

## Tree Clearing, Endangered Species Legislation & Critical Habitat: *Conflict Ignition or Conflict Avoidance & Agricultural Systems?*



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***22 August 2016***

### SUMMARY

1. From the time Queensland's Vegetation Management Act came into force in September 2000, **one of its purposes** - to regulate the clearing of vegetation in a way to conserve biodiversity - has been a constant legal obligation.
2. There are good reasons for this. Australia's biodiversity is currently in decline. The primary threat for loss of native fauna is when habitat critical for their survival becomes destroyed, degraded or fragmented. Other threats also exist.
3. Controversy has arisen over **Queensland's tree clearing laws** and management of habitat critical for the survival of fauna and flora; especially for the LULUCF categories of "*cropland management*" and "*grazing land management*".
4. Regulatory control of tree clearing in agricultural systems, to protect critical habitat, poses a novel, complex problem for the Queensland Government.
5. The **needs** for Government are legal obligations to regulate tree clearing in a way, that includes preventing the loss of biodiversity and conserving remnant vegetation. At the same time, a legal obligation to allow for sustainable land use.
6. Farmers and graziers recognise the ecological **need** for tree clearing controls. Their **concerns** are the impacts on their financial viability and the flow-on social and economic impacts on regional Queensland as well as national food security.
7. The challenge for Government is how to reconcile these **"interests"** (i.e. '**needs & concerns**'), to avoid conflict; as well, to meaningfully involve all sectors of society that share an interest in **conservation** action for biodiversity.
8. The foundation for a pathway to avoid conflict will require one of the three cornerstones for the conservation of biodiversity - '*Critical Habitat*' - to be effectively addressed from the perspectives of both law and science.

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*Dr Ted Christie, Environmental Lawyer & Mediator – 22 August 2016*

### **Disclosure Statement:**

*Ted Christie does not work for, consult to, own shares in or receive funding from any company or organisation that would benefit from this article, and has no relevant affiliations.*

**KEY WORDS:** Tree clearing; legislation; threatened species; fauna; critical habitat; LULUCF; conservation; biodiversity; protected areas; scientific uncertainty; economics; conflict

Strict regulatory controls on the broad scale clearing of intact woodlands and forests should not be in dispute. On the other hand, control of regrowth on previously cleared land for agriculture and grazing, arising as a lease condition to achieve a “*Living Area*” under *Queensland’s Land Act*, requires careful consideration to avoid conflict.

The concept of a “*Living Area*” has been a cornerstone for the administration of State land in Queensland since its adoption in 1927<sup>1</sup>. Living area standards enable conclusions to be made about the size an agricultural or grazing property requires to remain economically viable in the foreseeable future.

Public debate recognizes the need for [conservation action for Australia’s biodiversity](#). More than [1,700 species](#) of fauna and flora, and ecological communities, are known to be threatened and at risk of extinction.

For LULUCF activities, the primary threat of tree clearing on biodiversity and endangered species loss arises when the habitat and biological systems critical for the survival of fauna becomes severely fragmented, degraded or destroyed.

Other threats to biodiversity decline and species loss are the introduction of alien or invasive species, over-exploitation of natural resources, changed fire regimes, pollution of aquatic environments and disease and climate change

Conflicts over threats to biodiversity that arise from a range of activities associated with the human use of natural ecosystems require solutions that have their foundations in both science and law.

It is for science to identify habitat that is ecologically critical for the survival of a species; and whether a specific human management practice is consistent with the needs for the conservation of threatened animal and plant species.

It is for law to ensure the appropriate degree of regulatory control, based on relevant and reliable scientific evidence. The evidentiary boundaries are set by the legal obligations imposed by endangered species legislation.

### **Regulatory Control of Threatened Species**

The legislative framework for regulatory control for the conservation of biodiversity, adopted by Australia in the 1990s, has its foundations in the *Endangered Species Act of 1973* of the United States. The framework in both countries has the following three cornerstones:

- i. The first step is to list a species threatened by extinction into a specific category for conservation (e.g. “*vulnerable*”, “*endangered*” ...) according to the likelihood of its extinction *i.e. if no conservation action is taken to address the threat to the species*. This step is based on scientific facts only;
- ii. Next, the designation of habitat critical for the survival of each listed species. *But, there are significant differences between Australia and the United States in this step*; and
- iii. The development of a recovery plan, or conservation plan, setting out actions necessary to stop the decline of, and support the recovery of, each listed species.

For the United States, the habitat that is critical for the survival of each listed species, must be defined and identified at the same time as listing.

But this is not the case in Australia. For example, under Commonwealth (*Environment Protection and Biodiversity Conservation Act, 1999*) and Queensland’s (*Nature Conservation Act 1992*) endangered species legislation, the critical habitat of a threatened species is not determined at the time of listing – but at a later time e.g. when a “*recovery plan*” or a “*conservation plan*” is prepared.

**Comment:**

In Australia – unlike the United States - the habitat critical for the survival of a threatened species may be unknown, for some time, following its listing.

