

Resolving Nigeria's Electric Power Crises: Role of the Legal and Regulatory Framework for the Nigerian Domestic Gas Supply Obligations and Pricing Model

Annotated Bibliography

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INTRODUCTION

This web page contains selected sources of information, relevant to my LL.M. thesis research at the University of Calgary.

My research is on the legal and regulatory framework for the Nigerian domestic gas supply and pricing model and its role in resolving the electric power production crises in the country. I also look importantly, at the likely challenges and possible solutions to such challenges.

My research to a large extent reviews the framework because the Government has proposed a legal and regulatory framework for the model stated above. Recently, the Nigerian Government came to the realization that the electric power supply industry as a strategic domestic industry which requires urgent attention in terms of gas availability and pricing, in view of the multiplier effect the sector has on the Nigerian economy as a whole.

Thus, my paper would be largely a doctrinal piece looking at the role of this model in improving electric power supply within the confines of its regulatory and legal framework, the likely challenges and problems, particularly legal ones and possible solutions to those challenges through a chapter on recommendations.

The following Annotated Bibliography therefore relates to some of the literature for my thesis project. I must point out however, that the bibliography is a work-in-progress and therefore not by any means comprehensive or exhaustive at this stage.

This annotated bibliography is divided into 4 parts. Part 1 consists of materials on the history, general information, challenges, analyses of the interrelationship and current state of electric power production and the domestic gas sector in Nigeria.

Part 2 consists of Government documents and reports while part 3 consists of legislations and regulations. Finally, there is part 4 which consists of other materials and useful online links for general and specific information regarding my research.

ANNOTATED BIBLIOGRAPHY

PART 1: BOOKS & ARTICLES

A. BOOKS

Akinrele Adedolapo, *Nigeria Oil and Gas Law* (London: Oil, Gas & Energy Law Intelligence, 2005).

This book does a thorough analysis of the Nigerian oil and gas sector, although its emphasis is on oil and not gas, it gives an insight into issues such as investment in the gas subsector, a historical perspective on gas development and some information on fiscal issues in the gas subsector. It is also one of the most cited Nigerian books when research is done regarding issues related to Nigeria's oil and gas sector and in my view, my research would not be complete without a review of this text which is the Nigerian oil and gas law practitioners' manual. In comparison to other texts I have read that do an analysis of the Nigerian oil and gas sector; I think it is the most thorough and reliable particularly when you consider that it was endorsed by world renowned energy experts like the late Professor W. Walde of the Centre for Energy, Petroleum and Mineral Law and Policy, Dundee.

Olivia Phillip International Consulting Limited, *Nigeria: Electric Power Sector Report 2008* (Lagos: Olivia Phillip International Consulting Limited 2008).

This reference text traces the history of the power and natural gas sectors and seeks to show the interrelationship between them. It is

an indispensable source of information and point of reference. It also reasons why investors should 'take the plunge' with regard to the Nigerian electric power sector. Although it is not a law text like the text by Akinrele for example, it is however, a good reference source for information, statistics and general policy of the Nigerian government as it relates to the power sector and natural gas supply and availability.

B. ARTICLES

Adefulu Adeolu, "How Can Nigeria Develop a Domestic Market for its Gas?" (2000) I.E.L.T.R. 99.

This article gives a historical perspective on natural gas development and utilization in Nigeria and discusses the problems involved in development of a Nigerian natural gas market. It goes ahead to make suggestions for developing a domestic gas market in Nigeria. The paper is in my view a good source of general information of historical facts and details regarding the Nigerian gas sector as far as my research or any research relating to Nigerian natural gas is concerned.

Besant-Jones John, "Reforming Power Markets in Developing Countries: What Have We Learned?", online: (2007) 2 OGEL 1, <<http://www.ogel.org/article.asp?key=2486>>.

This paper compiles the lessons of experience from the reforming of power markets of developing countries and transition economies. The paper acts a sourcebook of about 240 references to this documented experience and complements the World Bank's

Operational Guidance Note for Public and Private Roles in the Supply of Electricity Services (OGN; World Bank 2004b) by compiling lessons of this experience that help in applying the Note's guidance. Interestingly it also shows that natural gas pricing and availability is most times key to electric power generation and stability. Finally, the paper states that any Government that wants to reform its electric power sector, should incorporate its strategic and tactical decisions in an explicit policy, document the policy, present to the legislature for discussion and for obtaining political support. It then further states that once this is obtained, the policy should be officially published. The author then mentions Nigeria as an example of a country that is following this process. This assertion is in my view, buttressed by the fact that recently in Nigeria, every regulation relating to the energy sector is made as a follow up to an explicit policy which has already been documented and in most times received legislative and political support. The regulations for domestic gas supply together with the Nigerian gas master plan are veritable examples of these.

Gbenga Oyeboode & Dosekun Kofo, “The International Comparative Legal Guide to Gas Regulations”, online: (2008) International Comparative Legal Guide 152 <<http://www.iclg.co.uk/khadmin/Publications/pdf/1799.pdf>>.

This article written by two of Nigeria's most renowned transactional lawyers provides a concise, yet thorough outline of Nigeria's natural gas sector, including a general description of natural gas reserves; natural gas production; importation and exportation of natural gas; natural gas pipeline transportation and distribution/transmission network; natural gas storage; and commodity sales and trading. It also does some analysis on the role of domestic gas supply for the

electric power sector. It states facts from official and primary sources which gives one some confidence on the thorough nature of the work and also makes me comfortable citing the article for assertions, facts and figures. The analysis on the role of domestic gas supply for the electric power sector in the article is also useful for my research. The article is also attractive to me because it is recent and a follow-up to a brilliant article earlier written by the same authors.

Ifey Ikeonu, “The Nigerian Electric Power Sector Reform: Establishing an Effective Licensing Framework as a Tool for Attracting Investments”, online: (2006): IP3 <http://www.ip3.org/pub/2006_publication_001.htm >.

This article was written in 2006 by the acting head of Legal and licensing division of the newly formed Nigerian Electricity regulatory Commission. It gives a general overview of the Nigerian electric power sector, its past, present and expected future expectations. It is useful in getting a good grasp of the problems faced in the electric power sector of the country. It also contains useful facts in building the introductory part of my research. It is not only descriptive; it has also got some good analysis of issues in the sector.

Salami Lawal & Elebiju Afolabi, “Investment incentives for the Electricity Business in Nigeria” (2004) 22 Journal of Energy & Natural Resources Law 94.

This paper gives an insight into incentives for investing in electricity business in Nigeria particularly as it relates to gas utilization since almost 70% of the power plants are gas fired. The paper makes particular reference to fiscal incentives. The incentives mentioned

included tax holidays, accelerated capital allowances amongst others. It is a narrative and does not contain any analysis; neither does it state the reason for the lack of investment in the sector despite the incentives. My major attraction to this article is the fact that it was written by two tax experts of a world renowned tax and consulting firm, known to be retained by most international oil corporations for tax consultancy purposes.

Saula Olokodana & Ayodele Oni, “Understanding Power Purchase Agreements” (2006) 3 Negris News1.

This is an article which was co-authored. One of the authors is an industry practitioner who was at the time of publishing the article, the Manager (now Senior Manager), Legal Services of a foremost indigenous Nigerian Power Production company. This article is useful because it was well researched and provides background information on the electric power sector in Nigeria, from an insider's point of view.

Steven J. Malecek, “A Legal Framework for Gas Development: How Can Host Governments Strike a Balance between Investment and Competition?”, online: (2001) 8 CEMPLP Annual Review, <<http://www.dundee.ac.uk/cepmlp/car/html/car5arti8.htm>>.

This article is in my view a brilliantly written article on policy issues regarding domestic gas supply particularly as it relates to supply for power generation. The article has also got quite a bit of useful information and analysis on objectives for gas development, as it

relates to power generation. It also suggests, and I quite agree with the author, that apart from other reasons particularly commercial ones, non-convertibility of local currency for repatriation of profits when selling gas into the domestic market is a key reason for the underdevelopment of domestic gas markets in less developed countries. This key reason amongst others mentioned in the article applies to the Nigerian domestic gas sector. This article is really a useful piece in building a good argument on why the state of the Nigerian electric power is where it is and also helps in making forward looking policies in improving the sector.

C. PRESENTATIONS, PAPERS & NEWS RELEASES

PRESENTATIONS AND PAPERS

Dayo Okusami, “Striking the Balance between LNG Exports and Domestic Demand: The Nigerian Model” (paper presented by a senior associate in Nigeria’s top energy law firm; Templars, at the 5th Law of LNG Conference in Houston, Texas, 5th September, 2008) [unpublished]

This paper presented at the 5th Law of LNG conference was co-authored by the writer of this compilation and a senior associate at one of Nigeria’s renowned energy law firms; Templars. The paper was written a few weeks after the Nigerian government expressed its intention of balancing the desire of increasing its ranking among LNG exporters in the world and meeting domestic demand for gas through a National Domestic Gas Supply and Pricing Policy and

proposed follow-up regulations. The paper highlights the legal challenges that the regulations may bring up, it also gives a comprehensive overview of the policy and regulations forming the Nigerian gas supply and pricing model.

Engr. (Dr.) J.O. Makoju, “Developments in the Nigerian Electric Power Sector” (paper presented by Special Adviser to the President on Electric Power to *the Professionals* at the Federal Palace Hotel Lagos, 1st March, 2007) [unpublished].

This presentation outlines the past and present conditions of electric power production in Nigeria and then goes on to state the problems and challenges and efforts being made to tackle those problems. This presentation was one the author attended and was quite insightful. Reasonable reliance in my view can be placed on most of the information in the paper because it was coming from the special adviser to the president on electric power, with over twenty years experience in the electric power sector, prior to the presentation.

Olatunde Odusina, “The Gas Master plan: Ensuring Maximum Benefit from Gas Resources by Striking the Balance between Export and Domestic Use” (paper presented by the Honourable Minister of State for Energy [Gas] at the Nigerian Oil & Gas 2008 Conference 18th-21st February 2008) [unpublished].

This paper presented by the Honourable Minister in charge of gas in Nigeria, highlights the efforts of the current administration at

improving domestic gas supply through policy and regulations. It makes mention of issues relating to gas-to-power and use of natural gas for power generation. It is also a veritable source of information regarding Nigeria's short to long term energy supply security policy and other related facts and information. It also alludes to the fact that natural gas is increasingly becoming more and more important in power generation especially with the construction of twenty-two greenfield gas-fired power plants.

MEDIA RELEASE

The Presidency, Media release, “FG Inaugurates National Gas Master Plan” (29 April 2008), online: The Presidency <http://www.nigeriafirst.org/article_8178.shtml>.

This report which is from the media representatives of the presidency, explains the efforts of the current Nigerian administration at improving domestic gas supply which would stimulate an improvement in electric power production, being the major fuel for power generation in Nigeria. The report states that due to the lack of domestic gas supply, there are power plants lying idle. It also states that the Government has approved a total overhaul of the gas subsector in order for the enjoyment of the multiplier effect of a functional and efficient domestic gas market, particularly as it relates to electric power supply. One interesting thing about this report is that it states the problems being encountered in the domestic gas sector, efforts being made to tackle those problems and the mechanisms to be adopted. I am also comfortable using the report because it is from the presidency

and therefore carries with it reasonable presumption in its favor that it contains authentic official information.

PART 2: GOVERNMENT DOCUMENTS

Nigeria, National Council on Privatization, *National Electric Power Policy* (Presidency: Abuja, 2001).

This official document outlines the Nigerian electric power policy, describes the current structure of the Nigerian electricity industry and the problems it faces as well as states the proposal to reform it in some detail. It is a basic source of information on the restructuring initiatives of the Nigerian government and places more emphasis on the benefits of restructuring without a corresponding attention to the attendant costs. It also analysis the need to improve domestic gas supply but goes short of stating that lack of domestic gas supply is a major reason for the lack of adequate investment in the sector.

Nigeria, *National Domestic Gas Supply and Pricing Policy* (2008).

This policy seeks to define the policy of the Federal Government of Nigeria in respect of pricing of gas to be supplied to consumers in the downstream sector. It also seeks to create a Domestic Gas Supply Obligation regime for all gas producers. There are attendant problems and challenges with this proposed policy which include not taking into consideration the fact that “booked reserves” of gas producers would be affected and the fact there is no nationally integrated transmission network for gas. There is also the contentious issue of price setting.

Nigeria, the Federal Executive Council, *the Gas Master Plan (2008)*.

This Government document does an overview of the Nigerian gas sector and analyzes its strength and weaknesses and emphasizes the need for strategic interventions by the Government in the gas sector. A major intervention is the pricing approach and like the National Domestic Gas Supply and Pricing regulations mentioned above, it does not appear to give too much thought to issues such as booked reserves, commercial viability of the pricing formulae and other important sundry issues. Any thorough research regarding the electric power sector and its interrelation with natural gas in Nigeria would, in my view, not be complete without an analysis of the document.

