ECOLOGICALLY SUSTAINABLE DEVELOPMENT: LEGAL PRINCIPLES

Justice Peter Biscoe, Land and Environment Court of New South Wales

A paper delivered on 15 April 2009 to the postgraduate course in Environmental Law and Policy conducted by the Institute of Environmental Studies at the University of New South Wales

Introduction

1. The internationally accepted principles of ecologically sustainable development are those adopted at the 1992 Earth Summit (the United Nations Conference on Environment and Development) in Rio de Janeiro attended by representatives of 172 countries including Australia. In New South Wales those principles have been incorporated in almost identical form in s 6(2) of the *Protection of the Environment Administration Act 1991*, which has been adopted by reference in s 4(1) of the *Environmental Planning and Assessment Act 1979 (NSW) (***EPA Act**) and other NSW statutes. Section 6(2) provides:

> …ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:
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> (a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
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> In the application of the precautionary principle, public and private decisions should be guided by:
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> (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
>
> (ii) an assessment of the risk-weighted consequences of various options,
>
> (b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and

productivity of the environment are maintained or enhanced for the benefit of future generations,

(c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

(d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:

(i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

2. One of the objects of the *EPA Act* is to encourage ESD: s 5(a)(vii). In other NSW statutes the ESD requirement has been expressed differently and, sometimes, arguably more strongly. For example, the National Parks and Wildlife Act 1974 (NSW) s 2A(2) provides that its objects "are to be achieved by applying" the principles of ESD.

3. In 2007 I attended the 5th Worldwide Colloquium of the IUCN Academy of Environmental Law in Brazil. Held 15 years after the Earth Summit, its theme, appropriately enough, was "Rio+15: A Legal Critique of Ecologically Sustainable Development". The colloquium was mainly attended by academics, from many countries. The novelty of recognised ESD principles, their generality and their lofty language are fertile ground for scholars. The great variety of topics collected under the banner of ESD can be seen in the titles of the many papers delivered at the colloquium, which I have listed in the

schedule to this paper. I delivered a paper entitled “Ecologically Sustainable Development: Legislation and Cases in New South Wales”.

4. Much of my paper came to be incorporated in my climate change judgment later the same year, *Walker v Minister for Planning* [2007] NSWLEC 741, (2007) 157 LGERA 124, which was updated in my recent climate change judgment in *Aldous v Greater Taree Council* [2009] NSWLEC 17.

ESD and the Courts

5. The work of the courts is to decide concrete cases within the general principles of ESD. Yet, as Justice Oliver Wendell Holmes said, “General principles do not decide concrete cases”: *Lochner v New York* 198 US 48, 69 (1908). Therefore it is necessary for the courts to work out the general ESD principles more specifically, through judgments at the points of application. Beneath the overarching general principles of ESD, a body of precedent is being developed which, in time, should lead to more specific sub-principles to guide the rational and consistent determination of different kinds of cases.

6. The principles of ESD have been considered in a significant number of cases in a wide range of circumstances, including the protection of endangered species, development approvals for coal mines and power stations, and the protection of coastal areas from storm damage. However, the High Court of Australia is yet to adjudicate on an ESD case.

7. In Australia, ESD litigation has so far been confined to administrative law, whether judicial review or (where available) merits appeals. Judicial review grounds include: error of law, failure to have a requisite state of mind required as a condition precedent to exercise of power, failure to consider mandatory relevant matters, failure to attribute statutorily required weight or priority to a relevant matter, and non-compliance with procedural requirements. Particularly in the area of climate change litigation, potential remedies for environmental damage and misrepresentation may be provided by tort actions in nuisance, negligence and conspiracy; actions for misrepresentation in tort, contract and under the *Trade Practices Act 1974* (Cth) and *Fair Trading Act*

(1987) (NSW); and actions for infringing human rights by pollution contrary to international conventions: see Preston J, "Climate Change Litigation" (2009) 9(2) *The Judicial Review* 205.

