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## **BIOTA PROPERTY RIGHTS FOR AUSTRALIA?**

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### **ABSTRACT**

In Asia and Oceania, the commodification of natural resources such as water and now biota, has resulted in changes to fundamental understandings of property rights. The interplay between modernity and customary rights to natural resources has brought starkly into focus quite different values ascribed to property rights, all of which are nevertheless expressions of worth.

The paper describes how the increasing use of biota such as genetic botanicals has raised issues of regulation and property rights, if such natural resources are to be conserved, and yet sustainably exploited. At a fundamental level the increasing recognition of neophyte property rights in natural resources such as biota has caused the notion of property rights in common law countries such as Australia and elsewhere, to undergo fundamental change. The outcome of interactions between different forms of institutions of property is only now being dimly understood.

Groundbreaking research by the authors into the conceiving of biota property rights underpins much of this paper, providing possible guideposts for the development of a more appropriate and inclusive approach to such rights.

### **KEYWORDS**

Biota property rights, property rights, property theory, valuation law and practice.

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## 1. INTRODUCTION

The issue of property in biota has both complexity and simplicity, more so than for other property rights such as land, minerals or even water. If biota is divided into two admittedly simplistic categories of flora and fauna, the inherent territoriality of flora makes the definition of such a property right somewhat less problematic than for fauna, which is often much more mobile.

This easier approach to the definition of territory is not available in some other property rights, notably water property rights. Water has been described as the most ephemeral of property rights not without reason; this inherent fluidity rather than a pun is the inescapable reality of conceiving property rights in such a natural resource.

The other biota categorisation, fauna has already been addressed to some extent by the High Court in the decision *Yanner-v-Eaton (1999) 201 CLR 351, (Yanner)* and it is worthwhile noting that the Court saw in Yanner's crocodile the inherent problem of constructing a property right in that category of biota. Nevertheless, while terrestrial fauna can often exhibit territoriality analogous to terrestrial flora, other forms of fauna such as marine animals or avifauna do not have the benefit of this fixity when one attempts to construct a property right.

There is clearly a whole raft of sub classes within the broad biota categorisations of flora and fauna, however the legal notion of biota property rights requires that the outcome of interactions between different biota should still result in a national reductive stereotype. To conceive different property rights regimes for biota in various States or Territories would result in an untenable situation producing unnecessary confusion across the Australian continent. There is no argument that can be advanced in favour of differential legal regimes between States or Territories, given that biota does not respect the human definition of territory – the cadastre.

The biophysical environment requires that a regime of biota property rights must be an endogenous enterprise derived from the reality of biota in its milieu. If the commodification of natural resources is to be extended to biota with the aim to produce a true market in this commodity, then continent-wide security of tenure must be available in order for that market to function. A titling system rooted in the legal notion of property in biota will be required in order for a collateral base to be provided for mortgage purposes, given that banking and financial institutions have over the last 150 years grown comfortable with the security of tenure offered by Robert Torrens' land titling system, wherein the State agency certifies:

*...on behalf of the State that the person thereby entitled holds such an estate or interest to the extent of his entitlement, subject to such interests recorded in the relevant folio of the Torrens Title Register and as appear (or should appear) on the Proprietor's certificate of title or duplicate Crown grant.<sup>1</sup>*

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<sup>1</sup> Frank Hallmann (1973) *Legal Aspects of Boundary Surveying as apply in New South Wales* (Sydney: The Institution of Surveyors, Australia, New South Wales Division), 140.

However in attempting to construct a regime of biota property rights, it is necessary to recognise that there will always be a demand for natural stock of biota, notwithstanding that synthetic substitutes are often developed in lieu of naturally occurring compounds found in biota. Biota property rights and the necessary adjunct of a titling system will not be transitory, because it is a myth that final replacement of natural stock will occur. There is inter species variation in natural stock which can have a significant effect upon the naturally occurring compounds present in a particular species.

There has been growing recognition that the “commercialisation of genetic resources” is a reflection of “the economic value of biodiversity to industry”, and that many pharmaceutical products are derived from biota, in many and varied forms.<sup>2</sup> The antibiotic Erythromycin is derived from Philippine soil, while the anti-rejection drug Cyclosporin A is derived from soil fungi in Norway<sup>3</sup>.