Nigeria, the Gas Infrastructure Blueprint (2008).

This is the document embodying the blueprint for gas infrastructure development in Nigeria. The intent is that investments in gas infrastructure will be guided by this blueprint. The importance of this document to my project is in highlighting the role the proposed infrastructural development of the Government of Nigeria would play in the proposed Nigerian domestic gas supply and pricing model.

Nigeria, the Seven Point Agenda: Driving Nigeria's Transformation,

online: <http://www.nigeriafirst.org/article_8489.shtml> this online resource states the seven point agenda of the present administration in Nigeria (2007-11 administration) which includes critical infrastructure. Featuring very prominently under critical infrastructure is electric power. The site states the problems with

electric power production in Nigeria and the steps the Government intends taking in solving that problem. Amongst these is Increase power generation capacity through diversification and installation of gas distribution grids.

Part 3: LEGISLATION

Companies Income Tax Act, LFN. 2004, c.C 21.

This is the key legislation regulating the taxation of Nigerian registered companies. The importance of this legislation to my research is in the fact that it provides fiscal and tax incentives for the utilization of natural gas, downstream particularly under Section 39.

Constitution of the Federal Republic of Nigeria, LFN. 2004, c.C32.

This legislation is the basic, fundamental and supreme law of Nigeria. Its importance to my research is in the fact that that it gives the Federal Government of Nigeria, powers over natural resources in the country even up to the country's territorial waters and exclusive economic zones. This is helpful in analyzing issues bordering on the right and powers or otherwise of the Federal Government to mandate a domestic gas supply obligation on holders of rights to natural gas within its territory.

Nigeria, National Domestic Gas Supply and Pricing Regulations (2008):

These Regulations provide, amongst other things, for the establishment of a department of gas which would be responsible for enforcing domestic gas supply obligations and pricing. It also

provides for the establishment of a gas aggregator responsible for nominations and balancing. The provisions of these Regulations form the core of my research and analysis.

Petroleum Act, LFN. 2004, c.P10

The Petroleum Act is the key legislation in the Nigerian oil and gas sector as there is no Gas Act or any single gas regulation. Its key provisions are on crude oil but it makes certain general provisions which relate to both crude oil and natural gas. Additionally, it has natural gas specific provisions such as the right of the Federal Government to gas free of cost at flare, the right of the Minister of Energy to impose on a licence or lease special terms and conditions including pricing terms, provided these are not inconsistent with the Petroleum Act. These provisions would be very useful in my analysis.

Petroleum Profits Tax Act, LFN.2004, c.P13.

This is the key legislation for taxation of oil producing companies distinct from other commercial entities. This legislation also provides fiscal and tax incentives for upstream utilization of gas. Its provisions are useful in my review and analysis.

Part 4 USEFUL ONLINE LINKS

The Department of Petroleum Resources, online: <http://www.dprnigeria.com/> is the website of the Nigerian Department of Petroleum Resources (DPR). The DPR is for the time being, and until a department of gas is established for gas regulation, Nigeria's oil and gas regulator and its site has got useful

information on Nigerian oil and gas and issues relating to licensing and permits. The site which used to contain obsolete information appears to be getting updated much faster and regularly nowadays.

The US Energy Information Agency, online: <http://www.eia.doe.gov/oil_gas/natural_gas/info_glance/natural_gas.html> is the website of the Energy Information Agency of the US Department of Energy which also publishes historical statistics of all forms for most countries in the world including Nigeria and is a veritable source of information in this regard.

The Presidency, online: <<http://www.nigeriafirst.org/>> is the website of the media arm of the presidency, which states its objectives, makes commentaries and issues media releases on contemporary issues. The site is particularly useful because of its search icon which makes it possible to navigate the site to any area of interest by just inserting key search criteria. The site also contains some literature on gas pricing, domestic gas supply obligations regulations and the Nigerian gas infrastructure blueprint which are the core areas of my research project.

The International Centre for Nigerian law, online: <<http://www.nigeria-law.org/LFNMainPage.htm>> for more information on Nigerian oil and gas laws.

Environmental assessment law and public participation for sustainable development of natural gas in Bangladesh: harmonizing the Aarhus Convention

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AN ANNOTATED BIBLIOGRAPHY

(703: Graduate Seminar in Legal Research and Methodology)

This annotated bibliography is prepared as a requirement for Law 703, and is intended to be a work in progress for my major research paper.

A. Books and Essays

- 1) Davies, Peter, “Public Participation, the Aarhus Convention, and the European Community” in Zillman, Donald N., Lucas, Alastair R. & Pring, George (Rock), eds., *Human Rights in Natural Resource Development* (Oxford: University Press, 2002) 155.

This essay demonstrates the role of public participation in the Aarhus Convention, which establishes the importance of such participation in the decision-making process, and forms the heart of this research paper. Emphasis has been placed on the principles that are relevant for implementing the Convention, and are important for discussion on the arguments presented in this paper.

- 2) Jain, R.K., Urban, L.V. & Stacey, G.S., *Environmental Impact Analysis: a New Dimension in Decision Making* (New York: Van Nostrand Reinhold Company, 1977).

This work is a rationale for the essential elements of public participation in the environmental impact assessment process. According to the authors the three major elements required to make the decision making process effective are: unhindered flow and availability of information, public accessibility to information, and reflection of public opinion in governmental decisions and regulations. In addition, the authors also propose possible frame works incorporating public participation in decision making. This work provides several important perspectives pertinent to this research.

- 3) Pring, George (Rock) & Noe, Susan Y., “The Emerging International Law of Public Participation Affecting Global Mining, Energy, and Resources Development” in Zillman, Donald N., Lucas, Alastair R. & Pring, George (Rock), eds., *Human Rights in Natural Resource Development* (Oxford: University Press, 2002) 11.

In this essay, analysing from a historical perspective, the authors conclude that public participation is a key issue affecting energy and resources development. The authors

scrutinised and evaluated existing international laws for public participation, and discussed the guidelines for public participation at a decision making level. The article also provides a useful review on Aarhus Convention, and is resourceful for constructing the ideas and information conveyed in this paper.

- 4) Thomas, I., *Environmental Impact Assessment in Australia: Theory and Practice*, 3d ed. (Sydney: the Federal Press, 2000).

Presenting the situation in Australia as an example, this book illustrates the necessity and development of environmental impact assessment. The author introduced the concept of public participation as a major characteristic of the assessment process, identifying it as a source of knowledge, sign of affirmation to democracy, and an effective way to close the difference between decision-making and public opinion. The author believes that such participation can eliminate public alienation, hostility and lack of confidence on government decisions. These are important issues, and are strongly related to the scope of this paper.

- 5) Tilleman, William A., “Environmental Assessment” in Hughes, Elaine L., Lucas, Alastair R. & Tilleman, William A., eds., *Environmental law and Policy*, 3rd ed. (Toronto: Emond Montgomery Publication Ltd, 2003) 216.

Starting from the details important for understanding the scope and procedures of assessment laws, this essay provides a comprehensive picture on Environmental Impact Assessment (EIA). While justifying the need of EIA, it also considers several alternatives such as good environmental planning and practice. Most importantly, it discusses the significance of the role of the public in the environmental assessment process, which is strongly related to the research objective of this paper.

- 6) Barton, Barry, “Underlying Concepts and Theoretical Issues in Public Participation in Resources Development” in Zillman, Donald N., Lucas, Alastair R. & Pring, George (Rock), eds., *Human Rights in Natural Resource Development* (Oxford: University Press, 2002) 84.

B. Articles

- 1) Habib M. Alshuwaikhat, “Strategic Environmental Assessment Can Help Solve Environmental Impact Assessment Failures in Developing Countries” (2005) 25 *Environmental Impact Assessment Review* 307.

This article investigates project-level environmental impact assessment and its limitations, and advocates adoption of Strategic Environmental Assessment (SEA) as a means to achieve sustainable development in developing countries. The author suggests that the lack

of transparency and accountability, and ineffective public participation in the development of the policy, plan and program (PPP) in many of these countries can be mitigated by the SEA process. Moreover, the proactive and broadly based characteristics of SEA would benefit the institutional development of the PPP process. The author calls for a coordinated effort between all government, nongovernment and international organizations involved with PPP to enable the developing countries pursue a path of sustainable development through application of SEA. This article provides good complementary and supporting material on public participation.

- 2) Hartley, Nicola & Wood, Christopher, “Public Participation in Environmental Impact Assessment-Implementing the Aarhus Convention” (2005) 25 *Environmental Impact Assessment Review* 319.

This article explores the possible nature of public participation in the environmental impact assessment process provided potential integration of the Aarhus Convention. The Convention advocates early and effective participation, but these terms remain rather undefined, and questions persist about the exact procedure to implement its principles. This paper reports the extent, to which the practice evaluation criteria were fulfilled, and the types and effectiveness of the participation methods. Finally some of the key barriers that appear to impede the execution of early and effective participation programmes are highlighted. The authors conclude that the Convention will undoubtedly lead to strengthening of participation procedures, but were critical about the possible level of improvement which is dependent on the interpretation and incorporation of the ideals into legislation and practice. This article is a good critical review of the Convention.

- 3) Mahmud, S, “Magurchara Blowout in Bangladesh: Environmental and Human Rights Issues” (2003) 1 *Oil, Gas and Energy Intelligence* 1.

This article provides a detailed description and understanding of the environmental and human rights issues originating from blow out situations where the Environmental Impact Assessment (EIA) procedures are not properly defined. Illustrating with the Magurchara blowout case in Bangladesh, the author identifies the potential legal, environmental and humanitarian crises arising from joint venture multinational projects facing blowouts, particularly due to lacks in the EIA and/or Acts outlining the EIA. Most importantly for this research, it illustrates the extent of lack of public participation in energy projects in developing countries, and discusses the significance of the role of EIA to prevent such situation from occurring in the first place.

- 4) Palerm, Juan R., “An Empirical–Theoretical Analysis Framework for Public Participation in Environmental Impact Assessment” (2000) 43 *Journal of Environmental Planning and Management* 581.

This paper proposes a public participation model for introducing theoretical approaches to the Environmental Impact Assessment (EIA) practices, and suggests application of the

critical social theory to a practical level. The theoretical model is based on Habermas's theory of communicative action and Weblen's analysis. This article provides a clear and concise summary of the literature on public participation in the EIA process, and is instrumental to develop a theoretical background on the subject matter of this research.

- 5) Palerm, Juan R., "Public Participation in Environmental Decision Making: Examining the Aarhus Convention" (1999) 1 *Journal of Environmental Assessment Policy and Management* 229.

In this article the author reviewed the development of public participation in environmental decision making. Empirical principles for public participation are proposed, based on Haberman's theory of communicative action, and these principles are used to access the Aarhus Convention which is the subject of this research paper. The Convention is compared with public participation principles, following more strict standards to interpret such participation. It is a significant work scrutinising the effectiveness of the Convention to incorporate meaningful public participation in environmental decision making process.

- 6) Rose-Ackerman, Susan & Halpaap, Achim A., "The Aarhus Convention and the Politics of Process: the Political Economy of Procedural Environmental Rights" (2002) 20 *Research in Law and Economics* 27.

This paper establishes the importance of the Aarhus Convention as an international agreement designed to strengthen democratic environmental governance by project level public participation. The authors endorse the idea that public participation reinforces procedural environmental rights and makes administrative decision-making more democratic and accountable. This is supportive to the idea conveyed in this research paper.

- 7) Zaharchenko, Tatiana R. & Goldenman, Gretta, "Accountability in Governance: The Challenge of Implementing the Aarhus Convention in Eastern Europe and Central Asia" (2004) 4 *International Environmental Agreements: Politics, Law and Economics* 229.

The focus of the paper is to represent the Aarhus Convention as an exercise in learning the tools and skills of democratic governance based on accountability and transparency. The authors argue that the fundamental principle of the Aarhus Convention is to ensure better environmental decisions and better management of specific environmental problems by developing well-informed citizens and more accountable governance. This article provides a good practical approach to adopt the Convention in order to secure public participation.

- 8) Jendroska, Jerzy, "Aarhus Convention: towards New International Standards in Access to Information, Public Participation and Access to Justice in Environmental Matters" (2001) *World Jurist Association* 12.

- 9) Julie, Lemmer A., "Cleaning up Development: EIA in Two of the World's Largest and Most Rapidly Developing Countries" (2007) 19 Georgetown International Environmental Law Review 275.
- 10) Lee, Maria & Abbot, Carolyn, "The Usual Suspects? Participation under the Aarhus Convention" (2003) 66 Modern Law Review 80.
- 11) Paul, McHugh D., "The European Community Directive-an Alternative Environmental Impact Assessment Procedure?" (1994) 34 Natural Resources Journal 589.
- 12) Ryall, Aine, "EIA and Public Participation: Determining the Limits of Member State Discretion" (2007) 19 Journal of Environmental Law 247.