8. ESD principles and the Australian and overseas cases were reviewed by me in *Walker* at [85] – [119] and *Aldous* at [34]. In *Walker* I annexed a list of all NSW and Commonwealth statutes which referred to ESD. They were also reviewed by Preston J in *Telstra Corp Ltd v Hornsby Shire Council* [2006] NSWLEC 133, (2006) 67 NSWLR 256 (a merits appeal in which development consent was granted for the installation of telecommunications equipment and a base station on the roof of a club) and *Taralga Landscape Guardians Inc v Minister for Planning* [2007] NSWLEC 59, (2007) 161 LGERA 1 (a merits appeal in which development of a large wind farm was approved). See also Preston J, "The Role of the Judiciary in Promoting Sustainable Development: The Experience of Asia and the Pacific" (2005) 9 Asia Pacific Journal of Environmental Law 109, and Preston J, "Climate Change Litigation" (2009) 9(2) The Judicial Review 205.

9. Over the last few years the most topical field for the application of ESD principles has been climate change. Climate change litigation and the public interest in climate change have been stimulated by a number of important events: the UK Stern Review Report on *The Economics of Climate Change* in 2006; the *Fourth Assessment Report of* the United Nations' International Panel on Climate Change (IPCC) in 2007; Australia's ratification of the Kyoto Protocol in 2008; the *Garnaut Climate Change Review* in 2008; and the pending Commonwealth bill for an Australian carbon trading emissions scheme. In addition, a United Nations Climate Change Conference is to be held in Copenhagen in 7-18 December 2009.

10. Climate change cases fall into two broad categories. Those concerned only with the effect of climate change irrespective of the causes (eg coastal erosion), and those also concerned with anthropogenic causes (eg coal fired power stations and coal mines).

11. Climate change cases are dependent upon a sound scientific basis for the proposition that climate change is occurring and threatens serious or irreversible environmental damage. Climate change cases concerned with anthropogenic causes are also dependent upon a sound scientific basis for the proposition that there are anthropogenic causes. A sound scientific basis for both propositions has been provided by the IPCC's Fourth Assessment Report. It says that climate change is real and dangerous and has anthropogenic causes. I examined that IPCC report in *Walker* at [125] and in *Aldous* at [36] – [38]. The IPCC comprises hundreds of leading climate change scientists from many countries. It is fair to say that the consensus of most climate change scientists is reflected in its Fourth Assessment Report. The Report brings the precautionary principle of ESD into play. Lack of full scientific certainty is not a reason for doing nothing to prevent environmental degradation.

12. The most authoritative United States climate change case is the decision of the Supreme Court of the United States in *Massachusetts v Environmental Protection Agency* 549 US 1 (2007). The State of Massachusetts and others petitioned the Environmental Protection Agency (EPA) to regulate the emission of greenhouse gases, including carbon dioxide, from new motor vehicles under the *Clean Air Act*. Greenhouse gases are air pollutants. The Act required the EPA to prescribe standards applicable to the emissions of air pollution from new motor vehicles in the event that it formed a judgment that such emissions cause or contribute to air pollution reasonably anticipated to endanger public health or welfare. The EPA denied the petition, explaining that it lacked statutory authority to regulate such emissions and that, even if it had such authority, it would decline to exercise it. The applicants sought judicial review of the EPA's denial. They were successful in the Supreme Court which held (reversing a circuit court decision) that the EPA possessed authority to regulate such emissions and had failed to provide a "reasoned explanation" for its conclusion that it would not regulate such emissions even if it possessed the authority to do so. The majority commenced their judgment by stating:

> "A well-documented rise in global temperatures has coincided with a significant increase in the concentration of carbon dioxide in the atmosphere. Respected scientists believe the two trends are related. For when carbon dioxide is released into the atmosphere, it acts like the ceiling of the greenhouse, trapping solar energy and retarding the escape of reflected heat. It is therefore a species – the most important species – of a greenhouse gas."