Moreover recent developments suggest that biota may have not only pharmacological worth, but broader commercial manufacturing value. A variety of deep-sea “glass” sponge known as Euplectella use silica to construct complex lattices of spicules<sup>4</sup>, which according to Bell Laboratories are made of the same material as fibre-optic cables, with similar size and optic qualities. Man-made fibre-optic cables have a propensity to fracture while the spicules are more robust and may “hold the secret to stronger, more flexible fibre-optic cables”.<sup>5</sup>

Biota, as terrestrial flora also has a recognised market value in terms of carbon sequestration, however there is disagreement as to whether “conservation of old forests is a better policy for tackling global warming than planting new ones.”<sup>6</sup> Riccardo Valentini of CarboEurope has highlighted the questionable economics of sequestration, stating that:

*“[countries]... will be able to claim carbon credits for the new planting, while in reality releasing huge amounts of CO<sub>2</sub> into the air.”<sup>7</sup>*

Terrestrial flora has also been the subject of proposals to introduce tax incentives for the protection of high conservation value native vegetation, which is a very specific approach which uses conservation covenants to target such financial incentives<sup>8</sup>.

Further, biota as fish has considerable value as a food source, and traditional aquaculture was a Chinese invention<sup>9</sup> several millennia ago, however it is now recognised that

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<sup>2</sup>Environment Australia (Department of Environment and Heritage) (2002) *Understanding the Nationally Consistent Approach for Access to and the Utilisation of Australia’s Native Genetic and Biochemical Resources (NCA)*, roneo, 2.

<sup>3</sup> Environment Australia, 1.

<sup>4</sup> slender pointed structures

<sup>5</sup> *Financial Times*, Singapore (2003) “Sea sponge inspires better fibre optics” (August 22) 6.

<sup>6</sup> *New Scientist* (2002) “Tree farms won’t save us after all”, (26 October) 10.

<sup>7</sup> Riccardo Valentini cited in *New Scientist*, 10.

<sup>8</sup> Carl Binning & Mike Young, (2002) *Talking to the Taxman About Nature Conservation: Proposals for the introduction of tax incentives for the protection of high conservation value native vegetation*. National Research & Development Program on Rehabilitation, Management and Conservation of Remnant Vegetation, Research Report 4/99 (Canberra: Environment Australia).

<sup>9</sup> *The Economist*, (2003) “The promise of a blue revolution” Special report Fish farming (9 August) 20.

aquaculture pollution can have enormous environmental harm offsetting the economic benefits of modern intensive fish farming.<sup>10</sup> Biota property rights have been successfully created in wild fish,<sup>11</sup> while farmed fish stock is private property because the Crown has abrogated the public right to fish to permit aquaculture by private parties.<sup>12</sup>

Notwithstanding that property rights currently exist in some biota such as fisheries, and flora for the limited purpose of carbon sequestration, it is clear that an overarching regime of biota property rights has to be conceived capable of accommodating emerging markets for genetic botanicals and broader biodiversity commercialisation. Novel theory is not needed to generate an omnibus narrative on biota property rights, as the fundamentals of property rights, the history and logic of property and existing property regimes reveal that property rights in biota are attainable within anglo-Australian property law.

The next section of this paper briefly addresses the fundamentals of property rights, and especially the notion of the “bundle of rights” that comprises the original concept of land property.

## 2. FUNDAMENTALS OF PROPERTY RIGHTS

Before we attempt to interrogate biota property rights and ascribe worth to the rights and interests therein, it is necessary that we understand the “bundle of rights” that comprises what was originally known as land property. Recent research by Sheehan and Small<sup>13</sup> attempts to elucidate what a definition of property rights might look like, however there remains much work to be done in this area as pointed out by the authors:

*[t]he increasing recognition of neophyte property rights in natural resources such as water and biota has caused the notion of property rights to undergo fundamental change. As the anglo-Australian legal system moves closer to an omnibus definition of property rights, this process has already brought forth calls for a titling system for these new “property rights” which are reminiscent of the Certificate of Title issued under the Real Property Act, subject to the inescapable restrictions created by climate and other inherent natural risks.<sup>14</sup>*

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<sup>10</sup> For a detailed discussion on the impact of pollution from aquaculture see *The Economist* (2003) “A new way to feed the world”, (August 9) 9, 20-21.

<sup>11</sup> For a detailed discussion on property rights in wild fisheries see Ragnar Arnason and Hannes H Gissurarson (eds) (1999) *Individual Transferable Quotas in Theory and Practice: Papers Exploring and Assessing the Radical Reorganization of Ocean Fisheries in the Final Decades of the 20<sup>th</sup> Century*, (Reykjavik: Institute of Economic Studies, University of Iceland)

<sup>12</sup> John Voumard, (2000) *Access to Biological Resources in Commonwealth Areas*, Report of Commonwealth Public Inquiry (Canberra: Natural Heritage Division, Environment Australia) July. (Voumard Inquiry) 43.