C. Legislations/Acts/Policies

- 1) *National Energy Policy of Bangladesh 2004*, online: Official Website of Bangladesh Oil, Gas and Mineral Corporation (PETROBANGLA)
<http://www.petrobangla.org.bd/NEP_2004_fulldoc.pdf>

D. International Materials (United Nations Documents)

- 1) *Aarhus Convention*, UNECE ESCOR, 1998, UN Doc.ECE/CEP/43 (1998).
- 2) *Agenda 21*, CSD GAOR, 1992, UN Doc.A/CONF.151/26 (vol. 1-3) (1992).
- 3) *Declaration of the UN Conference on the Human Environment*, UNEP GAOR, 1972, UN Doc. A/ CONF.48/ 14/ Rev (1972).
- 4) *Draft Principles of Conduct in the Field of the Environment for Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States*, UNEP GAOR, 1978, UN Doc. UNEP/ IG12/ 2 (1978).
- 5) *Guidelines of 1987 on Goals and Principles of Environmental Impact assessment*, UNEP GAOR, 1987, UN Doc.UNEP/Z/ SER.A/9 (1987).
- 6) *Rio Declaration on Environment and Development*, CSD GAOR, 1992, UN Doc.A/ CONF.151/26 (vol. 1) (1992).

E. News Articles

- 1) “Bangladesh Sues Canadian Oil Giant for Gas Field Blowout” *The Economic Times* (18 June 2008), online: The India Times Group
<http://economictimes.indiatimes.com/International_Business/Bangladesh_sues_Canadian_oil_giant_for_gas_field_blowout/articleshow/3142630.cms>.

Comparing Electricity Governance in China and India - Have Power Sector Reforms Led to Independence and Transparency among Electricity Regulators?

Kamaal R. Zaidi
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Research Question and Objective

My research question is the following:

Have the Regulatory Reforms within the Electricity Sectors of India and China Led to Greater Independence and Transparency Among Regulators?

The purpose of my thesis is to determine whether India and China, countries with similar paths to regulatory reform in the electricity sector, have created electricity regulators in fulfilling some of the guiding principles of effective electricity regulation, including the creation of independent and transparent regulatory bodies, whose aim is to provide reliable and accessible power, fair pricing to users of electricity in both countries.

Research Methodology

The proposed thesis will compare the electricity reforms in the regulatory frameworks of India and China. As part of this analysis, the legislative history of electricity reforms in India and China will be reviewed in the context of the relationship between federal, state, and private entities in pursuing the overarching policy goals of generating adequate power, fair pricing, and distribution to all users of electricity.

ANNOTATED BIBLIOGRAPHY

This annotated bibliography contains various sources of information for my major research paper on comparing electricity regulation in India and China. These sources are divided into to the following four sections:

1. Legislation: covering all electricity reforms in India and China;
2. Reports: which are produced by scholars on electricity issues and international agencies, and which provide a comprehensive overview of the political and economic reforms in India and China;
3. Monographs (Books): covering electricity market reforms;
4. Articles: dealing with electricity reforms in India and China

LEGISLATION

India

Electricity Act (2003).

Electricity (Supply) Act (1948).

Electricity Regulatory Commissions Act (1998).

China

Electricity Law (1995).

Electricity Law (2003).

Electricity Regulations (2005).

REPORTS

Angie Austin, “Energy and Power in China: Domestic Regulation and Foreign Policy” (Paper presented to the Foreign Policy Centre, April 2005), online: The Foreign Policy Centre < <http://fpc.org.uk/fsblob/448.pdf>>.

This paper provides a summary of the changes to China’s electricity market regulations. Here, the author’s analysis includes an overview of trends in demand and supply, and identifies risk factors associated with China’s energy consumption. The author suggests a need for further changes in energy regulation. This paper is useful in understanding the background of China’s regulatory framework in dealing with electricity.

David G. Victor, “Electricity Market Reform in Developing Countries Results From a Five Country Study” (Presentation given to the State Level Electricity Reforms in

Delhi, India, September 2004), online: Program on Energy and Sustainable Development < http://iis-db.stanford.edu/evnts/3978/5_David_Victor.pdf>.

This paper provides a brief overview of the regulatory restructuring in the electricity sectors of five countries, and provides background on the institutional changes that occur when moving from a government-controlled system to a private sector system. The author provides a good comparison of electricity restructuring in five different countries, and how those changes have impacted on those nations' electricity sectors. The paper is helpful in providing reform strategies among five nations who have reformed their electricity sectors.

Government of India (Ministry of Power), Annual Report 2007-08 – Power: *The Building Block of the Economy*, online: Ministry of Power <http://powermin.nic.in/JSP_SERVLETS/internal.jsp>

This online report provides an overview of various electricity power projects in various Indian states. This report is helpful in comparing the success or failures of electricity projects operating under the economically liberalized markets, and how regulatory bodies play an important role in this process.

OECD, *Electricity in India: Providing Power for the Millions*, (OECD, 2002)

This report provides an overview of the Indian electricity sector from the perspective of the Organization for Economic Cooperation and Development (OECD). The OECD report is helpful as it describes the Indian regulatory agencies involved in the electricity generation, transmission, and distribution processes, and how restructuring of the electricity sector (by way of legislative reforms) has encouraged a relationship between private investors and government.

Sudha Mahalingam *et al.*, *Electricity Sector Governance in India: An Analysis of Institutions and Practice* (2006)

This report provides an overview of the Indian power sector, the policies, and regulatory process involved in regulating electricity issues in India. The authors recommend that more reforms should be introduced in India's electricity sector in order to provide accountability and transparency in the decision-making process for setting fair prices, streamlining private investment initiatives, and directing future power projects.

MONOGRAPHS (BOOKS)

Fereidoon P. Sioshansi & Wolfgang Pfaffenberger, *Electricity Market Reform: An International Perspective*, (Oxford: Elsevier Ltd., 2006) at 419

This book provides a comparative perspective on electricity market reforms in selected nations. The authors provide a broad overview of the major issues affecting the electricity market in various nations. The book is helpful describing the global electricity market reforms in terms of restructuring the generation, transmission, and distribution of electricity.

Richard J. Gilbert & Edward P. Kahn, *International Comparisons of Electricity Regulation*, (Cambridge University Press, 1996) at 366

This book provides an international perspective on the differences in electricity regulation among various nations. This country-specific set of studies on the structural reforms in the electricity sector helps provide a background of some of the major political and economic reforms in the developed world, and their impact upon the availability of electricity to consumers.

ARTICLES

Anil K. Upadhyay, “Power Sector Reforms – Indian Experience and Global Trends”, (2000) 12 Econ. & Pol. W. 1023

This article explores the history of the Indian electricity industry, and the restructuring measures instituted by India in response to growing demands of electricity consumption. The author argues that institutional problems, poor energy accounting and managerial practices will likely lead to necessary reforms, but that this process will be slow and gradual. This article provides an overview of the legislative history involving government conferences that led to a series of legislative enactments for electricity statutes.

Aparna Viswanathan, “Towards a New Energy Trading Arrangement in India: An Analysis of the CERC Electricity Trading Regulations and Proposed Amendments on Open Access”, (2005) Int’l Energy L. & Tax’n Rev. 19

This article assesses the electricity regulations within India’s Central Electricity Regulatory Commission (CERC), including the regulatory reforms such as open access regulations to promote India’s energy market. The author argues that a lack of interstate transmission between individual states in India is being dealt with by CERC in the form of pricing controls and transmission capacity. The article is helpful in describing the legislative history of India’s electricity market, including its focus on the *Electricity Act* (2003), administrative agencies like CERC, and recent initiatives to improve the electricity sector. This article ties in neatly with the author’s previous article in 2004.

Aparna Viswanathan, “Light-Handed Regulatory Approach Electrifies Indian Power Sector”, (2004) Int’l Energy L. & Tax’n Rev. 198

This article focuses on the provisions of India’s *Electricity Act* (2003) in the context of electricity generation. Here, key features of the regulations under India’s Central Electricity Regulatory Commission (CERC) are examined. The author argues that there are still some shortcomings with respect to regulatory reforms, including whether normative pricing under liberalization policies are creating efficiency, and also whether political interferences still exist in streamlining the electricity sector. The article is helpful in exploring the background of India’s market-based approach in liberalizing the electricity market through competitive bidding process.

Aparna Viswanathan, “Future Shock: Does India’s Electricity Act 2003 Have the Power to Reverse a Decade of Failed Reforms?” (2003) 9 Int’l Energy L. & Tax’n Rev. 198

This article explores whether the introduction of a competitive market would be beneficial for India’s electricity sector. The author argues that various economic reforms for electricity generation are inadequate in addressing the shortage of energy. The article is helpful in showing how economic reforms are structured (particularly with electricity generation), and also how the poor are being ignored in this entire process.

Chunbo Ma & Lining He, “From State Monopoly to Renewable Portfolio: Restructuring China’s Electric Utility” *Energy Pol’y*, online: EconPapers <http://econpapers.repec.org/article/eeeeenepol/v_3A36_3Ay_3A2008_3Ai_3A5_3Ap_3A1697-1711.htm>.

This article explores how administrative reforms in China’s electricity sector have led to a dual role played by the central government in promoting business while regulating electricity activities. The authors provide a comprehensive analysis of recent developments in 2008 by discussing the regulatory framework, pricing, investment schemes, and, more importantly, legislation designed to further these goals. This article is helpful in highlighting the most recent developments in the Chinese power sector, particularly in the restructuring of the regulatory framework.

Deepa Badrinarayana, “India’s Policy Priorities – Bleak Forecast For a Global Climate Regime?” (2008) 9 German L.J. 327

This article provides an overview of India’s economic, energy, and environmental

policies towards global climate change. The author argues that India's government is continuing to expand its share of the global energy market by deregulating various industries (such as electricity). However, these attempts at deregulation are only meant to push for economic growth, a factor contributing to more climate change. The only concession to climate change is India's focus on alternate and efficient energy use. Although this article focuses on climate change, it explains some of the motivation behind the formulation of India's energy policy.

Hongliang Yang, "Overview of the Chinese Electricity Industry and its Current Uses" *University of Cambridge Electricity Policy Research Group*, online: Cambridge Working Papers <<http://www.electricitypolicy.org.uk/pubs/wp/eprg0517.pdf>>.

This article outlines the historical developments within the Chinese power sector from the economic liberalization policies in the 1980's until 2006. The author argues that if the Chinese government does not adopt a long-term policy in electricity restructuring, an inferior industry design may result. This article is helpful as the author offers an integrated electricity policy framework model that the Chinese power sector could use for future planning.

Jim H. Williams & Ravi Ghanadan, "Electricity Reform in Developing and Transition Countries: A Reappraisal" (2006) 31 *Energy* 815.

This article provides a comprehensive overview of electricity reforms in various developing nations, including India. The authors propose that structural reforms in the electricity sector must involve a greater integration of networks between government agencies and private power producers. This article is helpful as it highlights the similarities and differences in the regulatory approaches of various governments in the developing world, and its impact on consumers and industry.

Marc Laperrouza, "Reforming China's Infrastructure Sectors" (2008) 10 *Network Indus. Q.* 2.

This article outlines China's restructuring of its regulatory agencies in the last 20 years in various sectors. The author argues that China's reforms must lead to proper institutional governance which adjusts to new economic changes, but that current reforms are lacking independent regulators. This article is helpful in showing how China's institutions are lacking independence in regulating their activities.

Navroz Dubash, "The New Regulatory Politics of Electricity in India: Independent, Embedded, or Transcendent?" (Paper presented to Oxford University, September 9,

2005), online: *Workshop on “The Politics of Necessity”* <http://www.cgdev.org/doc/event%20docs/Dubash_Regulatory%20Politics%20of%20Electricity.pdf>.

This article describes the challenges within the regulatory politics of the Indian electricity sector. The author argues that reforming the electricity sector requires independent regulators to help shape more accountability within the industry (as there are weak mechanisms of enforcing regulations), and that this process should lead to improvement for consumers of electricity. This article is helpful in describing the research question relating to regulatory transparency and accountability.

Navroz K. Dubash and Narasimha Rao, “Emergent Regulatory Governance in India: Comparative Case Studies of Electricity Regulation” (Paper presented at the Conference on “Frontiers of Regulation: Assessing Scholarly Debates and Policy Challenges”, 2006) [unpublished].