In these circumstances, a listed species may be subjected to threats before their critical habitat is determined.

### **The Legal & Scientific Meaning of Critical Habitat**

Queensland’s endangered species legislation - the *Nature Conservation Act* (1992) – provides the following legal meaning for “[critical habitat](#)”:

- “habitat that is essential for the **conservation** of a viable population of protected wildlife or community of native wildlife, whether or not special management considerations and protection are required”.
- The legal meaning is extended so that critical habitat “may include an area of land that is considered essential for the conservation of protected wildlife, **even though the area is not presently occupied by the wildlife**”.

**Comment:**

A key issue for statutory interpretation is the legal meaning given to the concept of “conservation” in Queensland’s *Nature Conservation Act of 1992* - compared to its scientific (or technical) meaning:

- The **legal meaning** of ‘conservation’ is “the protection and maintenance of nature while allowing for its ecologically sustainable use”: Section 9, Nature Conservation Act (Qld); and
- The **scientific or technical meaning** of ‘conservation’<sup>2</sup> is:  
“... the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations.  
Thus, conservation is positive embracing **preservation, sustainable utilization, restoration and enhancement**”. (Author’s emphasis)

The contrast between the legal and scientific meanings for ‘conservation’ creates uncertainty for decision-making by Government for tree clearing controls.

Linking the Section 11 definition for ‘*ecologically sustainable use*<sup>3</sup>’ to the Section 9 meaning for ‘*conservation*’, leads to a conclusion that ‘*conservation*’ under this Act is more appropriate for “protected areas” such as national parks – rather than agricultural systems. It is primarily based on ecological considerations.

Applying this interpretation of ‘*conservation*’ to the regulatory control of tree clearing in agricultural systems is problematic: Sustainable land use for agricultural systems must address ecological, economic and social (including cultural) considerations.

The IUCN “scientific” meaning warrants consideration for its application to agricultural systems as it recognizes that “*conservation*” and “*sustainable development*” are interdependent.

A log-in-the-road in the legislative framework is that it does not prescribe how “*critical habitat*” is to be evaluated for all listed species<sup>4</sup>.

The question arises whether there is an accepted body of scientific knowledge to provide a pathway for evaluating critical habitat for threatened native fauna?

One such pathway focusses on two factors: **(i) habitat quality** and **(ii) conservation value**: *Habitat quality* is equally important as *conservation value* for any assessment of the habitat that is critical for the survival of a listed species<sup>5</sup>.

- The term *habitat quality* reflects ‘the extent to which the physical, biological and other environmental characteristics of an area correspond to the habitat characteristics of the listed species’.
- The term *conservation value* ‘means the ability of an area to support a listed species over the long term’.
- Objective criteria exist - based on an accepted body of scientific knowledge - that may be used to evaluate *habitat quality*<sup>6</sup> and *conservation value*<sup>7</sup>.

### **Critical Habitat & Economics: The United States Approach**

There is a significant difference in this issue between Australia and the United States.



Under the *Endangered Species Act* of the United States, the requirements for listing of a species are based on scientific facts only – as is the case in Australia.

But, in contrast to the requirements for listing under this United States Act, the designation of critical habitat is based on the “*best scientific data available*” – and after taking into account consideration of any other relevant impacts of specifying any particular area as critical habitat e.g. economic impacts, impacts on national security: Section 1533(2)<sup>8</sup>.

Under Section 1533(2), an area may be excluded from critical habitat if the benefits of such exclusion outweigh the benefits of specifying the area as part of the critical habitat - **subject to the qualification:** *That based on the best scientific and commercial data available, the failure to designate such area as critical habitat will result in the extinction of the species concerned.*

**Comment:**

Neither the Commonwealth’s nor Queensland’s endangered species legislation has an equivalent provision for designating critical habitat.

The primary focus for the conservation of biodiversity and the management of critical habitat in Australia has been on the network of *protected areas*: [Australia’s National Reserve System](#); more than 10000 protected areas cover over 137 million hectares.

*The System is made up of Commonwealth, State and Territory reserves, Indigenous lands and protected areas run by non-profit conservation organisations, through to ecosystems protected by farmers on their private working properties - and new eco-tourism businesses.*

However, the management of human use and tree clearing in agricultural land and grazing land tenures in Queensland poses more complex issues for taking conservation action for biodiversity and the management of critical habitat, compared to the [management categories of protected areas in Australia](#).

- **Conservation** action for biodiversity through regulatory control of tree clearing in **agricultural systems** is based on **sustainable use** and must focus on **ecological, economic and social (including cultural) considerations**.

- In contrast, **conservation** action for biodiversity in **protected areas** will be based on **preservation and restoration/enhancement** and will largely focus on **ecological considerations**.

