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The Commodification of the Asian Commons: Water as a Property Right

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Abstract

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

This paper describes how the increasing commodification of the Asian commons, specifically water, has raised issues of regulation and property rights. These issues must be addressed if such natural resources are to be both conserved and sustainably exploited. At a fundamental level the increasing recognition of neophyte property rights in natural resources such as water has led to the notion of property rights in countries such as Thailand and elsewhere, undergoing fundamental change. The outcome of interactions between different forms of institutions of property is only now being dimly understood. Groundbreaking research by the author into the conceptualisation of water property rights underpins much of this paper, providing possible guideposts for the development of a more appropriate and inclusive approach to such rights.

Keywords

Market reform, property theory, property law and practice, water property rights.

Introduction

Conceptualising property in water is more complex than for other property rights such as land, minerals or even biota.[1] Furthermore, water cannot be divided into simplistic categories of flora and fauna as in biota property rights, thereby assisting the definition of territory.[2] Indeed, there is no inherent territoriality of water making the definition of a water property right more problematic than for land, minerals or biota, all of which are much less mobile.

In Asia as elsewhere, the difficulty in attempting to define the territoriality of water and the absence of useful analogies in other property rights such as land and minerals, leads to the description of water as the most ephemeral of all property rights. This inherent fluidity rather than being a mere pun is an inescapable biophysical reality when attempting to conceive property rights in such a natural resource.

Arguably, the Australian High Court decision *Mabo and Others* v *Queensland* No 2 (1992) 175 CLR 1 (Mabo) was the catalyst for current research into the legal notion of property, and the contemporaneous advancement of property theory. The concept of property has literally exploded since *Mabo* with the subsequent identification in Australia and elsewhere of a raft of hitherto unknown separate property rights such as:

Water property rights;
Biota property rights;
Indigenous property rights (native title);
Carbon credit property rights;
Saline property rights (salt);
Transferable development property rights; and
Electromagnetic spectrum.

1 For a useful discussion on the development of property theory see Garrick Small and John Sheehan "Methodological Implications of Property Theory Discourse: Why the way we discuss property influences the answers we find" presented at the joint CSIRO and Tropical Savannas and Desert Knowledge Co-operative Research Centres (TS–CRC, DK–CRC) International Workshop "Property Rights: the key to achieving ecologically sustainable development in Outback region", held in Undara North Queensland, 3 March 2005.

2 Even archaic property rights such as customary title rely heavily for their enforcement on boundaries. For a useful introductory discussion see Melanie Hughes McDermott "Boundaries and Pathways: Indigenous Identities, Ancestral Domain, and Forest Use in Palawan, the Philippines" presented at the International Association for the Study of Common Property (IASCP) 8th Biennial Conference, Indiana University, Bloomington Indiana 1 June 2000.

Prior to 1992, all of the above except for the last were subsets of what was known as land property. Unsurprisingly, the appropriateness and resilience of conventional land titling systems[3] to deal with these newly emerging property rights has raised fundamental issues rooted in emerging property theory. In addition, archaic rights such as native title have probably been incapable *ab initio* of accommodation within such titling systems. Native title, as stated earlier, has therefore acted as a catalyst for much of the emerging common law property theory.

Property rights require a satisfactory answer to the question of territoriality, whether by placement of an individual property right on the cadastre or on some other form of spatial information vehicle. Some property rights such as biota, native title and water will require the convergence of professional, technical and scientific knowledge and skills residing in the spatial and valuation professions in particular, together with the support of other disciplines such as botany and zoology, anthropology and archaeology, hydrology, and a further broad raft of other sciences.