This paper describes the changing regulatory roles for federal and state agencies involved in India’s electricity sector. The authors compare two states, Delhi and Andhra Pradesh, in arguing that regulatory reforms have produced necessary institutional checks on state authority in the regulation of electricity generation, transmission, and distribution. This paper is useful in providing a background of the political structure and processes that influence India’s regulatory regime in the electricity sector, and provides an evaluation of regulatory governance.

Pei Yee Woo, “China’s Electric Power Market: The Rise and Fall of IPP’s” *Stanford University Center for Environmental Science and Policy*, online: Program of Energy and Sustainable Development <<http://iis-db.stanford.edu/pubs/20955/ChinaIPPs.pdf>>.

This article discusses the role of private electricity firms (known as independent power producers, or IPP’s) in China, and how the interplay between a centrally planned government and private investment firms have led to restructuring institutional reforms. The author, who is a research fellow with Stanford University’s Program of Energy and Sustainable Development, argues that the Chinese power market requires structural reforms to streamline the interactions between centrally planned agencies and private investment firms. The article is helpful in defining the problems of accountability and transparency within the government and private regulatory bodies, and providing specific case studies within provinces such as Shandong.

Sanjay Jose Mullick, “Power Game in India: Environmental Clearance and the Enron Project”, (1997) *Stan. Env’tl. L. J.* 256.

This article explores the economic reforms in India's electricity sector. The article is useful in providing a broad overview of the legislative history of the federal government's effort to modernize India's electricity sector. Although the article focuses on Enron's situation in India and how energy companies contribute to pollution, the section describing the legislative history describes various amendments to key pieces of past legislation such as the *Electricity Act (1948)* and the *New Power Policy* in 1991.

Smita Nakhooda, Shantanu Dixit, & Navroz K. Dubash, "Empowering People – A Governance Analysis of Electricity: India, Indonesia, Philippines, Thailand" *Prayas Energy Group*, online: World Resources Institute < <http://pdf.wri.org/empoweringpeople.pdf>>.

This article compares the electricity reforms in four countries, India, Indonesia, Philippines, and Thailand. More specifically, the authors explore the regulatory frameworks of each country, and describe the challenges faced in the enforcement of key electricity regulations. The authors argue for greater public participation and competence among independent regulators. This article is useful in outlining India's approach to institutional governance for electricity policy.

State Electricity Regulatory Commission (SERC), "Study of Capacity Building of the Electricity Regulatory Agency (SERC)" *Ministry of Finance, P.R. China*, online: World Bank < http://www.worldbank.org.cn/English/Content/dljg_en.pdf>.

This article provides a thorough overview of China's regulatory bodies and how they have been restructured in relation to modern electricity policymaking. Basic methods of electricity sector regulations relating to pricing, adequacy of power, and investment mechanisms are discussed in the context of changing power projects in various Chinese provinces. This Chinese government agency contends that problems exist within regulatory bodies, and that a need for new regulations for personnel training and improved communication between these bodies should be endorsed.

Subhes C. Bhattacharyya, "Review of the Electricity Act 2003 of India" *Dundee University*, online: The Centre for Energy, Petroleum and Mineral Law and Policy < http://www.dundee.ac.uk/cepmlp/journal/html/Vol14/Vol14_4.pdf>.

This article explains how India's *Electricity Act (2003)* consolidates a number of older pieces of electricity legislation, and how the statute has introduced many changes to the Indian electricity sector from a single-buyer to a multi-buyer system, where government and private industry are both involved in the form of federal and state regulatory commissions. The author argues that this more open regime leads to greater financial management for regulatory commissions, as penal provisions form part of these legislative reforms. This article is helpful in

explaining how the legal redress mechanism is used to discipline regulatory commissions (special courts and ombudsman) in the Indian power industry.

T. Jamasb, “Between the State and Market: Electricity Sector Reform in Developing Countries” (2006) 14 Util. Pol’y 14.

This article explores electricity market reforms in developing countries, including restructuring administrative agencies, promoting market competition domestically and from international assistance, and regulation. The author argues that gradual reform is needed to reform the electricity sectors in developing countries, and that governments must change their role towards sensible policy planning. The article is useful in illustrating the common problems experienced by governments in developing nations, while they restructure their regulatory frameworks.

Taieb Hafsi & Zhilong Tian, “Changing Institutions: The Chinese Electricity Industry from 1980 to 2000” *École des HEC*, online: Université de Montréal <<http://www.cerium.umontreal.ca/pdf/hafsi.pdf>>.

This article provides an historical analysis of electricity reforms since 1980, including the administrative changes to various regulatory bodies involved in planning China’s power sector. The authors argue that the transformation of a large Chinese power sector involves a three-cycle process involving the creation of industrial norms on the part of the federal and state governments, and private firms. This article is useful by providing a detailed account of the institutional changes within regulatory bodies in the Chinese power sector.

Varun Rai, “Changing Face of the Indian Energy System: A March Towards Normalcy” *University of Pennsylvania’s Centre for the Advanced Study of India*, online: University of Pennsylvania <http://iis-db.stanford.edu/pubs/22242/Indian_Energy_System.pdf>.

This article discusses the impact of India’s reforms in the electricity sector since 1998. The author asserts that these electricity reforms have led to positive institutional changes that will strengthen India’s future in power sector planning. These changes relate to greater transparency in regulatory agency decision-making. This article is instructive in showing how India’s electricity reforms have led to regulatory change in the context of transparency, while raising the issue of institutional instability among state-owned firms.

INTERNATIONAL INVESTMENT AND MOST FAVOURED NATION STATUS

ANNOTATED BIBLIOGRAPHY

Liz Whitsitt

SECTION I – GENERAL TEXTS

INTERNATIONAL ECONOMIC LAW

Secondary Materials

Books

Andreas F. Lowenfeld, *International Economic Law*, 2d ed. (Oxford: Oxford University Press, 2008). This is one of the leading textbooks in International Economic Law and is important as it provides a brief overview of how this area has developed and an explanation of the general principles that operate within this field.

M. Sornarajah, *The International Law on Foreign Investment*, 2d ed. (Cambridge: Cambridge University Press, 2004). This textbook is a leading work surveying developments in international law respecting the protection of investment by multinational corporations. In addressing such developments, this book examines the problems associated with the protection of foreign investment taking into account a number of disciplines including law, economics and political science.

SECTION II – MFN CLAUSES IN BITs

Articles

Yas Batefatemi, “Unresolved Issues in Investment Arbitration” (Paper presented to the Congress organized by UNCITRAL for its 40th annual session in Vienna, 9-12 July 2007), online: <http://www.uncitral.org/pdf/english/congress/Banifatemi.pdf>. This article provides a useful overview of divergent case law in investor-state arbitrations on a number of issues, one of which is the applicability of MFN clauses to dispute settlement mechanisms. This article is helpful as a starting point in determining what issues are emerging in investor-state arbitrations but not helpful in terms of analyzing the issues.

Dana H. Freyer and David Herlihy, “Most-Favored-Nation Treatment and Dispute Settlement in Investment Arbitration: Just How “Favored” is “Most-Favored”?” (2005) *ICSID Rev. – F.I.L.J.* 58. This article provides a useful overview of the arbitral jurisprudence addressing MFN clauses in BITs. In attempting to reconcile the jurisprudence on this issue, the author suggests that the “fault line” in the cases may be explained by looking at the purpose for which the MFN clause was invoked in each of the cases.

Locknie Hsu, “MFN and Dispute Settlement” (2006) 7(1) J. World Inv. and Trade 25. This article provides an overview of arbitral jurisprudence addressing MFN clauses in BITs. The author indicates that the jurisprudence cannot be reconciled and posits some useful questions to consider in the wake of the emerging divergent case law.

Jurgen Kurtz, “The MFN Standard and Foreign Investment: An Uneasy Fit?” (2004) 5(6) J. World Inv. and Trade 861. This article considers three fundamental historical, normative and systemic differences respecting the use of the MFN principle in international trade versus international investment law. In discussing those differences, the author posits that there is a far greater potential for the MFN principle to interfere with the regulatory autonomy of host states in the investment context. This article also provides suggestions for the interpretation of the MFN principle within international investment law and in doing so attempts to give effect to the meaning of MFN clauses while at the same time avoiding excessive intrusions into state sovereignty.

Luke Peterson, “RosInvest Ruling adds to Muddy Picture of MFN’s Effect on Arbitration” *Investment Treaty News* (17 January 2008), online: http://www.iisd.org/pdf/2008/itn_jan17_2008.pdf. This article provides a brief overview of arbitral jurisprudence respecting MFN protection in international investment law given most recent decision in *RosInvest*. The author indicates that the jurisprudence on this topic may signal a doctrinal divide regarding MFN clauses in international investment law.

Yannick Radi, “The Application of the Most-Favoured-Nation Clause to Dispute Settlement Provisions of Bilateral Investment Treaties: Domesticating the ‘Trojan Horse’” (2007) 18(4) E.J.I.L. 757. This article discusses the arguments so far addressed in the arbitral jurisprudence on the applicability of MFN clauses to dispute settlement provisions in BITs and argues that by reason of the ‘effet utile’ principle a MFN clause always covers such provisions, unless an opposite intention can be demonstrated.

Noah Rubins, *MFN Clauses, Procedural Rights and a Return to the Treaty Text* (2008) [unpublished, archived online: <http://www.investmentlaw.info/course.htm>]. Noting that several jurisprudential conflicts are emerging in investment arbitration decisions, this article advocates a return to treaty text as a way of resolving the MFN dispute in investor-state arbitrations.

Ruth Teitelbaum, “Who’s Afraid of Maffezini? Recent Developments in the Interpretation of Most Favored Nation Clauses” (2005) 22(3) *Journal of International Arbitration* 225. This article proposes that focusing on the extension of the MFN principle to dispute settlement mechanisms may distract from other significant problems related to MFN treatment. The article considers that such problems may include (i) avoiding substantive obligations by invoking MFN clauses, and (ii) invoking disparities in MFN clauses themselves as violations of the fair and equitable treatment provisions found in most BITs. The article concludes by suggesting some potential solutions for arbitral tribunals to consider when faced with complex issues respecting the scope and applicability of MFN clauses.

SECTION III – HISTORY OF MFN IN INTERNATIONAL LAW

Secondary Materials

ILC Documents

“First Report on the most-favoured-nation clause” (UN Doc. A/CN.4/213) in Yearbook of the International Law Commission 1969, vol. 2 (New York: 1970) at 158 (UNDOC. A/CN.4/SER.A/1969/Add.1). Written by Special Rapporteur Endre Ustor at the request of the ILC, this report provides a thorough outline of the history of the MFN clause in international trade law, its primary field of application. The Report follows the history of this clause until the end of the Second World War.

“Second Report on the most-favoured-nation clause” (UN Doc. A/CN.4/228/Add.1) in Yearbook of the International Law Commission 1970, vol. 2 (New York: 1972) at 199 (UNDOC.A/CN.4/SER.A/1970/Add.1). Written by Special Rapporteur Endre Ustor at the request of the ILC, this report provides a thorough outline of the history of the MFN clause in international law after the Second World War.

“Third Report on the most-favoured-nation clause” (UN Doc. A/CN.4/257/Add.1) in Yearbook of the International Law Commission 1972, vol. 2 (New York: 1974) at 161 (UNDOC.A/CN.4/SER .A/1972 /Add. 1). Written by Special Rapporteur Endre Ustor at the request of the ILC, this report sets out five draft articles with commentaries, on the use of terms, the definitions of most-favoured-nation clause and most-favoured-nation treatment, the legal basis of most-favoured-nation treatment, and the source of the right of the beneficiary State.

“Fourth Report on the most-favoured-nation clause” (UN Doc. A/CN.4/266) in Yearbook of the International Law Commission 1973, vol. 2 (New York: 1975) at 97 (UNDOC.A/CN.4/SER.A/1973/Add. 1). Written by Special Rapporteur Endre Ustor at the request of the ILC, this report provides for three further draft articles on MFN clauses which address the presumption of unconditional character of the clause, the *ejusdem generis* rule and the acquired right of the beneficiary State.

Websites

International Centre for the Settlement of Investment Disputes (ICSID)

http://icsid.worldbank.org/ICSID/FrontServlet?requestType=CasesRH&actionVal=ShowHome&pageName=Cases_Home. This website provides a list of investments disputes currently being heard by ICSID and where permitted by the parties, provides access to arbitral decisions.

United Nations Conference on Trade and Development (UNCTAD)

<http://www.unctad.org/Templates/StartPage.asp?intItemID=2068>. In addition to listing existing bilateral investment agreements, this website contains a number of useful research reports and working papers related to current issues within the international investment and development context.

International Law Commission (ILC)

<http://www.un.org/law/ilc/>. This website provides a summary of the work done by the ILC respecting a number of issues in international law, including the MFN principle. A review of this website gives researchers quick and easy access to reports on the MFN principle conducted under the auspices of the ILC.