The majority held:

> "The harms associated with climate change are serious and well recognized. Indeed, the NRC [National Research Council] Report itself—which EPA regards as an objective and independent assessment of the relevant science…identifies a number of environmental changes that have already inflicted significant harms, including the global retreat of mountain glaciers, reduction in snow-cover extent, the earlier spring melting of rivers and lakes, [and] the accelerated rate of rise of sea levels during the 20th century relative to the past few thousand years…"

The majority concluded:

> "Nor can EPA avoid its statutory obligation by noting the uncertainty surrounding various features of climate change and concluding that it would therefore be better not to regulate at this time...If the scientific uncertainty is so profound that it precludes EPA from making a reasoned judgment as to whether greenhouse gases contribute to global warming, EPA must say so. That EPA would prefer not to regulate greenhouse gases because of some residual uncertainty…The statutory question is whether sufficient information exists to make an endangerment finding.
>
> In short, EPA has offered no reasoned explanation for its refusal to decide whether greenhouse gases cause or contribute to climate change. Its action was therefore arbitrary, capricious, …or otherwise not in accordance with law…"

Even the dissentients acknowledged that:

> "Global warming may be a crisis, even the most pressing environmental problem of our time…Indeed it may ultimately affect nearly everyone on the planet in some potentially adverse way, and it may be that governments have done too little to address it'."

Land and Environment Court of NSW

13. The Land and Environment Court of New South Wales, a superior court of record with a civil and a criminal statutory jurisdiction, has delivered a substantial number of ESD judgments. Its ESD cases have nearly all been in its civil jurisdiction, on which I will focus. The Court's civil jurisdiction is unusual in that it includes not only conventional judicial review and civil enforcement, but also merits appeals from refusals of development consents or modifications of development consents under Part 4 of the *EPA Act*. However, its merits appeals jurisdiction does not extend to appeals from decisions of the Minister for Planning under Part 3A of the *EPA Act* (introduced in 2005), which relates to major infrastructure projects. In relation to Part 3A matters, the Court's jurisdiction is limited to judicial review.

14. These niceties of the Land and Environment Court's jurisdiction are essential to an understanding of its ESD decisions. In a merits appeal, the Court stands in the shoes of the administrative decision-maker and decides the case on the merits: s 39 *Land and Environment Court Act 1979*. In a judicial review case, on the other hand, the Court is limited to deciding whether a decision-maker has acted unlawfully; for example, by failing to take into consideration any relevant ESD principle which a statute mandates that the decision-maker must take into consideration.

15. A consent authority – and the Land and Environment Court on a merits appeal – is obliged to take relevant ESD principles into consideration when considering a development application under Part 4 of the *EPA Act*. That is because s 79C in Part 4 requires a consent authority to take into consideration the public interest, which has been interpreted to include the principles of ESD.

16. Although Part 3A of the *EPA Act*, which is concerned with major infrastructure projects, does not include an equivalent provision, it was held in *Walker* both by myself and by a majority of the Court of Appeal (the third member expressing no view) that the Minister is also bound to take into consideration

the public interest (which includes relevant principles of ESD) when granting development approval under Part 3A.

17. A significant issue can be whether the decision-maker is obliged to consider the principles of ESD at the level of particularity for which the applicant contends. A judicial review challenge failed for this reason in *Drake-Brockman v Minister for Planning* [2007] NSWLEC 490, (2007) 158 LGERA 349. That was a challenge to the validity of a concept plan approval for a large redevelopment of a former brewery site at Chippendale. The applicant contended that, although the Minister had specifically considered ESD and greenhouse gas emissions, the approval was nevertheless invalid because the Minister had not carried out a quantitative analysis. Jagot J held that the challenge failed because, assuming the Minister was obliged to consider ESD, he was under no obligation to do so at that level of particularity.

18. Environmental activists have brought many important judicial review cases in the Land and Environment Court. Environmental activists may seek judicial review pursuant to the open standing provision in s 123 of the *EPA Act*, which relevantly provides:

> "123 **Restraint etc of breaches of this Act**
>
> (1) Any person may bring proceedings in the Court for an order to remedy or restrain a breach of this Act, whether or not any right of that person has been or may be infringed by or as a consequence of that breach.
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> (2) Proceedings under this section may be brought by a person on his or her own behalf or on behalf of himself or herself and on behalf of other persons (with their consent), or a body corporate or unincorporated (with the consent of its committee or other controlling or governing body), having like or common interests in those proceedings."