Conceiving these property rights also requires attention to the twin issues of territoriality (definition) and valuation if these newly emerging rights are to be not just of economic worth but have the status of legal private rights. Yoram Barzel distinguishes economic rights from legal rights in the following manner:

> Legal rights are the rights recognised and enforced, in part, by the government. These rights, as a rule, enhance economic rights, but the former are neither necessary nor sufficient for the existence of the latter. A major function of legal rights is to accommodate third-party adjudication and enforcement, In the absence of these safeguards, rights may still be valued, but assets and their exchange must then be self-enforced.[4]

Hence, mere economic rights asserted over natural resources such as water lack the security of legal ownership in much the same manner as squatter communities cannot enforce their economic rights in the same manner as titled legal landowners. However, according to Hernando de Soto[5] such economic rights are not accidentally "extralegal" but represent a considered response to the inadequacy of existing laws in many developing or postcolonial countries. Yet, according to Chadzimula Molebatsi *et al*,[6] the creation of "formal property"[7] as proposed by de Soto as a way of unlocking

3 The difficulty in accommodating emerging property rights such as water in existing land titling systems is discussed in ACIL Tasman in association with Freehills "An effective system of defining water property titles" (2004) Research Report PR040675 (Land and Water Australia. Canberra).

4 Yoram Barzel *Economic Analysis of Property Rights* (2nd ed, Political Economy of Institutions and Decisions Series, (Cambridge University Press, Cambridge: 1997) 4.

5 Hernando de Soto *The Mystery of Capital* (Black Swan Books, London: 2000) 161.

6 Chadzimula Molebatsi, Charisse Griffith-Charles and John Kangwa "Conclusions" in Robert Home and Hilary Lim (eds) *Demystifying the Mystery of Capital: Land Tenure and Poverty in Africa and the Caribbean* (The Glass House Press, Sydney: 2004) 151.

7 de Soto note 5 at 231.

"dead capital"[8] is probably too simplistic and a gross overestimation of the cadastral and bureaucratic capacity of such countries. All of the above suggests that there is a clear and imminent need to establish an understanding of how emerging property rights in natural resources such as water should be constructed to permit Asian nation states to enact appropriate legislation to give legal recognition to those rights. In addition, the debate on the appropriate form by which existing traditional rights and interests in natural resources are "paperised"[9] suggests that the commodification of the Asian commons and the conceiving of property rights in water will be both a pragmatic task and one, of necessity, embedded within Asian perceptions of nature.[10]

However, the biophysical environment requires that a regime of water property rights must be an endogenous enterprise derived from the reality of water in its milieu. If the commodification of natural resources is to be extended to water with the aim to produce market reform, then security of tenure must be available in order for that market to function. A titling system rooted in the legal notion of property in water will be required in order for a collateral base to be provided for mortgage purposes, given that in the Western tradition banking and financial institutions in Asia have over many years grown comfortable with the security of State guaranteed land tenures 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.[11]

Even in those countries where liberal notions of private property rights have not found a ready home, significant movement has occurred towards security of private tenure sometimes in the face of a contradictory legal culture. Such dilemmas are discussed in the following section of this paper which also examines the issue of private property rights in water in the Asian context.

8 Ibid at 15.

9 Molebatsi, *et al* note 6 at 149.

10 For a useful discourse on man-environment relations in Asia see Ole Bruun and Arne Kalland (eds) *Asian Perceptions of Nature: A Critical Approach* Nordic Institute of Asian Studies – Studies in Asian Topics No.18 (Curzon Press Ltd, Richmond, UK: 1995).

11 Frank Hallmann *Legal Aspects of Boundary Surveying as Apply in New South Wales* (The Institution of Surveyors, Australia, New South Wales Division, Sydney: 1973) 140.

The Commodification of the Asian Commons

In line with other major global regions, Asian nation states are now addressing the need for increasing commodification of natural resources, such as land, biota (forests) and water. Traditional Asian commons have thus been subject to a creeping commodification, a result of the joint impact of local and international business investment, and the increasing focus by state bureaucracies on natural resources for the broader national benefit.