Combating Electronic Waste in Africa: Looking beyond Recent Global Partnership Initiatives

Annotated Bibliography

Compiled by Komolafe Olakunle D.

LL.M. Candidate, University of Calgary

This web page contains selected sources of information, relevant to my LL.M. thesis research at the University of Calgary.

In the name of bridging the digital divide between the developed world and countries in Africa, the African continent has become the world's latest destination for obsolete electrical equipment. The toxic nature of e-waste being transported to the continent, coupled with lack of efficient waste management system in the affected countries, has made the hazard transfer a subject of increasing global importance. At the international level, certain initiatives have been established to put an end in to this scourge. These initiatives include the Nairobi Declaration on the Environmentally Sound Management of Electrical and Electronic Waste, Partnership for Action on Computing Equipment, Mobile Phone Partnership Initiative. There are also parallel regional initiatives, in response to this emerging problem.

This thesis reviews current global measures aimed at combating the threat of electronic waste (e-waste) in Africa. In this regard, it will examine the adequacy, or otherwise, of the provisions of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (the Convention) in curtailing this threat. It will also review the effectiveness of current global partnership and parallel initiatives, aimed at curtailing the exportation of e-waste from the developed countries to the African continent.

This thesis analyses the implications of the initiatives for the Basel Convention. It seeks to provide answers to the following questions: Are the provisions of the Convention adequate to solve the problem of e-waste dumping in Africa? How do recyclable and reusable materials tie-in to the fundamental provisions of the Convention? To what extent is the dumping a "trade for waste" policy between western nations and African countries, and not merely the activities of private businesses? Are recent partnerships and the parallel initiatives clear admissions that solution to the threat of e-waste in Africa does not lie in any of the provisions of the Convention? How crucial is the immediate ratification and implementation of the Ban Amendment towards effective regulation of exportation of e-waste from developed countries into the African continent? Are there roles for the affected African continent and the 1991 Bamako

Convention to play in bringing a quick end to this scourge? Finally, the thesis offers possible recommendations towards ensuring effective regulatory response to the menace.

This annotated bibliography is divided into four sections. All the sections, except section four, contain a part on monographs and articles.

Section one has background information on transboundary movement of hazardous waste, with particular focus on the Convention. The Convention represents the most comprehensive global response in this direction, to date.

Section two contains literature that addresses the electronic waste in Africa. The section is also devoted to literature on the Bamako Convention, which is the equivalent of the Basel Convention in Africa.

Section three is devoted to materials that will help to answer the fundamental questions that this thesis raises.

Section four contains useful links to other web based sources, which contain relevant information on combating the threat of e-waste in Africa.

Please note that this annotated bibliography is a work in progress and is not, by any means, exhaustive.

SECTION ONE

BACKGROUND INFORMATION ON THE TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTE

Monographs

Jonathan Krueger, *The Basel Convention and the International Trade in Hazardous Wastes* (London: Earthscan Publications, 2001).

This book presents a comprehensive overview of regulation of transboundary movement of hazardous wastes. The author examines, in a simple way, the questions of implementation and monitoring under the Convention. He also reviews the linkages that exist between the Convention and other international and regional agreements. The book is very relevant to research on transboundary movement of wastes, as it offers detailed information on history, scope, objectives, impact and regulatory framework of the Convention.

W. Kempel, *The Negotiations on the Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal: A National Delegation Perspective* (Leiden: Martinus Nijhoff Publishers, 1999).

The author does a very good review of the prominent roles of Non-Governmental Organisations (NGOs) in all the phases of negotiations that led to the adoption of the Basel Convention. This review is important to my thesis, as it reinforces the belief that activities of NGOs can constitute great incentives and catalysts for the international community to proactively address the issue of e-waste dumping in African continent.

Articles

Katharina Kummer, “The Basel Convention: Ten years on” (1998) 7 RECIEL 3.

A great scholarly work, the author gives a detailed account of the evolution of the Basel Convention in its first 10 years. A product of thorough research, the article shows the in-depth understanding of the author – it addresses issues ranging from negotiations leading to the birth of the Convention to the adoption of the Ban Amendment. It is a reliable source of information on the formative years of the Convention.

Jason Lloyd, “Toxic Trade: International Knowledge Networks & the Development of the Basel Convention”(2008) 3 International Public Policy Review.

The article examines the position of epistemic communities in knowledge formation and international policy. The author brilliantly connects the creation of the Convention to the broader discourse on transnational knowledge networks in global governance. Any reader will find the article very good for its rich treatment of the historical development of the Basel Convention.

SECTION TWO

Monograph

Adefemi Oresanya, *Electronic Waste Management System in Africa* (Ibadan: Onibonoje Publishers, 2002).

The author gives a comprehensive overview of the management systems of e-waste in Africa, noting that there is need for strengthened pollution regulations in the continent. He advocates for the legal transplant of European Community's Extended Producer Responsibility (EPR) into African countries. The book will serve as useful material on improving e-waste management system in Africa.

Articles

Andrew Webster-Main, “Keeping Africa out of the Global Backyard: A Comparative Study of the Basel & Bamako Conventions” (2002) 26 E.L.P.J. 65.

The article offers a comprehensive overview of North-South movement of hazardous waste. In doing this, the author employs a comparative approach to review the Basel and Bamako Conventions. His detailed information on the history, scope, objectives and institutional framework of the Bamako Convention, stands the article out as crucial to an aspect of my thesis. Any reader interested in having good understanding of the Bamako Convention and its regulatory framework will find this article helpful.

Nnorom, I.C. & Osibanjo, O., “The Challenge of Electronic Waste (E-waste) Management in Developing Countries” (2007) 25 Waste Management & Research 489-501.

The article focuses on management of e-waste. Concerned by the huge challenge that developing countries face in terms of the increasing volume of e-waste generated locally, and those exported from developed countries, the authors advocate that developing countries should adopt a hybrid form of Extended Producer Responsibility, as a way out.

Nnorom, I.C. & Osibanjo, O., “Overview of Electronic Waste (E-waste) Management Practices and Legislations, and their Applications in Developing Countries” (2008) 52 Resources, Conservation & Recycling 843.

The article represents a product of further research on the authors’ earlier article, “*The challenge of electronic waste (e-waste) management in developing countries.*” The authors examine issues such as absence of legislation dealing specifically with e-waste, inadequate infrastructure for waste management, absence of any framework for end-of-life product take-back or implementation of extended producer responsibility. The authors would go on to suggest that as pollution control measure, developing countries should pass specific legislation on e-waste control and management.

SECTION THREE

Monographs

Jennifer Clapp, *Toxic Exports: The Transfer of Hazardous waste from Rich to Poor Countries* (United States: Cornell University Press, 2001).

This 178-page book offers a comprehensive and very clear description of the attitudes and responses of desperate individuals involved in hazard transfer (e-waste trade), in the name of trading. The author argues that owing to dynamic nature of hazard transfer and its accompanying economic incentives, regulations put in place to curtail this business are rendered ineffective. Clapp’s use of simple language, coupled with her thoroughness, makes this book a very interesting reading. The chapter on *Industry Players and Post Basel* addresses a contemporary environmental problem – ship breaking hazards. It offers great insight on an effective approach towards regulating the growing ship breaking business.

***International Environmental Law*, ed. by Paula, M. Pevato (United Kingdom: Ashgate Publishing Limited, 2003).**

This book is a collection of essays on a broad range of issues in International Environmental Law. Intersecting trade and environment, the book should stand the test of time. It gives thorough consideration to important topics such as the concept of pollution in International Law, international trade and protection of the environment, compliance control mechanisms and international environmental obligations, and the evolution of the Bamako Convention from an African perspective. The book is of huge relevance, as all the issues highlighted above form the core of my research thesis.

David, A. Firth, *Trade Implications of the Basel Convention Amendment banning North-South Trade in Hazardous Waste vol.3* (United States: Blackwell Publishing Limited, 2008).

The author explores the ongoing policy dialogue concerning the interaction between trade and the environment. In contrast with the chapter on international trade and protection of the environment in Pevato's *International Environmental Law*, the author does more detailed analysis of the implications of the General Agreement on Trade & Tariffs/World Trade Organisation Rules on the Ban Amendment of the Basel Convention. His insightful review of the factors responsible for the delay in ratification of the Ban Amendment makes it particularly relevant to my thesis research.

Abraham Chayes & Antonia Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements* (London: Harvard University Press, 1995).

The book, focused on understanding compliance with international law, explores ways of securing compliance with international treaties and agreements. The authors are of the opinion that the use of sanctions for the enforcement of treaties is ineffective. Instead, they contend that interdependence of nation states encourages compliance with international treaties and instruments. This book is a reference point on literature on compliance with international treaties. It will be useful on analysis of means to achieve compliance with the Basel Convention.

Jenny Willén, *International Trade with Waste* (Thesis Work: D, Department of Economics, Uppsala University, Sweden, 2008) [unpublished], online: Uppsala Universitet <<http://publications.uu.se/abstract.xsql?dbid=9258>>.

The article has the same message as Kummer Katharina's yet to be reviewed article, "*Environmental Requirements and Market Access: Turning Challenges into Opportunities*." The author argues that transboundary movement of waste has inherent business opportunities for the developing countries. She made a success of this argument using a multiple case study approach. This approach, which distinguishes it slightly from Katharina's article, makes her thesis very engaging and allows for substantial analytical benefits that come with review of two or more cases.

Articles

Young, G., *etal.*, "A Long Way from Basel Clarity: Implications of the Basel Convention for the Consumer Electronics Sector" (2000) 9 Eur. Environ. Law Rev. 71.

The article offers a comprehensive overview of the connection between provisions of the Basel Convention on Transboundary Movement of Hazardous Waste and the concept of Extended Producer Responsibility under the European Commission's (EC) Directives. The authors argue that the provisions

of the Convention, unless reviewed, would likely frustrate producers attempting to meet the take-back and waste recovery obligations under the EC's Directives.

Reid, J. Lifset "Take it Back: Extended Producer Responsibility as a Form of Incentive Based Environmental Policy" (1993) 9 Journal of Resource Management & Technology.

The author examines extended producer responsibility (EPR) as an emerging approach to incentive based environmental policy. He argues that a heightened concern about resource scarcity, scepticism about consumer sovereignty and the ability of the market to respond to greener products are factors, among others, that make EPR very suitable. The author's comprehensive overview of what EPR entails makes the very relevant to my research thesis.

Kummer Katharina "Environmental Requirements and Market Access: Turning Challenges into Opportunities" (Paper presented at CBTF International Symposium, 3 October 2007) [unpublished] 1.

The author argues that the exportation of electronic waste from western countries into African continent may turn out to be a win-win situation for both parties. She is of the opinion that although e-waste contains toxic substances, nonetheless sound recycling practices may allow for extraction of valuable resources from these products. She concludes that the developing countries should be assisted in terms of improving their e-waste management systems. Her succinct, but scholarly overview of the concept of environmentally sound management addresses one of the areas of interest for my thesis research.

Renckens Stefan, "Governing the environmental flow of E-waste: Partnerships in the Framework of the Basel Convention" (Paper presented at the 48th Annual Convention of the International Studies Association, Chicago, USA, Feb 28, 2007).

This article, which is a work in progress (WIP), represents a good response to the dearth of literature on public-private initiatives of the Conference of the Parties to the Basel Convention. This fact makes it a useful source for the analysis of Basel's initiatives in my thesis research. She analyses the effects of the Mobile Phone Partnership Initiative (MPPI) on curtailing the grave implications of environmental flow of e-waste. She argues that the circumstances of MPPI formation, particularly the non-inclusion of poor countries and Non-Governmental Organisations in the process, seem to suggest that the MPPI guidelines will not effectively be able to minimize or eliminate the transboundary flows of e-waste. The fact that it is a WIP may explain why it is yet to address the relatively recent establishment of the Partnership Action on Computer Equipment.

Olagbaju Abioye, "Electronic Waste Management in Nigeria: A Great Challenge" (2003) 3 U.I.L.R 84-102.

The author, in this brilliant article, observes that given the economic implications of recycling of electronic waste in the developed world, the western nations will continue to look in the direction of Africa, and in particular Nigeria, as dumping site. He calls on relevant regulatory agencies, especially the Standard Organization of Nigeria, to brace up to the challenge. The need for strengthened regulatory agencies should cut across the continent, for there to be record of any significant success.

Jennifer Clapp, “Seeping Through The Regulatory Cracks” (2002) 22 SAIS Review 1.

This article, an extension of the author’s earlier work, *The Transfer of Hazardous waste from Rich to Poor Countries*, argues that the limited scope of the Basel Convention and differences in regulations on pollution control across countries are, among other factors, responsible for the continued thriving of the trade in toxic substances. The article is very useful as the author justifies her call for strengthened rules governing foreign direct investment in toxic substances and improved commitment on the part of member states to strictly implement the provisions of the Basel Convention.