19. Environmental activists who brings judicial review proceedings bear the risk of an adverse costs order if they lose. Therefore, costs can be a deterrent. However, that risk has been mitigated by the Court's discretion not to award costs (or to limit the award of costs) in public interest cases where there are also special circumstances, as recognised by the High Court in *Oshlack v*

Richmond River Council [1998] HCA 11, (1998) 193 CLR 72. More recently, the Court has adopted a unique public interest costs rule in r 4.2 of the *Land and Environment Court Rules 2007*, which provides:

> "**4.2 Proceedings brought in the public interest**
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> (1) The Court may decide not to make an order for the payment of costs against an unsuccessful applicant in any proceedings if it is satisfied that the proceedings have been brought in the public interest.
>
> (2) The Court may decide not to make an order requiring an applicant in any proceedings to give security for the respondent's costs if it is satisfied that the proceedings have been brought in the public interest.
>
> (3) In any proceedings on an application for an interlocutory injunction or interlocutory order, the Court may decide not to require the applicant to give any undertaking as to damages in relation to:
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> (a) the injunction or order sought by the applicant, or
>
> (b) an undertaking offered by the respondent in response to the application,
>
> if it is satisfied that the proceedings have been brought in the public interest."

20. The application of ESD principles in the Land and Environment Court of NSW is illustrated by four recent cases: *Gray v Minister for* Planning [2006] NSWLEC 720, (2006) 152 LGERA 258, *Walker*, *Aldous* and *Anderson v Director General of the Department of Environment and Climate Change* [2008] NSWCA 337.

21. In *Gray* it was held that downstream burning of coal from a proposed coal mine was a relevant matter for consideration in (a) the environmental assessment of the mine, and (b) the Director-General's decision as to whether the environmental assessment adequately addressed the Director-General's requirements: at [100], [115], [125], [126], [135].

22. *Walker* and *Aldous* were climate change cases. At issue in each was whether the decision-maker was bound to take into consideration the principles of ESD in relation to climate change and, if so, had failed to do so. *Walker* was

concerned with a concept plan approval by the Minister for Planning under Part 3A of the *EPA Act*. *Aldous* was concerned with a development consent under Part 4 of the *EPA Act*.

23. In *Walker* the Minister for Planning granted a concept plan approval for a major project, a retirement village on a flood affected coastal plain just north of Wollongong known as Sandon Point. The applicant, Ms Walker, was an environmental activist who sought judicial review of the Minister's decision, utilising the open standing provision in s 123 of the *EPA Act*. I held that the Minister was bound to take into consideration the public interest, that the public interest included relevant principles of ESD, that the Minister had failed to take the relevant ESD principles into account by failing to consider climate change flood risk, and that, consequently, the concept plan approval was invalid. I reasoned to the following conclusion at [166]:

> "In my opinion, having regard to the subject matter, scope and purpose of the *EPA Act* and the gravity of the well-known potential consequences of climate change, in circumstances where neither the Director-General's report nor any other document before the Minister appeared to have considered whether climate change flood risk was relevant to this flood constrained coastal plain project, the Minister was under an implied obligation to consider whether it was relevant and, if so, to take it into consideration when deciding whether to approve the concept plan. The Minister did not discharge that function."

24. The Minister appealed successfully to the Court of Appeal: *Minister for Planning v Walker* [2008] NSWCA 224, (2008) 161 LGERA 423. An application for special leave to appeal to the High Court was refused.