<sup>13</sup> John Sheehan & Garrick Small (2002) *Towards a Definition of Property Rights* UTS Property Research Unit Working Paper No 1.02. (Sydney: Faculty of Design Architecture & Building, University of Technology) October.

<sup>14</sup> Sheehan & Small 36.

Existing notions of land property are outdated, and probably incapable of wholesale modernisation to accommodate these neophyte rights. Also in valuation endeavours, current practices which may warrant retention and even refinement whilst familiar, may no longer be appropriate for the valuation of property rights such as biota.

Valuation practices are not immutable, and habituation can be quite restraining, with the unpalatable prospect that the involvement of the valuation profession in the emerging field of biota property rights is under threat. To overcome such constraints when dealing with such “new” property rights it is necessary to accept with vigour new valuation practices, Pinker usefully observing that:

*...no matter how important learning and culture and socialisation are, they don't happen by magic. There has to be innate circuitry that does the learning, that creates the culture, that acquires the culture, and that responds to socialisation...*<sup>15</sup>

The following section of this paper focuses on the history and logic of property, and how property theory provides an important discourse for the conceiving of property rights in biota.

### **3. THE HISTORY AND LOGIC OF PROPERTY**

Contemporary distinctions regarding property obscure the nature of the institution. The primary distinction employed in the current legal treatment of property is between personal and real property. There is currently a raft of legal traditions regarding property including common and statute law that reaches back half a millennia. Generally real property is a distinct positive institution to personal property and there is a body of law emerging that attempts to resolve the penumbra between the two.

The justification for property has a very different pedigree. The question of property has always been in terms of purely external property, property that is not related causally to the owner. By contrast, property emanating from the productive activities of the human person has little serious challenge. Humans often devote portions of their time to the production of things of value to either themselves or others. From writing music to digging ditches, the human agent who originates these products is naturally and completely the sole owner of these things to the extent that the person is the owner of his (her) own life and in proportion to the extent to which the person contributes to the final product.

Slavery is the only challenge to this fundamental species of property and relies upon the acceptance of one person owning the life and consequently the work of another. Even then, it follows the logic that ownership of a person's produce is linked essentially to

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<sup>15</sup> Steven Pinker (2002) cited in *The Sydney Morning Herald* "Great minds think unlike" (October 12-13) 5s; see also Steven, Pinker (2002) *The Blank Slate: The modern denial of human nature* (London: Alan Lane).

ownership of that person's life. To the extent that slavery is no longer seriously considered acceptable, its implications for property will not be explored further.

By contrast, ownership of non-produced things cannot be linked to individuals except by convention and the justification to the various conventions adopted has always been problematic. Non-produced things include the land, the water, animals and plants (not the result of human management), air and the contents of space. Here they will be referred to as external things, though they have also been dubbed land in the context of classical factors of production. In practice it has been found that the allocation of private property rights to individuals encourages better management of external things. This principle was first applied to land, and now is being considered for other valuable elements from the natural environment.

Conventions are very flexible things. They are a function of culture, community and time. This led Adam Smith to define property as those rights of possession that are upheld by state sanction. To the extent that state sanction is a positive convention, property is no more than an arbitrary positive artefact of culture and time.

While this definition is useful as positive description of modern practice, it has little explanatory merit. By deflecting attention away from fundamental aspects of the nature of property, it has contributed to a considerable part of the current confusion regarding optimum strategies for the institution of property. It fails to draw a distinction between natural property and conventional property and renders a rational investigation of conventional property opaque. It may be rejected without loss of essential understanding and its removal facilitates useful development of property policy.

It has been suggested that there is no causal connection between external things and the human person, but this does not exhaust the possibilities for essential relationships between the two. All humans are mortal and have needs for life that demand access to the natural things of the world. Babies enter the world needing air and a place to live. As the person grows, food, clothing and shelter all ultimately demand some access to the natural things of the world. Similarly, work in all of its forms relies on space and raw materials. To be a person is to share a common fundamental need for reasonable access to the external things of the world and to the extent that a person is denied reasonable access to these things is the extent that the person's opportunity to live is compromised. As before, if a person has an inalienable right to life, then an inalienable right to the use of the external things of the world necessarily follows.

This led thinkers as early as Aristotle to recognise that people share a common need to be able to use external things. Different cultures resolve this tension between private ownership of external things and the community's common inalienable right to use in different ways. In some cases things are left in the public domain as public goods. This is satisfactory where community spirit is strong and demands on the resource are slight.

Historically, various forms of feudal property have acted as an intermediary property form. Title was given to the community leader who administered the property as personally owned, though used for the good of the community. The system has been used

all over the world, but has never been better than the leaders. Sometimes it has been successful, but often with cruel failures. Modernity prefers widespread ownership of absolute private property. This system operates very well so long as ownership is widely distributed. The historical flaw has been the tendency for absolute property to concentrate into the hands of a small group who effectively become oligarchs.