Ifeoma Onyerikam, “Achieving Compliance with the Basel Convention on Transboundary Movement of Hazardous Wastes,” online: Social Science Research Network
<<http://ssrn.com/abstract=984067>>.

The article asserts that the level of compliance with the Basel Convention is low and suggests measures that will improve the existing level of compliance. The author’s thorough review of the literature on theories of compliance makes the article worth its title.

Ikechukwu Chime “Trade Related Environmental Measures: A Threat to Developing Countries” (2003) OGEL 1.

The author attempts to align the conflicting interests of environmental protection and the main objective of the General Agreement on Trade and Tariffs – free movement of goods and services. He is of the opinion that an improvement in the economic conditions of developing countries will make people desire cleaner environment, with the means to pay for it. In reality however, reconciling the conflicting interests requires much more than the proposed solution.

Harvey Alter, “Environmentally Sound Management of the Recycling of Hazardous Wastes in the Context of the Basel” (2000) 29 Convention Resources, Conservation and Recycling 111–129.

The author does a comprehensive overview of the concept of environmentally sound management (ESM) under the Basel Convention. He proposes a consensus of the literature definition of ESM through an excellent review of many papers and literature on the concept. It is a compendium on the concept.

Lorenz M. Hilty, “Electronic Waste – an emerging risk?” (2005) Environmental Impact Assessment Review.

In this article, the author argues that disposal or recycling of waste without controls has predictable negative consequences for the environment and human health. He argues that the life cycle of electronics has to be improved significantly, in order to avoid an accelerated loss of scarce raw materials and emission of toxics into the environment. The article is not explicit on the connection between advancement in technology and durability of electronic equipment.

Engobo Emeseh, “Challenges to Enforcement of Criminal Liability for Environmental Damage in Developing Countries: with Particular Reference to the Bhopal Gas Leak Disaster (2003) 1 OGEL.

Highlighting the challenges faced in terms of enforcement of criminal liability for environmental damage in developing countries, the article shows that extra legal factors, in addition to legal and institutional lapses, play a significant role. The author advocates that efforts by countries in the developing world to strengthen their regulatory and institutional framework need to be actively supported at the international

level. The author's message is critical to African countries making any meaningful impact in terms of combating the scourge of e-waste in the continent.

SECTION FOUR

For an overview of the gravity of the threat of e-waste in Nigeria, one of the countries most hit by the dumping of e-waste into the African continent, see Basel Action Network website, online: Basel Action Network <http://www.ban.org/BANreports/10-24_05/documents/ExecutiveSummary.pdf>.

For an update on the status of ratification of the Ban Amendment, see online: Basel Convention website <<http://www.basel.int/ratif/ban-alpha.htm>>.

Greenpeace International recently conducted a report recently on Ghana as a dumping site for e-waste. For an overview of this report, see online: Greenpeace International: <<http://www.greenpeace.org/international/news/poisoning-the-poor-electroni>>.

The aim of the Mobile Phone Partnership Initiative (MPPI) is to address environmentally sound management of used and end-of-life mobile telephones. For an overview of the status of the MPPI, see online: Basel Convention website: <<http://www.basel.int/industry/mppi/information.doc>>.

Partnership Action on Computer Equipment is yet another is a multi-stakeholder partnership between industry, government, academia and civil society. Its main goal is addressing the environmentally sound management of used and end-of-life personal computers. For background information on this initiative, see online: Basel Convention website <<http://www.basel.int/industry/compartnership/index.html>>.

**Public Participation in Water Conservation and Revitalization:
The Case of the Velhas River Basin, Brazil**

Annotated Bibliography

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Introduction

The annotated bibliography is part of the research for my LL.M. thesis, which deals with public participation in environmental decision-making. The research purpose is to evaluate public participation on the conservation and revitalization of the Velhas River Basin, Brazil.

I will construct a theoretical framework and criteria, based on democratic theories, in order to assess public participation. The objective is to investigate the process in government organizations, the Velhas River Basin Subcommittees (VRBSs); and non-government organizations, the state's university project ("Manuelzão") nuclei. Both have a community-based approach. Based on the evaluation I will make recommendations to the Brazilian law, in order to increase the amount and the quality of local public participation.

I will use the comparative law method to apply the research criteria to both types of organization, and to the Aarhus Convention, which provides internationally on environmental decision-making and public participation.

The bibliography is divided in four sections: Theories of public participation; community-based water management; Brazilian law; and the Aarhus Convention.

Section I: Theories of Public Participation

Annika Agger and Karl Löfgren, "Democratic Assessment of Collaborative Planning Processes" (2008) 7 Planning Theory 145.

The article proposes criteria to assess democratic effects of collaborative processes, based on democratic theories. The criteria consist of access to the process, public deliberation, adaptiveness of institutions to democratic values, accountability, and political identities and capabilities of the actors involved. Some of the criteria proposed contain vague concepts, such as “genuine access” and “legitimate and efficient” participation. The authors critique collaborative planning tradition, which focuses primarily on case studies to assess public participation, without solid criteria. The critiques and criteria are useful to construct the theory and the criteria to evaluate the Velhas River Basin case,

Barry Barton, “Underlying Concepts and Theoretical Issues in Public Participation in Resource Development” in Donald N. Zillman, Alastair R. Lucas, George Pring, eds., *Human Rights in Natural Resources Development: Public Participation in the Sustainable Development of Mining and Energy Resources* (Oxford: Oxford University, 2002) 77.

The work discusses different political, sociological, legal and philosophical theories to explain public participation and its importance. The author shows positive and negative aspects of the topic, and defends that regulatory work still needs to be done. The chapter points out relevant authors and theories for my research; for example, it refers to Habermas’ defence of a consensus discourse, which shapes a communicative generated power (p.96). The chapter will be used as a guide through the theories in order to form a public participation theoretical framework, which will be applied in the research.

Thomas Webler, “‘Right’ Discourse in Citizen Participation: An Evaluative Yardstick” in Ortwin Renn, Thomas Webler, Peter M. Wiedemann, eds., *Fairness and Competence in Citizen Participation: Evaluating Models for Environmental Discourse* (Dordrecht, Boston, London: Kluwer Academic Publishers, 1995) 35.

The author questions how public participation success should be evaluated: If by the outcome of the process, or by its contribution to collective will. He points out that both of these criteria are fragile. Therefore, he relies on Habermas’ Communicative Action as a framework to propose a “procedural model” to evaluate public participation. It consists of two main criteria: Fairness and Competence. They refer respectively to the equal possibility of each participant to express and defend personal interests, and to contribute to a solution to the problem. The article is a useful piece of scholarship for a practical analysis of the public participation process, as it presents a detailed set of criteria to evaluate fairness and competence in the process. Webler critiques Habermas for not proposing structured parameters for the discourse, which in his opinion is a premise to accomplish competence.

Thomas Webler and Seth Tuler, “Fairness and Competence in Citizen Participation: Theoretical Reflections from a Case Study” (2000) 32 *Administration & Society* 566.

The case study consists of an explanation of the authors’ theory and criteria of fairness and competence, and an analysis of the case, comparing its results with the theory. The authors used interviews to assess public participation on forest management in New York and New England (U.S.A.), and made recommendations. The authors used Yin’s methods of case study to defend the relevance of a specific context and the generalization of the results back to theory (Yin, 1994). The criteria were revised as the

interviews' results added new elements to the research, changing its original design. The criteria lacked a specific approach to social categories, such as color, gender and class, which will all be considered in my research. The scholarship contributes to the understanding of case study process in public participation.

Section II: Community-based water management

Margaret E. Keck and Rebecca Abers, "Running Water Participatory Management in Brazil" *NACLA Report on the Americas* (July 2004) 29.

The article discusses the Brazilian water management system under a political perspective, addressing its positive and negative aspects. It calls attention to the Water Law legislative process, which took place in a technical level, not including society into previous discussions. The article is relevant to my research because it deals with water management on a grassroots level, which is the focus of my thesis. On the one hand, the authors critique the top-down approach of Brazilian political system, inhibiting local participation. On the other hand, they describe successful examples of community-based participation on water management in some regions of the country. These elements will contribute to understand Brazilian water management system and its implications to community-based law.

Apolo H. Lisboa, Eugênio M.A. Goulart, Letícia F. M. Diniz, *Projeto Manuelzão: A história de mobilização que começou em torno de um rio* (Belo Horizonte: Instituto Guaicuy, 2008).

The book is a collection of interdisciplinary essays telling the story of the *Manuelzão* Project, and its work for the Velhas River revitalization and conservation. The project, which is an initiative of the medical department of the Federal University of Minas Gerais, Brazil, was founded in 1997, the same year Brazilian Water Law and Water Management System came into force. Since then, the *Manuelzão* Project has been working to promote environmental awareness and public participation in communities alongside the Velhas River. The book is relevant to my research, as it addresses political, historical and cultural elements of the basin to support the research statement.

Andrea Moraes and Patricia E. Perkins, "Women, Equity and Participatory Water Management in Brazil" (2007) 9:4 *International Feminist Journal of Politics* 485.

The authors claim that poor people in Brazil are the most affected by water issues. They argue that women have an important role to change social conditions, through their leadership in organizations, such as households, associations and NGOs. The water management system in the country is outlined in the article, calling attention to the Watershed Committees (referred as River Basin Committees for the purpose of my thesis) as formal spaces of public participation for environmental and social change. Despite the fact it is a very brief and general work, it describes a relevant relationship between poverty, gender and environment. It will be used in the research in order to describe public participation in Brazil.

Barbara van Koppen, Mark Giordano, John Butterworth and Evaristo Mapedza, "Community-based Water Law and Water Resource Management Reform in Developing Countries: Rationale, Contents and Key Messages" in Barbara van Koppen, Mark Giordano and John Butterworth, eds.,

***Comprehensive Assessment of Water Management in Agriculture Series, Volume 5: Community-based Water Law and Water Resource Management Reform in Developing Countries* (Wallingford, Oxon, GBR: CABI Publishing, 2007) 1.**

The chapter introduces a series of essays that analyse community-based water law in a wide variety of countries. It contains general conclusions and recommendations from the analysis. The authors define community-based water law and Integrated Water Resource Management (IWRM). The latter is a set of states' regulatory measures with strong impact on local water management. The authors point out the weaknesses and strengths of community-based water law. They defend the importance of a balanced and careful influence from the state over local systems. The chapter contributes to my research as it provides a global perspective of community-based water law.

Section III: Brazilian Law

Antônio H. Benjamín, Cláudia L. Marques, and Catherine Tinker, "The Water Giant Awakes: An Overview of Water Law in Brazil" (2005) 83 Texas Law Review 2185.

The article describes the Brazilian Water Law and outlines the history of water management system in the country. Its main purpose is to analyze the case of the Guarani Aquifer, which is shared by Brazil, Argentina, Uruguay and Paraguay. It discusses the degradation of the Aquifer and makes recommendations for domestic and international law. The work will be helpful to understand the legal treatment applied to water pollution in Brazil. Although the article does not significantly address public participation, I intend to use it in order to best understand the Brazilian Law, the water management system and its history.

Édis Milaré, *Direito do Ambiente: A Gestão Ambiental em Foco. Doutrina. Jurisprudência. Glossário*, 5th ed. (São Paulo: Revista dos Tribunais, 2007).

The book describes Brazilian environmental laws and doctrine. It discusses the National Water Management System, which was established by the Water Law and includes the Water Basin Committees. The latter are formed by the government, civil society and water company's representations. They deliberate on water issues on each basin. The book generally outlines environmental law history in the country. It will be used to understand water management system and history of public participation in environmental decision-making in Brazil.

Section IV: The Aarhus Convention

Jane Holder and Maria Lee, *Environmental Protection, Law and Policy: Text and Materials*, 2d ed. (Cambridge: Cambridge University Press, 2007) 85.

The focus of the chapter is the Aarhus Convention, the European document that provided on access to information, public participation in decision-making and access to justice in environmental matters. The chapter is a collection of excerpts of scholarships, international legislation, and judicial cases on the topic. The work critiques the reductionist nature of the convention, which excludes the "poorly educated and poorly organized" (p. 129), and privileges the participation of NGOs; however, it does not

make any recommendations. The chapter will be used as guide to pertinent scholarships, case studies and regulations on the international convention.

Robert McCracker Q.C. and Gregory Jones, “The Aarhus Convention” (1 July 2003) Journal of Planning and Environmental Law 802.

The Aarhus Convention was signed by European countries, including England. The article discusses the document’s provisions in light of the British domestic law. However, it also defends the global significance of the international convention. The scholarship describes the functions and the forms of access to information, public participation, and access to justice, which are the three pillars of the convention. Although the article focuses on the British Law, it can serve as a source of information about the international document, its objectives and how it has been applied in Europe.