Larry Lohmann reports that this commodification has resulted in a decline in biological diversity[12] especially in genetic agricultural stock and in the structure and life of soil. Water, which has been a traditional part of village life in many Asian nation states, has been subject to the impact of damming and large scale irrigation schemes.[13] Forest clearance to permit these developments has also resulted in alternate flooding and droughts, with increasing siltation sometimes quite distant from a particular project. This has resulted in the displacement of traditional village communities.[14] In addition, the introduction of monocultures such as commercial tiger-prawn ponds has had a deleterious effect on local traditional fisheries given that it has been estimated by Lohmann that one half of the Thai mangroves have been removed for commercial aquaculture in ten years.[15]

In northern Thailand, traditional wooden dam structures as part of *muang faai*[16] are being replaced by "modern" cement dams leading to increased siltation. They have also:

> ... torn apart the complex forest/stream/rice field/labour relationships which local villagers have maintained for centuries as an ecological guarantee of subsistence. This has sometimes led to abandonment of the system ...[17]

All of the above suggests that commodification of traditional rights and interests in water has occurred in Thailand at a significant cost to traditional owners. Suntariya Muanpawong observes that:

> [s]imilar to other nation states, Thailand has gradually transformed the local and possibly collectively-managed natural resources, primarily the forests, into government property. This restricted the access of the previous users and frequently turned their rights of customary law into privileges and concessions granted by the state.[18]

12 Larry Lohmann "Who Defends Biological Diversity? Conservation Strategies and the Case of Thailand" in Vandana Shiva *et al* (eds) *Biodiversity: Social and Ecological Perspectives* (Zed Books Ltd and World Rainforest Movement, London and Penang: 1995) 78.
13 Ibid at 82.
14 Ibid at 79.
15 Ibid at 80.
16 Traditional Thai irrigation systems.
17 Lohmann, note 13 at 83.

Elsewhere in Asia, access to the traditional common property resource of water is also changing, notably in India where community control at the village level is being altered through the commodification of water. Where communal rights to, and management of water have for centuries permitted the sustainable exploitation and conservation of water supplies, traditional rules on water use are being supplanted by new private rights. Vandana Shiva observes that "water-renewing traditional systems"[19] are now in decay and water sources are under immense stress, stating that:

> [I]n a study of 152 villages using traditional water-harvesting systems, 79 were dry or polluted. The Chobala Pond in Mundlana village is still communally maintained and it still serves the water needs of 10 villages. On the other hand, Mankund, named after the hundreds of ponds and tanks it once boasted, now has no water. The 1,000 tube wells introduced to the region have drained the traditional water sources.[20]

The commodification of natural resources in India is a process that commenced in earnest with British colonisation and, according to Jacques Pouchepadass[21] was a product of the colonial requirement for cash cropping which "irreversibly altered the local socia-ecological configuration". Furthermore, Pouchepadass observes that the British colonisers:

> ... set up everywhere an increasingly efficient framework of governmental control, which gradually denied the local populations free access to their traditional natural resource bases, at a time when their numbers were beginning to increase. Although the ecological stresses and traumas resulting from European colonization were not by any means the first events of their kind in the tropics, the scenarios for the first time were modern, representing the onslaught of commercial and industrial capital on the natural resources of the world at large.[22]

Pervasive changes in traditional rights and interests in natural resources especially in north India, have occurred over the past two centuries and it is argued by Minoti Chakravarty-Kaul[23] that the institutional changes wrought by colonisers and subsequent national governments are such that traditional property institutions have now decayed and "cannot be artificially resuscitated". Nevertheless, Chakravarty-Kaul suggests that institutions will have to be "invented and sustained"[24] to deal with

18 Suntariya Muanpawong "Some legal problems in Thai community forest law" presented at 2nd International Convention of Asia Scholars (ICAS2) held at Freie Universitat in Berlin 11 August 2001.

19 Vandana Shiva, *Water Wars: Privatization, Pollution and Profit* (South End Press, Cambridge, MA: 2002) 12.

20 Ibid at 12.

21 Jacques Pouchepadass "Colonialism and Environment in India: A Comparative Perspective" in Alice Thorner (ed) *Land, Labour and Rights: 10 Daniel Thorner Memorial Lectures* (Tulika Books, New Delhi: 2001) 122.

22 Ibid.

23 Minoti Chakravarty-Kaul *Common Lands and Customary Law: Institutional Change in North India over the Past Two Centuries* (Oxford University Press, New Delhi: 1996) 275.

24 Ibid.

the current dilution of traditional village rules for the management of common property resources.

Importantly, Chakravarty-Kaul believes that the conceiving of new institutions to deal with natural resources (apart from common lands) will have to accommodate not only village communities but also recognise women as the "most important of these groups"[25] which form the traditional management of common property resources.