Viewed in this light, the problem of biota is somewhat clarified. The political pressure for private ownership tends to come from those who see the benefits of private ownership, while many of the concerns about privatising biota come from those who focus on the potential loss of broad common access. Politically these perspectives have become identified with the polarities of political Right and Left, or the economic polarities of capitalism and socialism. Amidst these opposing positions debating whether biota should be private property or common use, is the Aristotelian exhortation for property to be both – private ownership *with* common use. It is one thing to define the parameters of biota as a secure commercial private property right, but it is another to design adequate mechanisms to ensure that the community is not threatened with the possibility of being locked out of its fundamental and inalienable right to a reasonable degree of common use.

The next section of this paper canvasses the inherent plurality of the natural resource which forms the basis of the conceiving of biota property rights.

#### **4. BIOTA AS A PROPERTY RIGHT**

At present biota exists as a public good that often appears to be attached to land. As a public good, it is better conceived as common property, but as a good attached to land it is implicitly part of the bundle of rights conveyed into private hands by freehold title. Some aspects of biota may be either sufficiently mobile, or sufficiently distributed, to make a linkage to specific land titles impossible. The commercial exploitation of the potential opportunities arising from biota may not neatly align to individual land parcels and will entail some degree of privatisation of common property. These aspects of biota have not been problematic while it remained a public good, even if one that had some degree of spatial definition. The challenge of designing a private property system in biota lies in harnessing these departures from cadastral property without producing such a degree of privatisation that the common use aspect of property is betrayed.

The construction of a system of private property in biota must be embarked upon from the standpoint that such rights must meet a defensible test of what a durable private property right is. If these property rights are to be meaningful to users, purchasers, and especially the banks and financial organisations that will use these rights as collateral for mortgage-based loans, then the test of whether they can property rights is crucial.

In constructing such a test, it is essential to gain an appreciation of existing judicial considerations of the notion of “property”. Starke J. in *The Minister of State for the Army-v-Dalziel* (1944) 68 CLR at 290 (*Dalziel*) indicated that such a definition:



*...extends to every species of valuable right and interest including real and personal property, incorporeal hereditaments such as rents and services, rights of way, rights of profit or use in land of another, and chooses in action.*

Starke J. (at 290) also comments that:

*...to acquire any such right is rightly described as an acquisition of property.*

This approach to constructing a definition of “property” has been further strengthened in (*Yanner*), where the High Court took the opportunity to contrast property in the conventional sense with the “property” or “ownership” that the Crown asserts over natural resources.

The Court stated that:

*The word “property” is often used to refer to something that belongs to another.... “property” does not refer to a thing; it is a description of a legal relationship with a thing. It refers to a degree of power that is recognised in law as power permissibly exercised over the thing. The concept of “property” may be elusive. Usually it is treated as a “bundle of rights”.*

*But even this may have its limits as an analytical tool or accurate description, and it may be...that “the ultimate fact about property is that it does not really exist; it is mere illusion”.<sup>16</sup>*

Also, the Court usefully stated that the common law position of natural resources including biota was as follows:

*At common law there could be no “absolute property”, but only “qualified property” in fire, light air, water and wild animals.<sup>17</sup>*

Nevertheless, as stated earlier in this paper, “property” is generally understood as a titled right to land or to exploit natural resources such as minerals. Commonly these property rights are referred to by the terminology “real estate”, with its emphasis on the immoveable nature of the “property” concerned such as land, buildings and minerals.

The range of interests that are classed as “property” while limited only by our imagination, has however been restrained by the Courts of common law countries who have only recognised a few kinds of interests in land, which are regarded as usual property rights. Some of these rights will be readily recognised such as freehold and leasehold, however a few such as mining rights, fishing rights, and water entitlements have also been recognised.

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<sup>16</sup> (*Yanner*) at 8 per Gleeson CJ, Gaudron Kirby & Hayne JJ.

<sup>17</sup> *Yanner* at 11.