25. Although Ms Walker did not win that battle, she won the war. That is so for four reasons. First, a majority of the Court of Appeal (the third member of the Court expressing no view), after saying that they were surprised and disturbed that the Minister had not considered the effect of climate change flood risk, held that it was mandatory that the decision-maker do so at the next stage of determining any development approval application: at [61] – [62]. Secondly, the majority indicated that if the concept plan approval had not been granted in 2006 but at some later time, there would be a strong prospect that failure to consider the effect of ESD would avoid the decision because of a growing

public perception that ESD is plainly an element of the public interest: at [56]. Thirdly, the Court of Appeal approved a line of authority in the Land and Environment Court that, in determining a development application under Part 4 of the *EPA Act*, the s 79C obligation of a consent authority (and of the Court on a merits appeal) to consider the public interest includes consideration of relevant ESD principles: [42] – [43]. Fourthly, although Ms Walker lost the appeal, the Court of Appeal subsequently declined to order her to pay any costs because she had brought the proceedings in the public interest and there were additional special circumstances: *Walker v Minister for Planning (No 2)* [2008] NSWCA 334.

26. A significant matter not brought to the Court of Appeal's attention in *Walker* was that the *EPA Act* authorises the Minister, when granting concept plan approval, to dispense with the development approval, environmental assessment or report which would otherwise be required under Part 3A: s 75P(1)(c). I venture to suggest that if the Court of Appeal had been seized of this point, it may have influenced them to uphold my decision. On a literal reading of the majority judgment, it might be argued that the Minister could avoid any obligation to take relevant ESD principles into consideration by dispensing with the requirement to obtain development approval when granting concept plan approval. The preferable view – and I think the majority would agree with at least this much – is that if the Minister were to dispense with the requirement for development approval, then the Minister would be obliged to take relevant principles of ESD into consideration at the concept plan approval stage. This is a qualification to the Court of Appeal's decision that the Minister does not have to do so at the concept plan approval stage.

27. Ironically, over the period that the Minister for Planning pursued the appeal in *Walker*, contending that he did not have to take climate change flood risk into consideration in relation to coastal plain development, another arm of the NSW government was telling councils that they had to do so when considering development applications under Part 4 of the Act. That was in the Department of Environment and Climate Change's published guidelines aimed to assist councils in the implementation of floodplain risk management plans. The

guidelines state that "the impacts of climate change and the associated ramifications…cannot be ignored in decision-making today", and that "climate change is expected to have adverse impacts upon sea levels and rainfall intensities, both of which may have significant influence on flood levels": see *Aldous* at [32].

28. The Court of appeal confirmed the relevance of the principles of ESD in *Anderson v Director-General of the Department of Environment and Climate Change* [2008] NSWCA 337. This was the latest of a number of cases brought with mixed success in the Land and Environment Court over several years by the Andersons, an Aboriginal brother and sister, seeking to prevent a large residential subdivision development near Angels Beach, Ballina. They considered the area to be of high significance to Aboriginal people. In this case they failed both at first instance and on appeal in a challenge to the validity of a permit under s 90 of the *National Parks and Wildlife Act* 1974. The permit allowed the destruction, defacement or damage of Aboriginal places and objects as part of a large residential subdivision. The Andersons argued (among other things) that the Director-General had misdirected himself as to what was required of him in his consideration of an ESD principle, the principle of intergenerational equity. The Court held that intergenerational equity requires an evaluative judgment and does not require that all Aboriginal objects found on land must be conserved for the benefit of future generations of the traditional custodians of the land: at [85]. The Court held that the appellants, being dissatisfied with the outcome of the merit assessment undertaken for the permit, had sought to disguise a challenge to the merits as a judicial review on the ground of failure to consider relevant matters: at [91]. The Court held that the Director-General in fact gave careful, detailed and comprehensive consideration to the principle of intergenerational equity from the perspective of the significance of the Aboriginal objects: at [92].