Unsurprisingly, the foregoing discussion on rights and interests in water has focussed on those communities described as either indigenous or customary. The International Work Group for Indigenous Affairs (IWGIA)[26] reported that the total estimated indigenous population of Asia was 148 million, comprising in East Asia 67 million, South Asia 51 million, and South East Asia 30 million. However, the remaining population in Asia far exceeds this total indigenous population, with estimates of the combined population of China and India alone exceeding 2.4 billion persons.[27]

Given this huge non-indigenous Asian population, indigenous and customary rights and interests in natural resources such as water are arguably of little consequence to nation states. However, as Nicholas Kristof points out "the cost of Asia's industrial revolution are etched in little hamlets ..."[28]

He observes that the industrialisation of Asian nations such as China has been at a huge environmental and human health cost, with nearly three million people each year perishing due to the catastrophic impact of polluted air and water which is "some of the filthiest" in "human history".[29] Further, Kristof asserts that this deterioration in environmental quality is "one of the structural flaws in Asia's economic architecture".[30]

As commodification of the commons continues apace in Asia, it is pertinent to note that it has not been without discord. Ole Bruun and Arne Kalland note that:

> ...conflicts over control of natural resources have intensified in the industrializing society: between industry and agriculture, between large- and small-scale economies, between centre and periphery, and between ethnic groups.[31]

25 Ibid.

26 Anette Molbech (ed) *The Indigenous World 2000/2001,* (IWGIA Copenhagen: 2001) 22.

27 *The World Guide 2005/2006* (Instituto del Tercer Mundo and New Internationalist Publications, Uruguay/ Oxford: 2005) 177, 289.

28 Nicholas Kristof "The Filthy Earth" in Nicholas Kristof and Sheryl Wu Dunn (eds) *Thunder from the East: Portrait of a Rising Asia* (Nicholas Brealey Publishing, London: 2000) 291.

29 Ibid at 295.

30 Ibid.

This is not surprising given there has been a close historic association between territoriality and ethno-nationality. Stanley Engerman and Jacob Metzer point out that disputation involving control of territory and rights and interests in land (and other natural resources) ... "have characterized human societies from ancient days to the contemporary world"[32] Furthermore, the recent *Millennium Ecosystem Assessment* reveals globally that traditional commons are unsustainably strained by the multitude of users and that:

> [w]ater withdrawn from rivers and lakes for industry and agriculture has doubled since 1960 and there is now between three and six times as much water held in manmade reservoirs as there is flowing naturally in rivers ...
>
> ... farm fertilisers have doubled in the same period ... and has triggered massive blooms of algae in the freshwater and marine environments. This is identified as a potential "tipping point" that can suddenly destroy entire ecosystems.[33]
>
> The Millennium Assessment finds that excessive nutrient loading is one of the major problems today and will grow significantly worse in the coming decades unless action is taken.[34]

The population of Asia is currently characterised by a raft of major urban centres which occupy nine of the fifteen positions in the UN list of the world's largest metropolitan areas as of 1995.[35] More recent data will almost certainly displace some of the remaining six non-Asian centres in the list due to the increasing population of other major Asian urban centres over the past decade. Indeed, by 2003 the population of Tokyo had grown to 35 million, an increase of 8.2 million since the 1995 UN ranking, while Mumbai had grown to 17.4 million, an increase of 2.3 million since 1995.[36]

Arguably, viewing Asia as a homogenous urbanised entity is misleading when considering the issue of commodification of natural resources. The rapid large-scale industrialisation of many Asian nations distorts perceptions of Asian societies which are still undergoing a process of change. Confounding the conventional view of

31 Ole Bruun and Arne Kalland, "Images of Nature: An Introduction to the Study of Man-Environment Relations in Asia" in Ole Brunn and Anne Kalland (eds) *Asian Perceptions of Nature:A Critical Approach*, Nordic Institute of Asian Studies – Studies in Asian Topics, No.18 (Curzon Press Ltd, Richmond, UK: 1995) 7.