Juan R. Palerm, “Public Participation in Environmental Decision Making: Examining the Aarhus Convention” (1999) 1 Journal of Environmental Assessment Policy and Management 229.

The article outlines principles of public participation in environmental decision-making, based on Habermas’ theory of Communicative Action, to examine the Aarhus Convention. On the one hand, the author defends that the document can be used as a reference to interpret pieces of legislation and to create new laws. On the other hand, he critiques the document for having a restrict application, and suggests improvements on the communication process aspect of the convention. I will use the scholarship to understand the Aarhus Convention, and compare it to the criteria to assess public participation.

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Rob Omura

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No. 158 Seabright Holdings Ltd. v. Imperial Oil Ltd. (2003), 2003 CarswellBC 153 (B.C. C.A.).

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This paper examines Alberta's approach to contaminated sites and compares it with other jurisdictions, in particular, BC, Ontario, and Quebec, as well as with the U.S., the U.K., and the Netherlands. It is a good survey with particular reference to Alberta's procedures. It will make its reappearance in Hierlmeier's *Brownfield Redevelopment in Alberta: Analysis and Recommended Reforms*, also by the Environmental Law Centre.

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The City of Vancouver's development plan for the Central Area, this is the main policy framework for Vancouver's downtown core redevelopment.

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Anna Alberini, "Determinants and Effects on Property Values of Participation in Voluntary Cleanup Programs: The Case of Colorado" (2007) 25 *Contemp. Econ. Pol.* 415.

The author examined site characteristics associated with participation in the Colorado VCP. Site with relatively high redevelopment potential were more likely to participation in remediation, and this includes factors such as site size and proximity to residential zones. Contamination depressed property values by about 50% and participation raised them to FMV. The author wonders if the state goals are being met, or if developers are merely using the program for the purpose of ridding the land of stigma.

_____ & David Austin, "Accidents Waiting to Happen: Liability Policy and Toxic Pollution Releases" (2002) 84 Rev. Econ. & Stats. 729.

The authors examined whether strict liability for cleanup costs increases the level of care taken by firms. Reviewing data of toxic spills from the US EPA's Emergency Response Notification System, the study found about 20% higher spills in states with a strict liability regime rather than a negligence-based liability regime. The authors found this to be related to the past frequency of spills and the severity of the spills, suggesting that strict liability regimes were imposed in response to spill history. Spill frequency slowly declined after imposition of strict liability. It is important to note that the frequency of spills remained high where there were a large number of small manufacturing firms, suggesting that riskier activities devolve to smaller, more liability-proof firms.

_____, "On and Off the Liability Bandwagon: Explaining State Adoptions of Strict Liability in Hazardous Waste Programs" (1999) 15 J. Reg. Econ. 41.

The authors examined strict liability regimes and found that strict liability is adopted in response of hazardous waste problems from manufacturing sources, particularly industrial chemical production. The authors also found that the higher the quality of a state's water laws the less likely the state is to adopt strict liability. Strict liability is seen as cost-effective approach as it reducing per capita spending on enforcement, rather than developing other approaches to controlling toxic spills.

_____ & John Bartholomew, "The Determinants of Hazardous Waste Disposal Choice: An Empirical Analysis of Halogenated Solvent Waste" (1999) 17 Contemp. Econ. Pol. 309.

The authors looked at the disposal practices for halogenated solvent wastes. They found that generators of toxic substances, when deciding where to ship toxic wastes, take into consideration the possibility of future liability. They are particularly interested in the solvency and record of the disposal facility.

_____ & Aline Chiabai, "Urban environmental health and sensitive populations: How much are the Italians willing to pay to reduce their risks?" (2007) 37 Reg. Sc. & Urban Econ. 239.

The authors explore how much people are willing to pay for environmental health, in particular death from respiratory related disease, and found that younger persons are willing to

pay more for better health as are those with existing health problems. While based on Italian data sources, it provides some indication of public support, in terms of costs, for environmental health.

_____ & Shelby Frost, "Forcing Firms to Think About the Future: Economic Incentives and the Fate of Hazardous Waste" (2007) 36 *Env't. & Res. Econ.* 451.

Anna Alberini is a Professor in the Department of Agricultural and Resource Economics, University of Maryland, and a member of the USEPA, Science Advisory Committee. The authors examined whether polluters responded to liability for damages. Reviewing the shipments of halogenated solvent waste listed in the Toxic Release Inventory for each year from 1987, the authors reviewed the movement and volume of wastes in strict liability, joint and several liability, and strict and joint and several liability jurisdictions. The authors found that waste was less likely to be sent to jurisdictions with concurrent strict and joint and several liability. Along with her other work on liability and incentives, this article forms a critical part of the empirical literature on environmental liability, brownfields, and private-developer behaviour.

Anna Alberini et al., "Paying for permanence: Public preferences for contaminated site cleanup" (2007) 34 *J. Risk Uncertainty* 155.

An analysis of the value of contaminated site cleanup from Italian data sources, this study indicates that people place a value on a clean environment at about €5.6 million (\$6.1 million U.S.), with a discount for future risk reductions of about 7%.

_____, "The role of liability, regulation and economic incentives in brownfield remediation and redevelopment: evidence from surveys of developers" (2005) 35 *Reg. Sc. & Urb. Econ.* 327.

The authors examined the values of various incentives, including liability relief, financial incentives, and regulatory relief, used to encourage brownfield redevelopment from the developer's perspective. This study is important for developer choice analysis and brownfield policy. Through a battery of in-person surveys the authors found, significant differences as a result of experience. Financial incentives were more attractive to experienced developers. On the other hand, liability relief was more attractive to inexperienced developers. This suggests that fear of potential liability is a more powerful disincentive for inexperienced developers than experienced developers, and that cost relief is a powerful incentive to attract experienced developers. This is an excellent primer into the econometric research on incentives and liability in brownfields.

Hunter Bacot & Cindy O'Dell, "Establishing Indicators to Evaluate Brownfield Redevelopment" (2006) 20 *Econ. Dev. Q.* 142.

This study explores evaluative criteria for assessing if brownfield projects are effective, looking for environmental and economic measures. Looking at Charlotte, NC, the authors found

that the benefit to property values varied depending on its location, but the cost of remediation remained relatively low in all conditions. However, this study is most useful for its literature review and framework.

Harold C. Barnett, "Crimes against the Environment: Superfund Enforcement at Last" (1993) 525 *Annals*, AAPSS 119.

Harold Barnett is a professor of economics at the University of Rhode Island. Barnett finds that the Superfund is an example of how government can be effective for environmental action, despite the setbacks from industrial resistance. Congress needs to decide who shall bear the cost of cleanup, industry or society.

Nathan Block and Christopher Pepper, "How Clean is Clean Enough? Weighing the Risks of Risk-Based Corrective Action and Advising Clients on the Cleanup of Environmental Contamination" (2003) 33 *St. B. Tex. Env't'l L. J.* 121.

Through an analysis of the Texas RBCA program, the authors stress uncertainty and modeling and the incompatibility of RBCAs with common law principles. In practice, RBCAs are necessarily tied to "No Further Action Letters" because RBCAs imply ongoing risk, even if minimal. Great care needs to be exercised because of the implied ongoing risk.

_____, "Why Nero Fiddled while Rome Burned: What Every Environmental Lawyer should Know about the Science of Environmental Toxicology and Risk Assessment" (2002) 32 *St. B. Tex. Env't'l L. J.* 189.

In this article the authors explore the theoretical underpinnings of RBCAs, in particular the risk to human health and the environment. Without such foundation it is easy to miss the point of risk-based assessments.

Mary-Ann Bowden, "The Polluter Pays Principle in Canadian Agriculture" (2006) 59 *Okla. L. Rev.* 53.

While ostensibly about the use of the polluter pays principle in agriculture, this article provides useful foundation on the principle in Canadian jurisprudence.

Peter Briggs & Stephanie Panayi, "The Contaminated Land Management Act 1997 (NSW), Impacts and Recommendations for the Mining and Resources Industry" (1999) 18 *Austr. Mining & Petroleum L. J.* 63.

Bill Christmas, "A Lender's Perspective on "Brownfields" Financing in Ontario (Paper presented to the 11th Annual Environmental Management, Compliance and Engineering Conference, Toronto, 15 May 2003).

A short article on the role of lenders in the brownfield redevelopment process, this papers outlines the importance of certainty, particularly in light of the *Tridan* case.

Flannary P. Collins, "The Small Business Liability Relief and Brownfields Revitalization Act: A Critique" (2003) 13 *Duke Env. L. & P. Forum* 303.

A general survey article that discusses the introduction of the Brownfields Law in 2002, with an overview of the prior CERCLA, and also a discussion on the liability exemptions created by the Brownfields Law. It is a good primer on the U.S. Brownfields Laws.

Philippe Cyrenne et al., "Historic Buildings and Rehabilitation Expenditures: A Panel Data Approach" (2006) 28 *J.R.E.R.* 349.

The authors explore developer preferences for historic sites in Winnipeg. It is helpful to explain developer choices in redevelopment decision-making.

Charles Davis & Richard Feiock, "Testing Theories of State Hazardous Waste Regulation, A Reassessment of the Williams and Matheny Study" (1992) 20 *Amer. Politics Q.* 501.

The authors find that there is a close relationship between the private sector and state policymakers in hazard waste regulation. As a result, the impact of state environmental organizations is limited. States with perceived toxic waste problems were more likely to spend on hazardous waste programs. Where enforcement is lacking and it is perceived that firms are not being inspected or punished, there is resistance to further enforcement efforts.

Christopher A. De Sousa, "Urban brownfields redevelopment in Canada: the role of local government" (2006) 50 *Cdn. Geographer* 392.

Christopher De Sousa is a professor of geography at the University of Wisconsin-Milwaukee. A general survey article on brownfields in Canada, De Sousa reviews the literature and the empirical research. De Sousa provides some basic Canadian statistical evidence on brownfields. After reviewing some of the barriers to redevelopment he looks at some of the results, and he finds differences in the pattern of Canadian brownfields and those of our American counterparts. He points out that government funds tend to fall on larger municipalities, leaving mid-sized and smaller communities without the resources to cleanup their contaminated sites.

Dietrich Earnhart, "Liability for Past Environmental Contamination and Privatization" (2004) 29 *Env. & Res. Econ.* 97.

A primer on the European liability regime for past environmental contamination. It demonstrates that the biggest barrier to redevelopment is the lack of knowledge of the buyer, so that as the developer becomes more informed the government needs to indemnify the developer less. Price discounts as compensatory are inversely related to developer

knowledge. The more informed the potential developer, the less the discount necessary to encourage a developer. Equally, the less informed the potential developer, the more the discount necessary to encourage developers. This is an important finding which coincides with similar studies on incentives and relaxed liability.

Mary M. Edwards & Anna Haines, "Evaluating Smart Growth: Implications for Small Communities" (2007) 27. *J. Planning Ed. & Research* 49.

Mary Edwards is an assistant professor of urban and regional planning at the University of Illinois at Urbana-Champaign. Anna Haines is an associate professor at the University of Wisconsin-Stevens Point. The authors looked at smart growth strategies in Wisconsin, finding little support for true initiatives across the board. Smart growth is narrowly viewed by municipal planners, focusing on compact, mixed-use, pedestrian-friendly, and ecologically sound development in existing built-up areas, rather than for all municipal development. The exception seems to be with natural resource protection, such as wetlands and natural areas. It is an excellent primer on the actual implementation of smart growth initiatives.

Joel B. Eisen, "Brownfields at 20: A Critical Reevaluation" (2007) 34 *Fordham Urb. L. J.* 421.

Joel Eisen is a Professor of Law and the Director of the Robert R. Merhige Jr. Center of Environmental Law, University of Richmond School of Law. In this article Eisen focuses on ways to shift the focus of brownfield redevelopment from developer-centred to development-centred. Given the relatively low cost of cleanup relative to the overall development cost, Eisen thinks that a developer-centred approach is misguided. The focus should not be brownfield redevelopment, per se, but community redevelopment using smart growth.

_____, "Brownfields of Dreams"?: Challenges and Limits of Voluntary Cleanup Programs and Incentives" (1996) 4 *U. Ill. L. Rev.* 883.

Eisen's comprehensive review of brownfield law and policy sets out the early efforts under CERCLA and VCPs. The procedure lacks public participation and transparency, and so any reform must improve information, public participation, state oversight, and long-term planning. It is an excellent primer on VCPs and future goals of brownfield law and policy.

_____, "Brownfields Policies for Sustainable Cities" (1999) 9 *Duke Envtl. L. & Policy Forum* 187.

Eisen examines the role of sustainability in brownfields law and policy, by first exploring current program objectives and then assessing further needs. He finds that a policy needs to consider three elements: procedural integration, substantive integration, and equity.