29. Finally, I turn to my recent climate change decision in *Aldous.* That was a case of judicial review of a council decision to grant consent to a residential development on a beachfront block at Old Bar beach, near Taree. The claim was brought by the owner of an adjoining property, located immediately

behind the subject property (whose real object may have been to avoid view loss). One of the claimed grounds for judicial review was that the council had failed to take ESD principles into consideration; in particular climate change induced coastal erosion. Old Bar beach has been badly eroded by coastal storms over the last 10 years. It was argued that if erosion continued at the same rate, then the proposed new residential development could be affected by erosion in due course. I rejected this ESD ground on the facts (the applicant succeeded on an unrelated ground). I held that the council was bound to consider ESD, in particular climate change induced coastal erosion, but that it had properly done so. Moreover, the proposed residence was to be built at the rear of quite a deep beachfront block, about as far from the beach as possible, and was to replace an existing dwelling on the edge of the beach, which was vulnerable to the coastal erosion. Short of sterilising development of the block, the development consent seemed not unreasonable.

Conclusion

30. Ultimately, the enforcement of ESD principles depends on the vigilance and willingness of authorities and concerned persons to litigate where there has been an actual or threatened breach of ESD principles. The expanding case law is testament to their efforts.

SCHEDULE

Papers presented at the 5th Worldwide Colloquium of the IUCN Academy of Environmental Law, "Rio+15: A Legal Critique of Ecologically Sustainable Development", Brazil, 2007:

- "A New Environmental Policy: The Risk and the Precautionary Principle", Dra. Miriam Alfie Cohen, Jefa del Departamento de Ciencias Sociales -UAM-C; Dr Adrian de Garay Sanchez, Rector de la UAM-A;
- "Contracting Public Support for Biodiversity Conservation: The South African Experience", Alexander Paterson, B SocSci, LLB, LLM (Environmental Law) Senior Lecturer, Institute of Marine and Environmental Law, University of Cape Town;
- "Role of Local and Indigenous Communities in the Conservation of Biodiversity and traditional knowledge in Nepal", Professor Amber Prasad Pant, Tribhuvan University, Faculty of Law, Nepal Law Campus, Kathmandu Nepal;
- "Critical Analysis of the New Brazilian Legislation on Sanitation", Andreas J Krell, Professor for Environmental and Constitutional Law at the Federal University of Alagoas (UFAL), Brazil;
- "The UK's Climate Change Bill", Andrew Waite;
- "Local Agenda 21+ 15 and the Constitution + 10: A rights-based Approach to Sustainable Communities in South Africa", Anel Du Plessis (BA, LLB, LLM), Senior Lecturer, Faculty of Law;
- "Mariculture and the Environment: Food for Thought", Ann Powers, Pace Law School, White Plains, New York USA;
- "The Assessment of Moral Diffuse Damages in Environmental Torts as an Imperative to Ensure Sustainability", Arlindo Daibert, LLM;

- “Multi Institutional Approach Against Deforestation”, Bambang H Mulyono;

- “Protecting Indigenous Peoples Through Responsible Financing”, Benjamin J Richardson, Osgoode Hall School of Law, Osgoode Hall School of Law, York University, Toronto;

- “Environmental Responsibility Under the 2004/35CE Directive, in European Law”, Branca Martins da Cruz, Universidade Lusiada, O Porto, Portugal;

- “The Limits and the Potentialities of Biofuel as an Alternative for Sustainable Development: Change Climate Convention and Biological Diversity Convention”, Solange Teles da Silva, Coordinator and Professor of the Master Degree in International Law and Environmental law at the Catholic University of Santos; Carolina Dutra, Lawyer, Student on the Master Degree in International Law and Environmental Law;

- “Progress in Capacity Building in Environmental Law in African Universities”, Charles Okidi, University of Nairobi;

- “Brazil’s Conservation Units Law and Ecologically Sustainable Development: Realistic Effort or Admirable Failure?”, Colin Crawford, Associate Professor and Co-Director, Centre for the Comparative Study of Metropolitan Growth, Georgia State University College of Law, Atlanta, GA, USA;

- “The Contribution of Judges to the Effectivity of Environmental Protection in the Reality of Brazilian Law”, Consuelo Yatsuda Moromizato Yoshida, PhD and Professor in Environmental Law, Pontificia Universidade Catolica de Sao Paulo, Judge of Federal Court;

- “Industrial Agriculture and the Ecology of Ethics”, David N Cassuto, Pace University School of Law;