32 Stanley Engerman and Jacob Metzer "Introduction" in Stanley L. Engerman and Jacob Metzer (eds) *Land Rights, Ethno-nationality, and Sovereignty in History* (Routledge London: 2004).

33 "Planet Shows Signs of Irreversible Strain" *The New Zealand Herald* 31 March 2005 at 16.

34 Dr Walt Reid co-author of *Millennium Ecosystem Assessment*, cited in *The New Zealand Herald* at 16.

35 United Nations Environmental Programme; United Nations Population Division 1995 *World Urbanization Prospects* cited in Kristof, note 28 at 306.

36 United Nations Environmental Programme; United Nations Population Division "UN Report says world urban population of 3 billion today expected to reach 5 billion by 2030" Press Release POP/899 24 2004 March 2.

modern Asian societies, Bruun and Kalland point out that Asian nations are "embracing the extremes", where:

> [h]uge world financial centres with highly sophisticated life styles are often surrounded by simple peasant economies, and the growing number of Asian cities with a million-plus inhabitants are often geographically close to vast areas occupied by tribal societies.[37]

The displacement of traditional Thai village communities by water projects referred to by Lohmann,[38] the destruction of Indian communal rights to water described by Shiva,[39] and the dilution of north Indian village rules guiding the management of traditional common property resources recounted by Chakravarty-Kaul,[40] all illustrate the nexus between the extremes in Asian societies. The dichotomy within Asian nations as they attempt to straddle both modernity and tradition underscores the clear and imminent need to establish an understanding of how emerging property rights in natural resources such as water should be constructed to permit legislatures to ensure that economic rights are also legal rights. As Kristof[41] has pointed out, the mismanagement of natural resources such as water is a structural flaw in Asian economies, and is an issue of the greatest importance if Asian nations are to be environmentally sustainable, a critical precursor to sustainable economic development.

Clearly, the globalisation of business investment has had a pervasive influence upon Asian nations as they have attempted to accommodate liberal notions of private property rights, which arguably have their genesis *inter alia* in the *Fifth Amendment*[42] to the United States Constitution, and the contemporaneous 1789 French Declaration of the Rights of Man and of the Citizen.[43] Harvey Jacobs observes that current debate within the American property rights movement, given civil liberty erosion in the aftermath of recent terrorism, focuses on the strong argument that property rights are, "a foundational civil liberty, central to the schema of the country's framers, and guaranteed under the Bill of Rights."[44]

37 Bruun and Kalland, note 32 at 7.
38 Lohmann, note 13 at 79.
39 Shiva, note 20 at 12.
40 Chakravarty-Kaul, note 24 at 275.
41 Kristof, note 29 at 295.
42 For a discussion on the *Fifth Amendment* see J.Ely. *The Guardian of Every Other Right: A Constitutional History of Property Rights* Bicentennial Essays on the Bill of Rights (2nd ed. Oxford University Press, New York: 1998).
43 See *Article 17 Declaration of the Rights of Man and of the Citizen.*
44 Harvey M.Jacobs "The Politics of Property Rights at the National Level: Signals and Trends" (2003) 69 (Spring) *Journal of the American Planning Association* 185.

P. B. Potter[45] observes that significant dilemmas have arisen in some Asian nations such as China, when attempting to reconcile these notions of fundamental liberal ideals with the local legal culture. A dramatic contrast has been exposed between Chinese law rooted in an authoritarian state structure, that emphasises collective interests over individual identity,[46] and modern legal constructs of property rights.[47]

Chinese attempts to recognise intellectual property rights held by private individuals reveal how tortured the process of property liberalisation can be, with Potter recording that:

> ... China has promulgated an impressive array of laws and regulations on intellectual property, including a Trademark Law (1982, revised 1993), a Patent Law (1984, revised 1992), Copyright Law (1991), and a Law Against Unfair Competition Protecting Trade Secrets (1993: Asia Law and Practice, 1998a). In addition the General Principles of Civil Law (arts 94ff) recognise the rights of individuals and legal persons to hold copyrights, patents and trademarks.

