BOOK REVIEW

NATALIE P STOIANOFF ET AL (EDS), MARKET INSTRUMENTS AND THE PROTECTION OF NATURAL RESOURCES (EDWARD ELGAR, 2016)

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This book is part of Edward Elgar's Critical Issues in Environmental Taxation Series and looks at the use of fiscal and market instruments to protect natural resources. The book is divided into four parts: 1. Balancing sustainable use and natural resource protection; 2. Protecting water resources; 3. Shifting the tax burden to effect environmentally responsible outcomes; and 4. Evaluating instruments that protect the global atmosphere.

The first part contains three chapters which look at: the use of market-based instruments in protecting South Australia's marine protected areas; the development of Reducing Emissions from Deforestation and Forest Degradation programmes ('REDD+') as a collaboration between Brazil and the State of California; and negotiations in Australia with the land sector to develop a carbon price to encourage the mitigation of GHG emissions.

In their preface the Editors refer to the agreement which was reached in December 2015 at the Paris United Nations Climate Change Conference, which presumably was the inspiration for the book. One issue indirectly raised by the first three chapters is how the environmental initiatives of the states and provinces of countries will be tied into an agreement which binds only signatory countries. For example, the South Australian fisheries legislation regulates the aquatic reserves of the state of South Australia and not the territorial seas of Australia beyond the state's marine parks. The chapter on the Brazilian REDD+ programmes refers to their implementation in the states of Acre and Matto Grosso. There is as yet no Brazilian federal legislation on the subject. However, as taxation tends to be a federal matter, the chapter on GHG

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emissions illustrates the way in which federal fiscal initiatives can be taken to further the aims of the Paris agreement.

An issue which is not addressed in the book is how countries deal with a conflict between the environmental objectives of country governments and the provincial governments. This was recently emphasised in the conflict between the renewable energy targets of a number of Australian states and the more modest target of the federal government. This has been perceived as a conflict between environmental ideologies.

Part II of the book, dealing with water resources, has three chapters describing water issues in the USA, including one on the impact of fracking and one on water conservation in drought afflicted California.

Part III of the book dealing with the use of fiscal incentives to effect environmentally responsible outcomes looks at subsidies to encourage the transition from fossil fuels to renewable energy in African and Indian Ocean island states and the use of environmental taxation to improve outcomes for e-waste in Australia and a chapter on *ad unit* and *ad valorum* tax shifting and its impact on Pigovian taxation in the European Union ('EU') Member States.

Part IV of the book contains five chapters which seek to evaluate the various instruments that seek to protect the global atmosphere. The first of these seeks to compare the feasibility of carbon trading and carbon taxation from the perspective of China. The next chapter looks at the use of economic instruments to regulate ship-sourced carbon dioxide emissions. The negotiating background of the Paris agreement is discussed in the next chapter with a focus on emissions trading schemes. This is taken further in the final chapter which looks at social justice and recent reforms in the EU and US carbon markets.

This book provides a useful introduction for policy makers, as well as students of environmental law on the economic issues which underpin efforts to secure the environmentally sustainable protection of natural resources in a situation of climate change.

BOOK REVIEW

COLIN T REID AND WALTERS NSOH, THE PRIVATISATION OF BIODIVERSITY? NEW APPROACHES TO CONSERVATION LAW (EDWARD ELGAR, 2016)

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The book reviewed above: *Market Instruments and the Protection of Natural Resources*, Stoianoff et al eds (2016) looks at the shift in environmental law from the command and control model to the use of economic instruments and market-based mechanisms. Reid and Nsoh seek to apply this modern approach to the preservation of biodiversity.

The title of the book is somewhat confusing, because it is not about how biodiversity might be privatised, in the sense of being turned into private property, but it is about how interactions with real property might be constrained by the use of economic instruments in the interest of biodiversity conservation. The opening chapter seeks to provide 'an overview of the factual, legal and regulatory background to biodiversity conservation'. The Convention on Biological Diversity 1992 ('CBD') is referred to as the source of the term 'biodiversity', but no mention is made of the substantive provisions of the CBD or of the 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, or of EU Regulation No 511/2014 of the European Parliament and of the Council of 16 April 2014 which seeks to implement the Nagoya Protocol. The subject of Access and Benefit Sharing ('ABS') is not mentioned in this book, despite its relevance to the privatisation of biodiversity, neither is the controversial subject of "biopiracy" which is the unauthorised privatisation of biodiversity.

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The introductory chapter contains a helpful summary of market-based instruments which will be relevant to the quantification of the biodiversity impacts of the use of real property.

The confusion in the title of the book is pointed up by chapter 1.7 which deals with 'commodification'. It questions whether biodiversity can be captured in monetary terms and whether a property-based analysis is appropriate to the subject of biodiversity conservation. In fact, a significant area of the commodification of biodiversity involves the patenting of biological resources, but this subject is not mentioned in the book.

The second chapter discusses a number of interlinked and 'pervasive issues' relevant to the debate. These include the uncertainty in assessing the success of conservation efforts; the difficulty in identifying what is being traded; the difficulties in equating benefits and detriments; valuation challenges; additionality in the sense of a scheme delivering something beyond what would have happened in any case; the duration and timing efforts to encourage biodiversity; locational issues where what might be appropriate is constrained by geographical and climatic factors; the need for coherence and co-ordination; the recognition of relevant property rights, although the emphasis here is on real property, rather than intangible property rights such as intellectual property and native title rights; security, monitoring and enforcement; information, transaction costs and intermediaries; the calculation of when a reward should be paid to landowners (whether on an input or an output basis); and governance in the sense of transparency, accountability and public participation). A number of these pervasive issues are explored in greater detail in the following chapters.

Chapter 3 looks at the payment for ecosystem services ('PES'). 'Ecosystem services' are defined in Chapter 1.2 as including the benefits which people can obtain from ecosystems, such as natural product; cultural services, including religious, spiritual and educational values; regulating services such as disease and climate regulation and water purification. This chapter applies the economic theories of Coase and Pigou to PES and considers such matters as biodiversity offsetting and polluter pays. It surveys the various mechanisms for valuing ecosystem services and the design of PES contracts.

Chapter 4 looks at biodiversity offsetting, well recognised by airline passengers who are invited to pay amounts to offset the environmental effects

of their air travel. Various offsetting models are canvassed. This is a subject which the House of Commons Environmental Audit Committee has considered in some detail and forms the basis of a pilot offsetting scheme developed in England by the Department for the Environment and Rural Affairs ('DEFRA'). This chapter concludes with a description of the 'BioBanking' scheme introduced by the NSW Government.

Chapter 5 looks at conservation covenants under which landowners accept environmentally-justified restrictions on the use of their land. An example could be the acceptance of buffer zones by farmers cultivating genetically modified crops.

Taxation incentives are described in chapter 8 and transferable development permits, quotas and impact fees in chapter 9.

The final chapter looks at the ethical issues involved in the protection of biodiversity. This chapter looks at 'wild Law and Earth Jurisprudence' and notes the market limitations to recreating the natural.