As stated earlier in this paper there has also been the very recent recognition of carbon as a property right, and legislation in various states is developing this concept.<sup>18</sup> The objective in recognizing carbon as “property” is:

*...to provide secure title for carbon sequestration rights through registration on the land title system. The practical effect of this will be that a carbon right attached to property will be held separately from the land ownership, and the carbon right attached to land will be viewable on a property title search, putting the world on notice of the obligations that flow with that land.*<sup>19</sup>

However, in the case of rights in biota specifically genetic botanicals, it has been proposed that these rights be not only regulated but also recognised as property if they are to be conserved. It has been argued that the creation of such property rights would act as a “real economic incentive”<sup>20</sup> to sustainably utilise these natural resources. Lyuba Zarsky, the founder of the Nautilus Foundation observes that:

*[f]uture generations should inherit a stock of capital – a natural environment, technology and knowledge – required to sustain life as biological and economic beings*<sup>21</sup>

During the recent enquiry into bioprospecting by the House of Representatives Standing Committee on Primary Industries and Regional Services it was strongly suggested that:

*...[t]he regulation of access to biological resources for research and exploitation has been problematical.*<sup>22</sup>

The Standing Committee was provided with a submission from the Australian Property Institute expressing the view that:

*...for the successful development of biota property rights, there must be recognition that one class of biota, notably those which are land-based, face specific conceptual difficulties. These difficulties are encountered when the need for security and tradeability of a property right impact upon broader socio economic matters, such as established property markets and land use regulation amongst others.*<sup>23</sup>

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<sup>18</sup> Jacqueline Bredhauer “Tree Clearing in Western Queensland – a Cost Benefit Analysis of Carbon Sequestration”, *Environmental and Planning Law Journal* 17:5 (2000) 389.

<sup>19</sup> Ibid.

<sup>20</sup> Nicole Veash “River of no Returns” *The Australian Magazine* (18-19 November 2000) 40.

<sup>21</sup> Lyuba Zarsky (1996) “Economy and Ecology: Sustainable Development” in *Economics as a Social Science: Readings in Political Economy*, eds G Argyrous and F Stilwell (Sydney: Pluto Press) 173.

<sup>22</sup> Information and Research Service of the Department of the Parliamentary Library. (2000)

*Bioprospecting and Regional Industry Development in Australia – Some issues for the Committee’s Inquiry* Paper prepared for the House of Representatives Standing Committee on Primary Industries and Regional Services (Canberra:) 2.

<sup>23</sup> Australian Property Institute (2001) *Submission to the House of Representatives Standing Committee on Primary Industries and Regional Services* (Canberra: National Secretariat, February) 8.

Further, the Institute stated that:

*The Institute notes that in considering impediments to bio prospecting, it must be recognised that any attempt to isolate biota as a property right through legislative action must be undertaken in the context of a land ownership milieu which is overwhelming private. This hurdle of private ownership has already been identified in current attempts by the Commonwealth and States to statutorily preserve biodiversity, especially flora.*

*The impact of the isolation of a specific “property right” such as biota from the “bundle of rights” held by a private landowner, raised a number of financial issues. Where a property right in a natural resource such as biota can be well defined, it is the Institute’s view that the allocation of such resources has an enhanced efficiency, and can lead to a situation where the “property” is recognised as having security and are tradeable*

*This situation has already occurred where certain property rights such as water and carbon have been statutorily isolated from the “bundle of rights”, and are not recognised as having security and are tradeable. However, it should be recognised that some more recently identified potential property rights such as saline credits, may or may not be so readily classified as “property” in terms of definition, and hence may lack the necessary security and tradeability. .<sup>24</sup>*

In a submission to the Standing Committee, it was proposed by the South Australian Department of Environment and Heritage that consideration should be given to “vesting the State’s indigenous flora and fauna in the Crown”.<sup>25</sup> In a counter submission, the Australian Property Institute observed that where a property right is compulsorily isolated out of the private bundle of rights held by a private land owner, hiving off of the specific interest in land would almost certainly attract a claim for compensation as guaranteed by *para 51(xxxi)* of the *Australian Constitution*.<sup>26</sup>

It was reasoned by the Institute that any vesting of biota property rights in the Crown, whether Commonwealth or State, must recognise:

*...the legal fact that inchoate rights in biota already reside with the private landowner. Isolation of a specific property right such as biota merely crystallizes what the particular right that is held by the owner actually is.<sup>27</sup>*

Limitations in the amount and veracity of biota data in Australia were identified in the *National Local Government Biodiversity Survey*<sup>28</sup> where it was shown that biodiversity

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<sup>24</sup> Australian Property Institute, 8.

<sup>25</sup> House of Representatives Standing Committee on Primary Industries and Regional Services (2001) *Bioprospecting: Discoveries changing the future – Inquiry into development of high technology industries in regional Australia based on bioprospecting*. (Canberra: The Parliament of the Commonwealth of Australia, August) 32.

<sup>26</sup> Australian Property Institute, 9.

<sup>27</sup> Australian Property Institute, 9.

was apparently unevenly distributed over local government areas. It was revealed that the obtaining of factual information on valuable genetic botanicals residing on a particular property would be constrained by the capacity of particular local councils to assemble biota data.

