 4WD vehicles and trail bikes can only make the pest management task harder as these vehicles are vectors for weeds and access tracks provide ready ingress for foxes, cats and dogs.

The Colong Foundation strongly supports appropriate and effective weed control and humane culling of all exotic pests. Where a national park is involved these management actions should be approved by a park plan of management.

Highly qualified pest control officers can kill hundreds of vertebrate pests a day. For example, through the use of helicopters they can eradicate hundreds of goats in a few hours. Amateur hunters in a ground-based operation can only cover a few hectares, provided they have the sufficient fitness to safely traverse rugged park terrain.

Supervised hunting activities actually restrict effective control of pest species by diverting limited park staff and resources. Even if feral animals are located during these hunting

forays, amateur hunters will find it difficult to get a clear shot in forested parks. Animals will be maimed and suffer horrible deaths as a result.

The NSW Shooters and Fishers Party allege that the impact by recreational hunters on pest and feral animal populations has been proven as every pest animal killed counts. They also say that shooting ducks is appropriate because there are millions of ducks and the ones hunters shoot would die anyway. Unlike native ducks, whose long-term population levels are in decline, feral animal populations are on the increase and require effective control. To control feral animals, the techniques used must remove over half of a population annually. Hunting just doesn't have any positive impact on vertebrate pest populations.

The Foundation's recommendations on vertebrate pest management (from the National Parks Association of NSW submission to the 2002 NSW Upper House Inquiry into the management of feral animals) are:

- 1 There should be integrated pest-species control regimes, based on specific action plans, covering natural geographic areas such as whole catchments or bioregions.
- 2 More detailed information, more study is needed into the ecology of certain feral animals, e.g. foxes.
- 3 Much more work needs to be done into the development of biological control agents and the use of sterilisation agents.
- 4 There should be adequate, enforceable deterrents against the release of animals into the wild.

The cost of removal/destruction of animals released, or escaping from custody, should be clearly the responsibility of and borne by the owner, who should also be subject to prosecution.

- 5 Shooting is still one of the most effective and humane methods for the eradication/control of large feral animals, including horses, as long as sufficient calibre rifles and qualified shooters are used.

The Committee should recommend against the ban on aerial shooting of horses.

- 6 No aerial or surface use of poisons (1080) should be permitted.
- 7 1080 should only be targeted at canids (foxes and dogs) and, if used, should only be placed in special bait stations under more than 10 cm of soil.

No more than one bait per bait station should be used.

The quantity of 1080 per bait should be reduced below 3 mg - the exact quantity - so as to avoid the accidental by-kill of *Dasyuris maculatus* as determined by recent scientific measurement.

- 8 Animals killed by poison should be collected and taken out of the surface foodchain by being buried at least 50 cm below the ground.

- 9 All baiting programs (whether to protect stock or wildlife) should only be a component of a larger, long-term, ongoing action plan which includes the use of other, appropriate management techniques.
- 10 Greater resources should be applied to control of feral animals, and
- 11 More rational, cross-jurisdictional and uniform sets of legislative procedures should be formulated for the control of pest species

In 2010-11 the NSW Game Council issued 15,080 hunting licences and reported 14,161 animals killed on public land or 0.9 pests per hunting trip. Some 46% of the animals shot were rabbits, about 20% were goats and about 16% were pigs. Wild dogs, which are one of the biggest problems for landholders made up just 0.5% of all animals taken (NSW Game Council Ann. Rpt., pgs 13 & 15). The annual budget for the NSW Game Council is \$2.5 million, so each pest animal killed on public land cost \$176.50.

These figures demonstrate ground-based recreational hunting is an ineffective means of feral animal control. Removing the occasional rabbit, goat or pig using is a waste of public money and time.

Given these poor outcomes, **this Inquiry should recommend that recreational hunting should not be considered an 'introduced animal emissions avoidance project' under the *Carbon Credits (Carbon Farming Initiative) Act 2011 (Cth)*, but instead be included in the 'negative list' of excluded projects under the regulations.**

LISTING PROCESSES

The listing of threatened species must remain independent of Government, business or other vested interest, and the broad scope for public nomination of threatened species and ecological communities should remain in place. The Colong Foundation respects the right of scientists to make decisions on the best information available and hope that such decisions are not compromised by bias or politics.