The government has also begun to create the bureaucratic infrastructure to enforce these rules through the State Administration for Industry and Commerce (trademark and trade secrets enforcement), the China Patent Office (patent enforcement), and the National Copyright Administration (copyright enforcement).[48]

Such laws protecting the intellectual property rights of private individuals are rooted in the twin needs of "economic development" and "foreign capital and technology,"[49] and are drawn from the Western tradition of liberal private property. Potter points out that paradoxically, "... the relevant rules and institutions often contradict local culture norms born of the Confucian tradition, which did not generally consider knowledge to be a form of property."[50]

Bruun and Kalland state that Western and Asian realities are comparatively similar. It is only in the contrast of ideals that dissimilarities are perceived, especially when "translating elements of Asian cultures"[51] into Western culture. Ideals rooted in Confucian or Western tradition confound the realities shared by Asian and Western societies, and hence attempts to find common ground in property theory.

45 P. B. Potter "Globalisation and Local Legal Culture: Dilemmas of China's Use of Liberal Ideals of Private Property Rights" (2000) 2 *Australian Journal of Asian Law* 1–33.

46 Ibid at 9.

47 For a discussion on current developments on the definition of property rights see John Sheehan and Garrick Small *Towards a Definition of Property Rights* Working Paper No 1.02 (UTS Property Research Unit, Faculty of Design, Architecture and Building, University of Technology Sydney, Sydney) (2000).

48 Potter, note 46 at 13.

49 Ibid.

50 Ibid.

51 Bruun and Kalland, note 32 above at 21.

There is a corollary between such dilemmas and the increasing recognition that the financial systems of Asia could be better regulated through a regional more culturally appropriate Asian Monetary Fund (AMF) rather than the US backed International Monetary Fund (IMF) in respect of which Christian Downie notes, "[t]he failure of the IMF to provide any forewarning [of the Asian financial crisis of 1997-1998] represents a glaring deficiency in monitoring and surveillance."[52]

Whilst the creation of an AMF "is increasingly likely",[53] a date for its inauguration still remains problematic.[54] By contrast, the commodification of Asian natural resources continues apace, and the need for a regime of property rights for the various component elements such as water is not only compelling but urgent. However, the voyage of constructing appropriate cultural and legal settings for such property rights risks foundering on the shoals of economic and political expediency, especially in nations such as China, with Potter pointing out:

> [t]he absence of deeply entrenched notions about the sanctity of private property is of particular relevance ...
>
> ... the general norms of Chinese socialist ideology that restrict private property rights, and does not carry with it the requirement of strict and effective enforcement as a condition for that recognition to be meaningful.[55]

Whilst Asian and Western ideals may differ, Asian perceptions of nature and hence natural resources are also significantly different to the current Western view of nature which according to Bruun and Kalland is:

> ... in a state of transition, expressed by a propagating ecological awareness and practice: a switch from unbound expansion to a tentative beginning of withdrawal. Concomitantly spreading in the western world is the naturalist view that "our survival lies in the protection of wilderness." [56]

As regards Asian perceptions of nature, they point out that:

> [c]ontrary to western tendencies to dichotomize the universe and stress the absolute, many Asian cultures contextualize the oppositions between nature and culture, the wild and the tame, humans and deities, purity and impurity, good and evil, and so on.[57]

52 Christian Downie "An Asian Response to the Asian Crisis: The Proposal for an Asian Monetary Fund" (2004) 54 (December) *Journal of Australian Political Economy* 103.

53 Ibid at 115.

54 Arguably, an AMF will not be successfully created until the People's Bank of China is able to counter the massive volume of Chinese money-laundering especially in the former Portuguese colony of Macau, and other border areas; see "Enter the Dragon" *The Sydney Morning Herald* 19-20 March 2005 at 45, 48.