It was stated by the Australian Property Institute in its submission to the Standing Committee that:

*...there is an urgent need for a structured national approach to data on biota which will be fundamental to any attempt to regulate or protect biota. Furthermore, for a true market for a property right to exist there is the fundamental requirement for confidence in data and public access thereto, which leads to security and transferability.<sup>29</sup>*

Interestingly, even if a sole species or genus was identified as being vested by legislation in the Commonwealth, a claim for compensation pursuant to *para 51(xxxi)*<sup>30</sup> would arise. In assessing the compensation accruing to the dispossessed owner for such an action, rather than focusing on the whole corpus of biota residing in a particular parcel of land, there would be required a detailed assessment of the biota in situ, together with an assessment of the industrial/commercial attributes of the species or genus within the existing compensation law framework.

It is clear that biota is accepted as being a valuable property right, indeed potentially one of the most valuable of all property rights, the Standing Committee being advised that:

*...the potential value of compounds is recognised from the outset and that intellectual property rights and knowledge are not sold off too early and too cheaply.<sup>31</sup>*

Confirming this view of the value of biota, the Australian Property Institute in its submission stated that:

*[a]lready there is evidence in western New South Wales of the State Valuation Office training its valuers to recognise specific species such as grey mallee, that have already been shown to have a worth greater than that of the surrounding vegetative cover in the region.<sup>32</sup>*

The Standing Committee in its report rejected the South Australian submission which proposed vesting biota in the Crown, and stated that it was:

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<sup>28</sup> *National Local Government Biodiversity Survey*, cited in Australian Property Institute, 9.

<sup>29</sup> Australian Property Institute, 9.

<sup>30</sup> *Australian Constitution*

<sup>31</sup> Information and Research Service of the Department of the Parliamentary Library, 2.

<sup>32</sup> Australian Property Institute, 10

*...not in a position on the basis of input to the inquiry to come to any conclusions about the need for changes to property right regimes in relation to bioprospecting. The committee is aware that economic growth can be facilitated by well defined property rights and the creation of new ones, particularly if they are nationally consistent. Changes to the existing regime of property rights might very effectively encourage the development of biobased industries in Australia, and position the country well in a bio industrially dominated future.*<sup>33</sup>

It is important to note that the Standing Committee rejected the vesting of biota in the Crown, and it can be concluded that the current private property rights regime which already accommodates within the bundle of rights known as land property, elements which can be reasonably be described as inchoate biota property rights. It appears that the Standing Committee took the view that this current regime should not be disturbed, and stating that:

*...any change to property rights is a complex matter and needs full and careful consideration.*<sup>34</sup>

Prior to the report of the Standing Committee in August 2001, the findings of an earlier Commonwealth Public Inquiry (known as the Voumard Inquiry)<sup>35</sup> had been published in July 2000, where it had been recommended that:

*...the applicant [seeking access to biological resources] would be required to negotiate, with the holder (or owner) of the biological resources, a benefit – sharing contract which covers the commercial and other aspects of the agreement.*<sup>36</sup>

Underpinning the above recommendation was the issue of ownership of biological resources, and whilst in the context of terrestrial flora in Commonwealth areas, it is pertinent that the Inquiry noted that:

*[a]t common law, ownership of land includes all the substrata below the surface. Natural things attached to land (or its substrata) or growing on (or in) it, whether cultivated or not, form part of the land and will be the property of the owner of the land. It would seem to follow that biological resources generally that are attached to or growing on or in land would be regarded as the property of the landowner. The common law rule would be subject to valid legislation or to any agreement (lease, licence, contract) to the contrary into which the landowner had entered.*<sup>37</sup>

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<sup>33</sup> House of Representatives Standing Committee on Primary Industries and Regional Services, 32.

<sup>34</sup> House of Representatives Standing Committee on Primary Industries and Regional Services, 32.

<sup>35</sup> see note 10.

<sup>36</sup> Voumard vii.

<sup>37</sup> Voumard 42.

Furthermore, the Inquiry addressed terrestrial fauna, noting that the common law distinguished between domestic animals and wild fauna, noting that:

*[a]t common law, there is no absolute property in wild animals while they are alive. A person may gain only a qualified property that is defeasible (ie it may be terminated or annulled)...*

*At common law, when a wild animal is killed or dies, absolute property vests in the owner or occupier of the land upon which the animal dies, or in the grantee or licensee of the shooting or sporting rights.*<sup>38</sup>

Importantly, the above comments were only raised in the context of Commonwealth areas and clearly any policy narrative must be conducted in the light of the existing land tenure within Australia much of which is privately held. Whilst a nationally consistent approach underscored the Inquiry's recommendations, it is instructive that it was recommended:

*...[t]hat further consultations be held with State and Territory governments to address the broader issue of a nationally consistent approach cross jurisdictions.*<sup>39</sup>

Clearly it was recognised by the Inquiry that the former Australian colonies and now States have always been "invested"<sup>40</sup> with the control and management of Crown lands, and administer the title systems for alienated land. As stated earlier in this paper, this fact was also recognised by the subsequent report by the Standing Committee on Bioprospecting.<sup>41</sup> Hence, the pervasiveness of private property rights in the Australian milieu must underpin any attempt to elucidate a private property rights regime for biota.