Exposing scientists to scrutiny is also a good thing, but removing independence of the committee would only serve to compromise the purpose of the Act. We are not convinced that bias does not operate to some extent, or it may be simply a matter of incomplete information and limited Committee resources. We hope that this submission may be brought to their attention.

The Colong Foundation draws this Inquiry's attention to the review of the definition for the listed Temperate Highland Peat Swamps on Sandstone community so as to include the coastal upland swamps on Woronora Plateau within it. This review has been proceeding very slowly given that it is merely a minor change in definition.

These biodiverse coastal swamps are being damaged by intensive underground mining and unless protected by a Federal listing more will be damaged. The state regulators are well aware of the damage, and yet it continues.

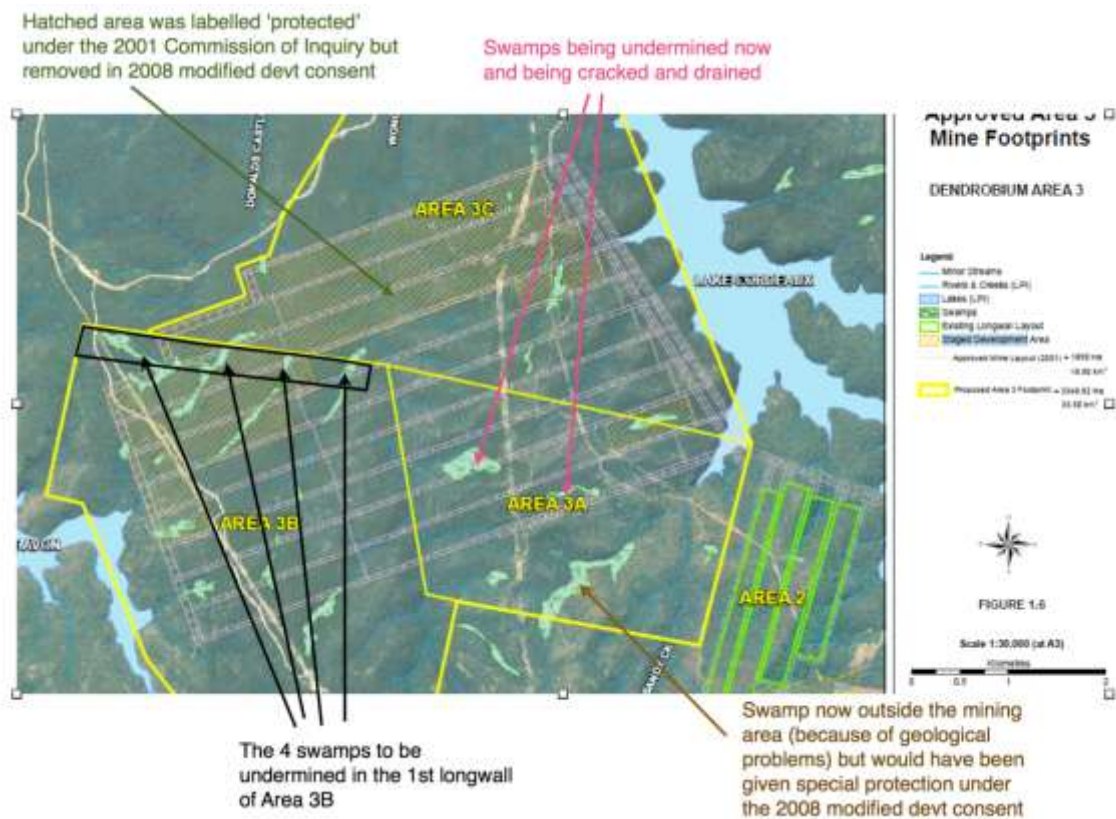
The regulatory situation on Woronora Plateau is almost identical to that on Newnes Plateau in the western Blue Mountains. Until Commonwealth approval was required for coal mining under Temperate Highland Peat Swamps on Sandstone on the Plateau, four swamps were severely damaged. After a decade of inaction by state regulators to adequately protect this threatened swamps on Newnes Plateau, the Commonwealth approvals excluded longwall mining under high quality swamps.

History is repeating itself on the Woronora Plateau where mining has damaged swamps there. Underground mining is soon to begin under the largest swamps and most significant swamps in the area. The predictions are that surface cracking of the sandstone will occur under these swamps, meaning significant damage to the swamps.