55 Potter, note 46 at 14.

56 Bruun and Kalland, note 32 at 8.

57 Ibid at 11.

Hence perceptions of nature, notably in South East Asia[58] have traditionally adjudged the exploitation of natural resources as a normative element of local politics, such that authority to govern is closely linked with the orderly managing of both the temporal and the spiritual. In this context Bruun and Kalland point out that:

> [t]he socio-centric use of natural models for society, for instance in defining social harmony or preserving power and hierarchy, may at its extreme imply seeing the natural environment as merely a resource potential to be converted into usefulness.[59]

However, as previously stated, the huge Asian population especially in China and India with a combined populace of 2.4 billion persons[60] dictates that the future Asia will be one where natural resources are consumed on a massive scale to permit accelerated industrialisation. Kristof observes that such a demand will mean that "scarcities will be inevitable".[61] Bruun and Kalland concur, observing that, "[t]oday, a great number of Asian societies share a common destiny in terms of population pressure, rapid environmental change, resource scarcity and frequent environmental crisis."[62]

Increasing urbanisation and the need for *lebenstraum*[63] undoubtedly lies behind the growing dilution of traditional Asian perceptions of natural resources which over centuries have focussed on a "holistic model for both natural and cultural domains."[64] Arguably, as the Asian population has become urbanised, less and less of the population relies directly on natural resources for survival. Schucking and Anderson note that:

> [m]ost communities that depend on intact nature are well aware of the importance of conserving natural diversity In fact, such communities are far superior to modern industrial societies in terms of their relationship with nature, which is based on respect and a sense of community, instead of just viewing it as 'resources'.[65]

Religious and cultural beliefs and practices have little bearing on people utilising natural resources, whereas population density is a critical diagnostic marker for excessive resource utilisation. Low population density results in resource availability

58 Ibid at 12.
59 Bruun and Kalland, note 32 at 15.
60 *The World Guide 2005/2006* 177, 289.
61 Kristof, note 29 at 300.
62 Bruun and Kalland, note 32 at 16.
63 Living space.
64 Bruun and Kalland, note 32 at 13.
65 Heffa Schucking and Patrick Anderson "Voices Unheard and Unheeded" in Vandana Shiva *et al* (eds) *Biodiversity: Social and Ecological Perspectives* (Zed Books Ltd and World Rainforest Movement, London and Penang: 1995) 31.

and hence unintended resource conservation. Importantly, Bruun and Kalland conclude that in the face of excessive utilisation of natural resources, commodification may assist in possibly ameliorating the situation, stating that:

> [o]ver-exploitation of resources is maybe modified by the commoditization of nature, by new disputes over rights to nature, and by the emerging definition of independent rights of nature. Environmental degradation seems in many cases to be more the outcome of a change in power relations than of a collapse of old values.[66]

Given the above discussion on the Asian commons, the following 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. Such fundamental notions lie at the core of any attempt to create water property rights in Asia, and arguably should underpin any commodification of Asian natural resources.

Fundamentals of Property Rights

Before attempting to interrogate water property rights, and ascribe worth to the rights and interests therein, it is necessary to understand the "bundle of rights" that comprises what was originally known as land property. Recent research by John Sheehan and Garrick Small [67] 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.[68]

Whilst the context of this research is the Anglo-Australian legal *milieu*, expanding notions of emerging property rights is not restricted to just those Asian nations who share a common law heritage such as Singapore, Malaysia, India, Pakistan, Bangladesh, Sri Lanka and the Philippines. Nations who share a *Civil Law* (Roman)

66 Bruun and Kallan, note 32 at 177.

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

68 Ibid at 36.

heritage such as Indonesia (Dutch), Vietnam (French), Cambodia (French), Laos (French), and East Timor (Portuguese) also have a long history of private property rights, and developing property theory is obviously of great importance.

Thailand, Korea, Japan, and China have neither a common law nor *Civil Law* heritage, and yet are now dealing with expanded private property rights in not only land and minerals, but also water. As previously mentioned, Potter notes the conflict that nations, especially China, face when attempting to import:

> ... notions of private autonomy in the acquisition and management of property. However, in the absence of relatively autonomous norms and effective institutions to restrain state action, China's adoption of the liberal private property rights regime remains incomplete. [69]

Paradoxically, Marxist ideology has both "repudiated directly and explicitly"[70] liberal ideals of private property, which are now, for economic and political self interest, the subject of "selective adaptation"[71] by China. This is doubtless to the chagrin of local legal culture which is both unwelcoming and historically threatened by such Western norms.