Arguably, the views expressed in the Voumard Inquiry and the subsequent report by the Standing Committee on Bioprospecting are evidenced in the text of the *Nationally Consistent Approach for Access to and the Utilisation of Australia's Native Genetic and Biochemical Resources (NCA)*<sup>42</sup> which was executed on 12 October 2002 by the Commonwealth States and Territories. The presence of private property rights in land and therefore biota, are recognised in the common elements of access and benefit-sharing arrangements which the NCA sets out, in particular stating that:

*So as to facilitate biodiscovery and maximise certainty...reassurance should be provided that arrangements do not alter existing property or intellectual property law:*<sup>43</sup>

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<sup>38</sup> Voumard, 42,

<sup>39</sup> Voumard, 118.

<sup>40</sup> Richard H Bartlett (2000) *Native Title in Australia* (Sydney: Butterworths) 66.

<sup>41</sup> House of Representatives Standing Committee on Primary Industries and Regional Services, 32.

<sup>42</sup> Natural Resource Management Ministerial Council, (2002) *Nationally Consistent Approach for Access to and the Utilisation of Australia's Native Genetic and Biochemical Resources (NCA)*, (Canberra) October.

<sup>43</sup> NCA-"Common Elements of Access and Benefit-sharing Arrangements Established in Australian Jurisdictions", 3(e).

The final section of this paper will address some fundamental issues arising from the increasing recognition of biota property rights within Australia.

## 5. CONCLUDING REMARKS

The establishment of new forms of specific private property rights such as biota has highlighted the need to recognise the impact of isolating these rights from the “bundle of rights” currently residing within the accepted notion of land ownership. It is instructive that this issue is currently being canvassed in the area of carbon credit property rights,<sup>44</sup> and by extrapolation saline credits. There is growing recognition of an interconnectedness between these less familiar forms of property and even archaic property rights such as native title<sup>45</sup>, and the prospect for conflict in some circumstances.<sup>46</sup>

A useful example of this interconnectedness is when carbon in wood fibre is unlocked through the removal of existing vegetation to permit agricultural pursuits. The connection is reasonably clear, however the impact of flow-ons such as rising water tables, and hence increasing salinity in soil is less clear. The substitution of salt tolerant vegetation and the adoption of altered farming practices in a more saline environment suggests that saline credits may be more difficult to create as a valuable property right, than say carbon or water. Land based carbon credits have already had a measurable impact on the price of rural land.

All of the above illustrates the difficulties likely to be encountered when the need for security and tradeability of a property right such as biota, impact upon broader socio economic matters, such as established property markets, land use regulation, and environmental management issues.

Nevertheless, a common feature of current property rights is that the interests in question are territorial, in so much as the right is contained only within defined boundaries. This is commonly achieved by way of a legal description of the boundaries, which have been defined by means of a cadastre. In addition, these rights are also proscribed in so far as what activities can occur within the territory<sup>47</sup>, the manner in which the right is to be paid for, and other obligations incurred or limitations imposed.

Some of these usual property rights can be acquired outright, while some such as fishing rights and water entitlements may be attached to rights that are or were once held in a parcel of land adjacent or nearby.

Whilst biota property rights are capable of construction within anglo-Australian property law, it is the view of the authors that there remains an intellectual quantum leap to

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<sup>44</sup> for a detailed discussion on property rights in carbon see Bredhauer at note 16.

<sup>45</sup> Michael Davis, (1999) “Indigenous Rights in Traditional Knowledge and Biological Diversity: Approaches to protection,” *Australian Indigenous Law Reporter* 4(4), 1-32.

<sup>46</sup> James Woodford, (2003) “Hunters and protectors”, *The Sydney Morning Herald*, (6-7 December), 4s, 5s.

<sup>47</sup> Donald Denman (1981) “Recognising the property right” *The Planner* 67(6), 161.

understand how existing property law will interface with property theory in the context of biota. This interface lies somewhere between these boundaries, and if true property rights in biota are to emerge the positioning of this interface is of critical importance. The commodification of natural resources such as biota has been urged by commercial demand, however while such matters are important they should not overshadow the need for an appropriate balance in conceiving property rights in biota.