Delays in Commonwealth listings can have very dire consequences, including in this case damage to Sydney's specially protected Metropolitan water supply catchment. Even when state regulators are well informed of the damage outcomes, and the consequences of the damage are significant, state regulators are not able to take effective action.

This inquiry should ask the scientific committee what progress is being made on the assessment of the redefinition of the Temperate Highland Peat Swamps on Sandstone to include the coastal upland swamps.

Figure 1 below shows the situation (from a 2012 submission by Dr A. Young, the preeminent expert on these swamps and sandstone geomorphology):



STRATEGIC ASSESSMENTS

Strategic assessment can switch off the site specific assessment under the EPBC Act. There should be objective tests in the EPBC Act to ensure the quality of the data that drives these regional assessments is adequate. Assessment should not rely on existing data where experts consider these data are deficient. Without adequate and relevant data, these assessments are not strategic but counter-productive.

Threatened species and ecological communities should not be rezoned for development. Strategic planning should ensure that threatened biodiversity is protected at all sites. To allow one site is destroyed for the better protection of another is not good strategy.

This Inquiry should recommend that strategic assessments flag large intact natural areas (wilderness), endangered ecological communities and threatened species habitat for automatic environmental protection.

Environmental assessments for projects are of course more detailed and will identify other values in addition to those identified by a strategic assessment. Where new information identifies additional areas with threatened species and endangered ecological communities that were not identified by strategic assessments, these too should be protected. For this reason strategic assessments should not turn off protection for threatened species and endangered ecological communities.

This Inquiry should recommend that strategic assessments are not a substitute for environmental assessments for particular development proposals.

This inquiry should recommend that strategic assessments should not remove obligations for project-based environmental assessment or any subsequent protection of identified values, including threatened species and ecological communities.

BIOBANKING

Biobanking should remain a voluntary scheme. Its stated purpose of enhancing biodiversity has not been demonstrated. The process of maintaining or improving biodiversity by allowing development in sensitive areas is flawed.

The lack of public participation and scrutiny of biobanking negotiations increases public concern with biobanking. The public should not be required to 'trust' developers with the protection of threatened species and ecological communities.

The 'trust us' regulatory model rarely works; either third parties with an interest in biodiversity conservation should be at the biobanking negotiating table or be in a direct oversight role in relation to these market transactions so as to protect the public interest in threatened species.

The biobanking process ensures that an equivalent site to that protected is destroyed. Thus the process can rapidly reduce the total amount of threatened biodiversity.

For example, in the situation where less than 1% of the pre-1750 area of each endangered community remains in Western Sydney, surely adopting a program to save the remaining habitat is required. Biobanking on the other hand guarantees that the EEC habitat reduces by half. It is not a good solution for the preservation of EECs as destruction of habitat continues.

Through biobanking, the stated management hierarchy for minimising harm to EECs of: avoid first; mitigate if there is development; and then offset becomes instead a mechanism to allow for development of areas that should be protected.

If, for example, the Sydney Region Growth Centres contain EECs, then the growth centres are in the wrong spot. EEC's and threatened species habitats should not be subject to biobanking.

This Inquiry should reject biobanking as an inappropriate substitute to protecting threatened species or endangered ecological communities.

THE DINGO AND BIODIVERSITY CONSERVATION

The Victorian scientific committee on threatened species has listed the dingo. Hybridization by feral dogs is a threatening process for dingoes. Further, there is substantial evidence of the importance of dingoes as top carnivores in suppressing other predators (e.g. Dr Purcell of UWS). So protecting dingoes does not mean that other threatened species are placed at greater risk.

Professor Chris Johnson of James Cook University, Townsville, observed that on a beef-cattle station in northern NSW the owners did not try and control the dingoes. There were no foxes on the property because they were hunted and killed by the local dingoes. He observed this also in other areas of Australia where there is a stable dingo population and found that there is less extinction of species in such areas.