Arguably, irrespective of legal or cultural setting, existing notions of land property are outdated, and probably incapable of wholesale modernisation to accommodate emerging concepts of property rights. Furthermore, in ascribing worth to such rights, current practices which could warrant retention and even refinement, whilst familiar, may no longer be appropriate for property rights such as water.

At present water exists generally 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 state abrogation. The challenge of designing a private property system in water lies in the harnessing of departures from cadastral property without producing such a degree of privatisation that the common use aspect of property is wholly diminished.

The construction of a system of private property in water 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 are property rights is crucial.

69 Potter, note 46 at 9.
70 Ibid.
71 Ibid at 2.

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* v *Eaton* (1999) 201 CLR 351, *(Yanner)*, where the Australian High Court took the opportunity to contrast property in the conventional sense with the "property" or "ownership" that the state 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".[72]

Also, the Court usefully stated that the common law position of natural resources was as follows, "At common law there could be no 'absolute property', but only 'qualified property' in fire, light air, water and wild animals".[73]

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 in countries that 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.

There has also been the very recent recognition of carbon as a property right, and legislation in various Australian states is developing this concept,[74] wherein the objective is:

72 *Yanner* at 8 per Gleeson CJ, Gaudron Kirby and Hayne JJ.
73 *Yanner* at 11.

> ... 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.[75]

The value of carbon credit property rights is currently at Euro 9.50 per ton, a significant increase above the January 2005 price of Euro 7 per ton.[76] Yet even the conceiving of an exotic property right such as carbon has had unexpected impacts upon customary holders of rights and interests in water, such as in the Waitahuna River in Otago in the South Island of New Zealand, where 114,258 carbon credits (worth around $A2 million) have resulted from hydro electric generation.

To sustain these carbon credits, the New Zealand energy company needs to pump Waitahuna River headwaters to a distant hydroelectric station in another valley. Apart from the obvious reduction in downstream flows, the removal of water also has unintended repercussions for Maori spiritual and cultural values, as it, "... violates the Maori belief in "mauri", the vital essence of water, which holds that waters from different valleys should not be mixed".[77]

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

74 Jacqueline Bredhauer "Tree Clearing in Western Queensland — a Cost Benefit Analysis of Carbon Sequestration" (2000) 17 *Environmental and Planning Law Journal* 389.

75 Ibid.

76 "Kyoto's Threat to the Essence of Mauri" *Sydney Morning Herald* 30 March 2005 at 13.

77 Ibid.

Concluding Remarks

The establishment of new forms of specific private property rights such as water 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 contentious area of carbon credit property rights.[78] There is growing recognition of an interconnectedness between these less familiar forms of property and even archaic property rights such as native title,[79] and the prospect for conflict in some circumstances.[80]

All of the above illustrates the difficulties likely to be encountered when the need for security and tradeability of a property right such as water, impact upon broader socio-economic matters, such as established property markets, financial regulation, and natural resources 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,[81] 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 water property rights are capable of construction within common law or Civil Law regimes, an intellectual quantum leap remains to understand how existing property law will interface with property theory in the context of water. This interface lies somewhere between these boundaries, and if true property rights in water are to emerge the positioning of this interface is of critical importance. The commodification of natural resources such as water 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 water.

78 For a detailed discussion on property rights in carbon see Jacqueline Bredhauer "Tree Clearing in Western Queensland – a Cost Benefit Analysis of Carbon Sequestration" (2000) 17 *Environmental and Planning Law Journal* 383–405.

79 Michael Davis "Indigenous Rights in Traditional Knowledge and Biological Diversity: Approaches to Protection," (1999) 4 *Australian Indigenous Law Reporter* 1-32.

80 James Woodford "Hunters and Protectors" *The Sydney Morning Herald* 6-7 December 2003 at 4s, 5s.

81 Donald Denman "Recognising the property right" (1981) 67 *The Planner* 161.

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

Finally, the task of conceiving private property rights in any natural resource is not only one embedded with the issues of definition (or territoriality), but also one of how nations states such as China will deal with such rights. International liberal capitalism presents a forceful challenge with which authoritarian state structures have only recently needed to deal. As stated in the introduction to this paper, this task is one of both complexity and simplicity, and will severely test the capacity of Asian property law and practice to accommodate these emerging property rights.