Arguably there are gaps in both law and property theory, and it is necessary that there be a debate over such issues given the commodification of the commons is not a task to be undertaken lightly. History could condemn us for underestimating the task ahead.

Finally, the task of conceiving biota property rights is one embedded with the issues of definition (or territoriality) and the ascribing of a correct worth to those rights. As stated in the introduction to this paper, this task is one of both complexity and simplicity, and will severely test the capacity of anglo-Australian land and valuation law and practice to accommodate these neophyte property rights.



## BIBLIOGRAPHY

- Arnason, Ragnar and Gissurarson, Hannes H (eds) (1999) *Individual Transferable Quotas in Theory and Practice: Papers Exploring and Assessing the Radical Reorganization of Ocean Fisheries in the Final Decades of the 20<sup>th</sup> Century*, (Reykjavik: Institute of Economic Studies, University of Iceland)
- Australian Property Institute (2001) Submission to the House of Representatives Standing Committee on Primary Industries and Regional Services (Canberra: National Secretariat, February)*
- Bartlett, Richard H (2000) *Native Title in Australia*, (Sydney: Butterworths).
- Binning, Carl & Young, Mike (2002) *Talking to the Taxman About Nature Conservation: Proposals for the introduction of tax incentives for the protection of high conservation value native vegetation*. National Research & Development Program on Rehabilitation, Management and Conservation of Remnant Vegetation, Research Report 4/99 (Canberra: Environment Australia).
- Bredhauer, Jacqueline “Tree Clearing in Western Queensland – a Cost Benefit Analysis of Carbon Sequestration”, *Environmental and Planning Law Journal* 17:5 (2000) 383-405.
- Davis, Michael (1999) “Indigenous Rights in Traditional Knowledge and Biological Diversity: Approaches to protection,” *Australian Indigenous Law Reporter* 4(4), 1-32.
- Denman, Donald (1981) “Recognising the property right” *The Planner* 67(6), 161.
- Environment Australia (Department of Environment and Heritage) (2002) *Understanding the Nationally Consistent Approach for Access to and the Utilisation of Australia’s Native Genetic and Biochemical Resources (NCA)*, roneo.
- Financial Times*, Singapore (2003) “Sea sponge inspires better fibre optics” (August 22) 6.
- Hallmann, Frank (1973) *Legal Aspects of Boundary Surveying as apply in New South Wales* (Sydney: The Institution of Surveyors, Australia, New South Wales Division).
- House of Representatives Standing Committee on Primary Industries and Regional Services (2001) *Bioprospecting: Discoveries changing the future – Inquiry into development of high technology industries in regional Australia based on bioprospecting*. (Canberra: The Parliament of the Commonwealth of Australia, August).
- Information and Research Service of the Department of the Parliamentary Library. (2000) *Bioprospecting and Regional Industry Development in Australia – Some issues for the Committee’s Inquiry* Paper prepared for the House of Representatives Standing Committee on Primary Industries and Regional Services (Canberra:).

Natural Resource Management Ministerial Council, (2002) *Nationally Consistent Approach for Access to and the Utilisation of Australia's Native Genetic and Biochemical Resources (NCA)*, (Canberra) October.

*New Scientist* (2002) "Tree farms won't save us after all", (26 October) 10.

Pinker, Steven (2002) cited in *The Sydney Morning Herald* "Great minds think unalike" (October 12-13) 5s.

Pinker, Steven (2002) *The Blank Slate: The modern denial of human nature* (London: Alan Lane).

Sheehan, John & Small, Garrick (2002) *Towards a Definition of Property Rights* UTS Property Research Unit Working Paper No 1.02. (Sydney: Faculty of Design Architecture & Building, University of Technology), October.

*The Economist* (2003) "The promise of a blue revolution" Special report Fish farming (9 August) 20.

*The Economist* (2003) "A new way to feed the world", (August 9) 9.

Veash, Nicole (2000) "River of no Returns", *The Australian Magazine* (18-19 November), 40.

Voumard, John (2000) *Access to Biological Resources in Commonwealth Areas*. Report of Commonwealth Public Inquiry, (Canberra: Natural Heritage Division, Environment Australia), July.

Woodford, James (2003) "Hunters and protectors", *The Sydney Morning Herald*, (6-7 December), 4s, 5s.

Zarsky, Lyuba (1996) "Economy and Ecology: Sustainable Development" in *Economics as a Social Science: Readings in Political Economy*, eds G Argyrous and F Stilwell (Sydney: Pluto Press), 171-176.