There are some dramatic illustrations of this. One of the last mammal species to become extinct on mainland Australia was the Mala, or Rufus Hare Wallaby, which was lost in about 1990. It is still being bred in captivity and there are populations on islands off the West Australian coast, but on the mainland it is extinct in the wild. In the mid 1980s there was one population of Malas left in the Tanami Desert and they lived in an area that had lots of dingos. Dingos occasionally preyed on them and it seemed like a good idea to poison the dingos to help boost the Mala population, so that was done. But within a couple of weeks of poisoning the dingos, foxes invaded the area, cats invaded the area, and before too long all of the Mala had been killed. There was a person doing a PhD study on the Mala, so he could see exactly what happened. Fox tracks would appear in one part of his study area and very quickly the Mala tracks would disappear. Then the fox tracks would move on to another part of the study area and the Mala tracks would disappear there. It could have been just a few individual foxes moving through the colony that eventually killed the whole lot of them, but that hadn't happened until the dingos had been removed. This suggests that we can use the Dingo as a kind of biological control of foxes and cats, and that this can actually work to prevent extinction.

This Inquiry should recommend that the role of the dingo in biodiversity conservation needs to be researched with the view to inscribing appropriate threatened dingo populations in the National Reserve System under the EPBC Act as soon as possible.

IRREPLACEABLE BENEFITS OF WILDERNESS

Australia's remaining wilderness areas are shrinking, biological 'islands' in an expanding sea of exploited land. The number of species that can survive on these 'islands' decreases as the 'islands' become more fragmented.

But there is hope, if this Inquiry promotes the undeniable and irreplaceable benefits of wilderness.

Wilderness holds a genetic store of unimaginable wealth. Only in wilderness could the Wollemi Pine (*Wollemia nobilis*) survive unknown for 200 years of European occupation. In the relative stability of the deepest canyons of our largest forest wilderness, these 30-metre trees survived 100 million years of climate change. Their discovery has brought home to the world that Australia's wilderness contains biological treasures of great importance to science and society. Opportunities yet to be grasped in our wild places include examination of the medicinal properties of native plants known to Aborigines, such as certain grevilleas, and opportunities for improving pasture contained in the genetic resources of our rapidly diminishing native grasslands.

The significant variation in altitude, soil and terrain in the wilderness areas on Australia's eastern seaboard may provide the essential opportunities for wildlife to relocate in response to global warming.

The rare and isolated plant populations and ecosystems of today are the survivors of previous warmer and wetter climatic conditions. They may be essential to the ecosystems of tomorrow.

Wilderness provides opportunities to study responses to climate change in environments where other types of disturbance is minimal. Such studies may enable scientists to recommend appropriate measures for wildlife survival in fragmented habitats where extinctions are likely, and how to adapt fire management and farming practices to a warmer world.

Our ability to retain wilderness is a key indicator of whether the Australian environment as we know it is environmentally sustainable. For example, to cease building wilderness-flooding dams Australians need to stop wasting fresh water. It is more important than ever to stop clearing native vegetation, reverse soil erosion, tree dieback, river salination and salt scalding of agricultural lands, to cease pesticide contamination of food crops and contain urban pollution and sprawl.

Wilderness, the ultimate self-sustaining natural system, provides the necessary inspiration for an ecologically sustainable society. Its undisturbed catchments also supply a higher, more constant water yield and quality than disturbed catchments. It also reinforces the viability of fresh water native fish populations and other aquatic life.

Wilderness has provided inspiration to philosophers such as Henry Thoreau and Aldo Leopold, and the Australian poet Judith Wright. The best opportunities for solitude and peace are found in wilderness. The wilderness has an enviable track record as a source of spiritual renewal and in providing an insight into humanity's place in nature.

Wilderness offers protection to the 40,000-plus years of Aboriginal history by helping to keep cultural heritage sites isolated and secret. Wilderness has enriched all our lives with art.

Who can deny the artistic impact of Peter Dombrovskis' image of Rock Island Bend — initially a campaigning tool to help stop the Franklin Dam and more recently seen as marking a turning point in Australia's environmental and political history.

Whether we see wilderness conservation as pragmatic resource management, whether we treat wilderness as a scientific store-house of natural diversity or an object of beauty — and therefore a source of human creativity and spiritual peace — the future of the Australian wilderness is inextricably bound up with the quality of all life on this planet.

Thank you for the opportunity to make this submission.

Yours faithfully,

Keith Muir
Director
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References:

Soule, M. E. et. al. 2005 The Role of connectivity in Australian Conservation, in Pacific Conservation Biology, pp 266-279.

Convention on Biological Diversity (1992) includes wilderness for the purposes of identification and monitoring (reference: Article 7(a) and Annex I of the convention). Note: the Annex is part of the Convention.