- “An Animal Ethical Context v. The Sustainable use of Wildlife”, Prof. David Favre, Michigan State University College of Law;
- “Climate Change and Sustainable Energy”, David Hodas;
- “”The Quest for Climate Justice and Equity: an Analysis of the Legal Framework in Uganda”, Emmanuel Kasimbazi, Senior Lecturer, Faculty of Law, Makerere University, Kampala Uganda;
- “Strengthening the International Protection of Endangered Wildlife to Ensure their Survival”, Felicity Hefferman;
- “Environmental Justice as a New Perspective to Environmental Law After Fifteen Years of Rio/92: Contributions to a Law of”, Fernanda de Salles Cavedon; Ricardo Stanziola Vieira;
- “Research Funding and the Legal Protection Over Traditional Knowledge in the State of Amazonas, as a Way to Promote Sustainable Development”, Serguei Aily Franco de Camargo; Fernando Antonio de Carvalho Dantas; Marco Aurelio de Carvalho Martins; Andrei Sicsu de Souza;
- “A Critical Analysis of the International Law Commission’s Draft Articles on the Law of Transboundary Aquifers and Aquifer Systems in Light of the Rio Declaration and Agenda 21”, Flavia Loures, Program Officer, World Wide Fund for Nature; Joseph Dellapenna, Professor, Villanova University School of Law;
- “Legal Frameworks for Integrated Marine Environmental Management”, Gregory Rose;
- “Environment and the Role of Judiciary: Problems of Developing Economies”, Imran Akram;
- “Sustainability Through new Environmental Law in Megacities: Mexico”, Ivett Montelongo, Universidad Autonoma Metropolitana, Mexico;

- “The Principle of Sustainable Development”, Dr Iwona Rummel Bulska, Principal Legal Officer, Division of Environmental Law and Conventions, UNEP;

- “Dispute Avoidance – and Dispute Settlement in International Environmental Law”, Dr Iwona Rummel-Bulska, Principal Legal Officer, Division of Environmental Law and Conventions, UNEP;

- “Liability for Environmental Damage”, Dr Iwona Rummel-Bulska, Principal Legal Officer, Division of Environmental Law and Conventions, UNEP;

- “Environmental Governance”, Dr Iwona Rummel-Bulska, Principal Legal Officer, Division of Environmental Law and Conventions, UNEP;

- “Climate Change and Indian Tribes: Impacts and Responses”, Jacqueline P Hand, UDM School of Law;

- “Keeping Distributional Impacts low While Making the Transition to a low Carbon Economy in EC Climate Change Policy: What Role for Legal Principles?”, Drs. Javier de Cendra de Larragan, LLM, Researcher and PhD candidate at Metro, the Research Institute for Transnational Environmental Law, Faculty of Law, University of Maastricht (the Netherlands);

- “Intent to Understand the Hydric Resources Act: Strategies of the Capital and `New’ Forms of Privatisation of Water”, Joaquim Shiraishi Neto;

- “Legal Pluralism, Co-operative Governance, and International Law. The Case of Transboundary Wetlands Under the Ramsar Convention: Keep the Layers Out!”, Jonathan Verschuuren, Professor of International and European Environmental Law, Centre for Legislative Studies, Tilburg University, the Netherlands;