## Conclusions

1. A former [Director General of the World Conservation Union \(IUCN\)](#) – the global authority on the status of the natural world and the measures needed to safeguard it - made the critical observation that *“To succeed [in actions for biodiversity conservation], we need new alliances across all sectors of society. Biodiversity cannot be saved by environmentalists alone – it must become the responsibility of everyone with the power and resources to act”*.
2. The Queensland Government’s **Species Technical Committee** would be an appropriate group to publish, as a public document, the existing database for *habitat quality* and *conservation value* for all listed species of native fauna. The document would also set out the methodology used to evaluate *habitat quality* and *conservation value* and be in a form that is readily available and understood *e.g. maps showing areas of land where the habitat is critically important to wildlife*. Knowledge of this document would facilitate public support in taking conservation action for biodiversity.
3. Following the recent failure of Government to introduce controversial new amendments to Queensland’s Vegetation Management Act, the challenge for Government is to meaningfully involve all sectors of society that have the power and resources to act: To find solutions for conflict over the regulatory control of tree clearing in agricultural systems. Solutions that would restore and enhance public trust and confidence in Government.

This article is based on the author’s book, [“Finding Solutions for Environmental Conflicts: Power and Negotiation”](#), at Chapter 9 (‘Biodiversity and Threatened Species’).

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## End Notes

<sup>1</sup> **Schedule 6, Dictionary, *Land Act (Qld) 1994*: “Living area** means the area of grazing or agricultural land that will be adequate to enable a competent person to derive from the working of the land, according to the use for which the land is suited, an income adequate to ensure a reasonable standard of living for the person, the person’s spouse and dependent children, as well as provide a reserve to meet adverse seasons and the cost of developing and maintaining the land at a sustainable rate of production throughout average seasons, having regard to—

- (a) the locality of the land; and
- (b) the nature of the land; and
- (c) the potential of the land for sustainable development; and
- (d) the distance of the land from transport facilities and markets”.

**See also:** Caltabiano, T., Hardman, J.R.P. and R. Reynolds (1999) *“Living Area Standards”*. Queensland Department of Natural Resources, Coorparoo.

<sup>2</sup> The origin of this [definition of “conservation”](#) is the ‘World Conservation Strategy’, prepared by the International Union for the Conservation of Nature (IUCN), and the following collaborative organizations: UNESCO, FAO, UNEP and the WWF.

**This definition was then adopted for the “[National Conservation Strategy for Australia](#)”; the Strategy recognizes that “conservation” and “sustainable development” are interdependent.**

<sup>3</sup> **Section 11, *Nature Conservation Act (Qld) 1992***

**“Ecologically sustainable use is—**

- (a) in relation to wildlife—the taking or use of the wildlife; or
- (b) in relation to protected areas—the use of the areas; within their capacity to sustain natural processes while—
- (c) maintaining the life support systems of nature; and
- (d) ensuring that the benefit of the use to present generations does not diminish the potential to meet the needs and aspirations of future generations”

<sup>4</sup> One exception are the Koala conservation criteria set out in the [“Nature Conservation \(Koala\) Conservation Plan 2006 and Management Program 2006 – 2016”](#).

<sup>5</sup> In a media statement on 13 August 2016, by [Queensland’s Environment Minister, Dr Miles](#) said scientists believed the greater glider had moved to a more severe category [for conservation] as a result of a range of threats, including tree-clearing. *“The greater glider feeds almost exclusively on eucalyptus leaves and buds, and lives in trees, so the destruction of its habitat and food source is sure to be detrimental to its survival”*.

**It is not in dispute that this conclusion is correct in terms of “habitat quality”. However, without any information on “conservation value”, scientific uncertainty would arise for the conservation category of the greater glider.**

<sup>6</sup> **Habitat Quality**

For an individual listed species, habitat quality may be considered in terms of scientific data in relation to:

*Physical characteristics* — such as landform, soil type, slope, aspect and elevation; and

*Biological characteristics* — such as vegetation structure (trees, shrubs, herbs), species composition and diversity or the presence of “indicator species” that reflect the biological condition (or status) of the area in response to disturbance, e.g. land degradation.

***The process of evaluation of habitat quality leads to areas being identified that contain a unique set of physical and biological characteristics necessary to support a listed species.***



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## **7 Conservation Value**

- i. The size of the area;
- ii. Configuration (or shape of the area), e.g. a “rounder” shape is preferred to a shape that is linear or irregular;
- iii. Spatial connectivity of patches of habitat that have become fragmented following human use activities, e.g. land-clearing for agriculture or human settlements — or through natural causes such as fire, drought or non-native species;
- iv. Length and width of habitat corridors;
- v. Exposure of habitat to unprotected edges;
- vi. Threats from non-native species; and
- vii. The role of unoccupied habitats and habitat refugia in population persistence.

### **Sources:**

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Olson, Todd (1996), ‘Biodiversity and Private Property; Conflict or Opportunity’, in William Snape III (ed.), *Biodiversity and the Law*, 67–79, Island Press, Washington D.C., USA.

## **8 Section 1533(2), Endangered Species Act of 1973 United States**

*“The Secretary shall designate critical habitat, and make revisions thereto, under subsection (a)(3) on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat.*

*The Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned”.*