- “The Perspectives of Amazonian Treaty as an Instrument of Harmonization of the Environmental Legislation in Amazonian Region, CNPQ – Brazil”, Jose Augusto Fontoura Costa e Solange Teles da Silva, Professors of Environmental International Law at the State University of Amazonas and Catholic University of Santos;
- “Towards an Environmental Liability Regime without Damage: the Case of Latin American Regimes”, Jose Juan Gonzalez, Universidad Autonoma Metropolitana, Mexico;
- “The Implications of the Principle of Sustainable Development in International Environmental Law”, Jose Juste-Ruiz, Professor of International Law, Universidad de Valencia;
- “Brazilian Jurisprudence in a Risk Society: New Approach?”, Jose Rubens Morato Leite, Professor of Environmental Law of UFSC (Federal University of Santa Catarina);
- “Critique of Ecological Sustainable Development: Case Study of Australia’s Legal Responses to Climate Change Since Rio”, Karen Bubna-Litic;
- “The Public, the courts and Participation in Environmental Decision-making in the UK”, Professor Karen Morrow, University of Swansea;
- “Agenda 21, Chapter 18: Protection of the Quality and Supply of Freshwater Resources – Integrated Approaches to Management of Water Resources and the Singapore Model”, Professor KOH Kheng-Lian, Faculty of Law, National University of Singapore; Director, Asia-Pacific Centre for Environmental Law;
- “Role of the Judiciary in Promoting Environmental Protection and Sustainable Development through the Rule of Law”, Lal Kurukulasuriya, Director-General, Centre for Environmental Research, Training and Information;
- “Managing the Last Remain of Indonesian Fish”, Laode M Syarif [vii];

- “Constitutional Environmental Rights: An Under-utilised Resource”, Loretta Feris;

- “Judicial Intervention in Constitutional Environmental Governance- How is South Africa Doing?”, Dr Louis J Kotze, Associate Professor Faculty of Law North West University, Potechefstroom Campus, South Africa;

- “Public Participation in Ecologically Sustainable Development in South-East Asia”, Lye Lin Heng;

- “An Analysis of the Mangrove Swamp Legal Protection in Brazil Under the Ecologically Sustainable Development Perspective”, Marcelo Nogueira Camargos; Solange Teles da Silva;

- “Plant Breeders and Farmers Rights under Ethiopian Law”, Mekete Bekele Tekle, Assistant Professor of Law, Addis Ababa University Faculty of Law;

- “Beyond Cap-and-Trade: Embracing Technology-Based Standards as a way to Develop an Effective, Efficient, Equitable, and Enforceable Climate Change Law”, Melissa Powers, Clinical Professor, Pacific Environmental Advocacy Centre, Lewis & Clark Law School;

- “A Critical Appraisal of Judicial Attitude Towards Environmental Litigation and Access to Environmental Justice in Nigeria”, Professor Muhammed Tawfiq Ladan, Department of Public Law, Faculty of Law, Ahmadu Bello University, Zaria, Kaduna State, Nigeria;

- “The General Agreement on Trades in Services (GATS) Since Rio: Sustainable Development in trade in Service”, Navamin Chatarayamontri, SJD Candidate, Pace Law School;

- “Faculty of Law, Universita Degli Studi Di Trento (Italy)”, Nicola Lugaresi;

- “Sustainable Development and the Utilisation and Environmental Protection of Shared International Freshwater Resources – The Role of Equity”;

- Kenya’s Position on GMOs: Who’s Position? Reflections on Kenya’s Policy Making Process on GMOs”, Patricia Kameri-Mbote & Edwin Ngure Kameri;

- “The Deforestation in the Legal Amazon. The Lack of Enforcement in the Command and Control Environmental Policy and the challenges for the Environmental State in Brazil”, Carlos Teodoro Irigaray, Doctor in Law (UFSC/Brazil). State Attorney of Mato Grosso State and Professor of Environmental Law, Universidade Federal de Mato Grosso (UFMT/Brazil); Patryck de Araujo Ayala, PhD Candidate in Law, Universidade Federal de Santa Catarina (UFSC/Brazil); Attorney of Mato Grosso State; Researcher of the Researching Group about Environmental Law and Political Ecology in the Risk Society, registered on CNPq/Brazil (UFSC/Brazil);

- “Governance of the Forgotten Province: A Critical Appraisal of the Policy, Legal and Institutional Frameworks for the Control and Management of Marine Resources within Kenya’s Maritime Zones”, Paul Musili Wambua, PhD Research Candidate – Ghent/UON Programme);

- “Ecologically Sustainable Development: Legislation and Cases in New South Wales”, Justice Peter Biscoe, Land and Environment Court of New South Wales;

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- “Pathways to Sustainability: Economics, Ethics and the Law”, Prue Taylor, Deputy Director, New Zealand Centre for Environmental Law;

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