_____, "A Case Study of Sustainable Development: Brownfields" (2002) 32 *E.L.R.* 10420.

Eisen believes that brownfield policies are linked to sustainability and smart growth. His work establishes a framework for brownfields and sustainability. While legislators agree with the goal of sustainability, substantial changes are necessary if current brownfields programs are to be a true benchmark of sustainable development. To achieve sustainable development brownfields programs need to incorporate three building blocks: procedural integration, intergenerational equity, and public participation. Jointly with his other articles, Eisen establishes a framework for assessing brownfield policy within the context of sustainability and smart growth. It takes brownfield policy work into urban planning.

Jennifer Felten, "Brownfield Redevelopment 1995-2005: An Environmental Justice Success Story?" (2005) 40 *Real Prop. Prob. & Tr. J.* 679.

A general survey of brownfields redevelopment from an environmental justice perspective, this article examines community participation in brownfield projects, noting the importance of public participation as early as possible in the process. While brownfield redevelopment provides tangible benefits to the community, real public participation is slow in coming. The community is seldom involved in the early planning process.

Sanford E. Gaines, "The Polluter-Pays Principle: From Economic Equity to Environmental Ethos" (1991) 26 *Texas Intl. L. J.* 463.

Although an article on the polluter pays principle in the international context, this article provides a general overview of the polluter pays principle as it developed in environmental legislation during the 1980s and 1990s.

Michael Greenberg et al., "Brownfield redevelopment as a smart growth option in the United States" (2001) 21 *Environmentalist* 129.

This study examines six smart growth options, including brownfield redevelopment, and finds that brownfield redevelopment is the "smartest smart growth policy." However, there are cost and implementation problems associated with brownfields, and in light of public preferences for suburban living, it is uncertain if brownfields redevelopment is economic viable as a smart growth option. The author is hesitant to lump brownfields with smart growth due to the potential for a public backlash. It is an interesting critique of smart growth policies.

_____, "Should housing be built on former brownfield sites?" (2002) 92 *Amer. J Public Health* 703.

In this short editorial, Greenberg calls for caution in the residential reuse of former brownfields. It is important for public participation in the process, government assistance, and public health officials to be involved.

Detlef Grimski & Uwe Ferber, "Urban Brownfields in Europe" (2001) 9 *Land Contamination & Reclamation* 143.

A short article on brownfields in Europe, this paper discusses the brownfields working group as a part of the larger CLARINET project, and their attempt to rationalize contaminated sites and urban redevelopment. It is useful for a European framework approach and European statistics.

Mark Haggerty & Stephanie A. Welcomer, "Superfund: The Ascendance of Enabling Myths" (2003) 37 J. Econ. Issues 451.

This review of the Superfund program in the U.S. is highly critical, giving up substance for enabling myths, while the political pressure has watered down its effectiveness. According to the authors, sites are not being cleaned up, and certainly not in accordance with the polluter pays and public health as the primary standards.

Kashif Haque, "Internal Revenue Code Section 198, The Tax Incentive for Brownfield Redevelopment: A Sheep in Wolf's Clothing" (2002) 8 J.L.P. 371.

This article reviews IRC section 198, which provides a tax deferral by permitting a developer to deduct remediation costs in the current year, subject to recapture upon sale of the property in the future. It is good general analysis of the program.

Marisa C. Higgin, "Brownfields: The Statutory Problem and Solution" (2002) 12 St. B. Tex. Envtl. L. J. 212.

A general survey article discussing U.S. brownfields, and also discussing the coming into force of the Brownfields Act in 2002. It is generally supportive of statutory initiatives to correct the brownfields problem.

John A. Hird, "Environmental Policy and Equity: The Case of Superfund" (1993) 12 J. Policy Analysis and Mgmt. 323.

Hird is highly critical of the Superfund. He argues that the polluter is not paying for contamination, but rather the public-at-large bears the burden of contamination. The Superfund program is flawed. It places the cost of cleaning up past contamination on parties that are unidentifiable or insolvent, and parties who cannot pay the cost of cleanup. As a result, the polluter pays principle is merely symbolic. Moreover, the funding of Superfund cleanup takes public money and distributes it to wealthier neighbourhoods, leaving the more destitute areas abandoned.

Marie Howland, "Employment Effects of Brownfield Redevelopment: What Do We Know from the Literature?" (2007) 22 J. Planning Lit. 91.

Marie Howland is a professor in the Urban Studies & Planning Program at the University of Maryland College Park. This article outlines the employment effects of brownfield

redevelopment from a literature review, but indicates that long-term effects of revitalization and job creation are unknown. These are areas for future study.

_____, "Private Initiative and Public Responsibility for the Redevelopment of Industrial Brownfields: Three Baltimore Case Studies" (2003) 17 Econ. Dev. Q. 367.

This study examined three brownfield projects in Baltimore. The author found that the site characteristics and site location are critical predictors of success. In this case, the residential project fared far worse than the two commercial/industrial projects.

_____, "The Role of Contamination in Central City Industrial Decline" (2004) 18 Econ. Dev. Q. 207.

This study looked at sales, selling price, length of time on the market, and the presence of contamination for an industrial area of Baltimore. Its importance is the recognition that other factors influence success, such as outdated infrastructure, incompatible land use, and inflexible sellers.

Alastair Iles, "Law and Change, Financial Responsible for the Clean-up of Contaminated Land" (1993) 19 Melb. U. L. Rev. 449.

The author explores contaminated sites legislation in Australia. He finds the same problem in similar legislation in Canada and the U.S., the strict, absolute, retroactive, joint and several liability regime that takes fault out of the equation, and instead, assesses liability on the basis of ownership or occupation, as well as control of the activity causing contamination. The failure to base liability on fault principles causes uncertainty.

William N. Kinnard, "The Valuation of Contaminated Properties and Associated Stigma: A Comparative Review of Practice and Thought in the United States of America, The United Kingdom and New Zealand" (1998, unpublished, archived at RICS Research).

The author reviewed the literature on valuating contaminated land with a review to the long-term effects of stigma. Most appraisers deduct the present value of cleanup costs plus a percentage for stigma from the "as if" clean FMV of the property but this problematic where cleanup costs are high, so some sort of sales comparison analysis is necessary.

William N. Kinnard & Elaine M. Worzala, "Evolving Attitudes and Policies of Institutional Investors and Lenders Towards On-Site and Nearby Property Contamination" (1996, unpublished, archived at RICS Research).

The authors conducted surveys of attitudes to contaminated sites. They found that investors and lenders would participate in all but the most severely contaminated sites, and more importantly, alleged contamination was a bigger deterrent than known contamination.

Marie-France Le Blanc, "Two Tales of Municipal Reorganization: Toronto's and Montreal's Diverging Paths Toward Regional Governance and Social Sustainability" (2006) 39 Cdn. J. Poli. Sc. 571.

This article examines the political and social factors that led to the SuperCities in Toronto and Montreal, and how that led to different results in sustainability efforts in each city. While both cities had significant resistance, in Toronto the municipal government has been able to secure significant resources for revitalization efforts, but in Montreal the decentralization of power has failed to achieve the same degree of consensus for revitalization efforts. However, the author notes that in both cities a central vision is evolving.

Alberto Longo & Anna Alberini, "What are the Effects of Contamination Risks on Commercial and Industrial Properties? Evidence from Baltimore, Maryland" (2006) 49 J. Env'tl. Planning & Mgmt. 713.

The authors looked at the effect of contamination risk on adjacent property values, assessing sales data from the Baltimore area for one year, 1999 to 2000. Overall, the study found that commercial sites were negatively affected but industrial sites were relatively unaffected.

Charles F. Mills III, "Global RBCA: Its Implementation, Foundation in Risk-Based Theory, and Implications (2006) 22 J. Land Use 101.

A thorough review of the principles of RBCAs, this article examines the foundations of RBCAs for managing risk at contaminated sites, and shows its implementation in Florida. Mills worries that the lack of understanding of the theory and science of risk-based assessments may lead to strict adherence to RBCA standards without questioning the foundation. Too strict an application can be misleading. Numerical values are often treated as absolute when in fact this is always a margin of error.

N. V. Nelles, "How Did Calgary Get Its River Parks?" (2005) 34 Urb. Hist. Rev. 28.

This historical article explores how the City of Calgary acquired the river parkways.

Lee Oliver et al., "The Scale and Nature of European Brownfields" (Paper presented to the International Conference on Managing Urban, 13-15 April 2005) [unpublished].

This article outlines brownfields, as understood in the European context, and provides a general listing of brownfields in Europe. It provides some indication of the scope of the problem in Europe. It is useful for European statistics as broken down by nation.

Richard G. Opper, "Managing Risk at Brownfield Sites" (2006) 20 Nat. Res. & Env't 32.

This article identifies risk management issues for the developer in general terms.

G. William Page & Robert S. Berger, "Property Characteristics of Contaminated Land in Environmental Cleanup Programs in New York State" (2005) 10 Public Works Mgmt. & Policy 157.

William Page is a professor in the Dept. of Urban & Regional Planning, University at Buffalo, State University of New York, and Robert Berger is a professor at the School of Law, University at Buffalo, State University of New York. This article examines 321 contaminated properties in New York participating in either the federal Superfund program or the state VCP. The authors found significant differences between the two groups, including size and location, and former, present and future use. Importantly, they found that most participating sites were not urban, urban projects tended to be larger than average, and half of the sites were formerly commercial sites, not industrial as expected. Moreover, about one-quarter of VCP sites were intended for future residential development.

Alan Peters & Peter Fisher, "The Failure of Economic Development Incentives" (2004) 70 APA, J. Amer. Planning Assn. 27.

The authors review the literature and find that incentives are not effective tools for redeveloping brownfields. On two measures incentives are justified: job creation and increased tax revenues. It is unknown if incentives lead to jobs, despite the \$40-\$50 billion spent annually in the U.S. on programs. The authors suggest that economic development incentives probably have little or no effect on the decision of firms to locate or invest. The authors are sceptical if incentives work in economically disadvantaged regions at all. Financial incentives are more effective locally, but the cost of most financial incentives are borne by state governments. To the state, the effect of incentives is revenue neutral at best.

Dianne Saxe, "Retrospective Liability for Environmental Contamination" (1992) 71 C.B.R. 492.

Dianne Saxe examines retrospective liability for environmental contamination in Canada. She finds uncertainty in the imposition of environmental legislation retrospectively. This is a good discussion on the law of retrospective liability in Canada.

Scott H. Segal, "Nibbling at the Edges? An Overview of Possible Superfund Reform in the 103rd Congress" (1993) 23 St. B. Tex. Env'tl. L. J. 181.

This article predates the substantial reforms of the Superfund, in particular, the Brownfields Act. Segal calls for reform of the Superfund, in particular with respect to risk and liability. The discussion is a useful foundation for justifying exemptions for lenders and municipalities.

Scott Sherman, "Government Tax and Financial Incentives in Brownfields Redevelopment: Inside the Developer's Pro Forma" (2003) 11 N.Y.U. Env'tl. L. J. 317.

An analysis of government incentives in the U.S., Scott Sherman examines the response to government incentives from the point of view of developers and lenders. Sherman looked at representative programs offering tax abatements, site assessment grants, acquisition, remediation and renovation grants, and low-interest loans, as well as the federal income tax incentive. Based on the effect on a developer's pro forma statements, the effect of each form of incentive is evaluated. It is a critical analysis of how each incentive impacts on a developer's financial position during various stages of a brownfield redevelopment.

Kurt A. Strasser, "The Uniform Environmental Covenants Act: Why, How, and Whether" (2007) 34 *Envtl. Affairs* 533.

Kurt Strasser is a professor at the University of Connecticut Law School. Strasser explores the Uniform Environmental Covenants Act, adopted by 14 states using standards for risk-based cleanups. It sets out the elements of an environmental covenant enforceable under the Act.

Fenton D. Strickland, "Brownfields Remediated? How the Bona Fide Prospective Purchaser Exemption from CERCLA Liability and the Windfall Lien Inhibit Brownfield Redevelopment" (2005) 38 *Ind. L. Rev.* 789.

This paper examines U.S. brownfield policy under CERCLA's windfall lien, which the author argues nullifies the bona fide prospective purchaser (BFPP) exemption by placing the cost of unrecovered response actions on the BFPP. In essence, Strickland argues against the beneficiary pays principle as being unfair to the purchaser of contaminated land. It is useful in that context.

Katherine M. van Rensburg, "Deconstructing *Tridan*: A Litigator's Perspective" (2004) 15 *J. Env'tl. L. & Prac.* 85.

An analysis of the *Tridan* case, this article explores the judicial history of the case and the main results, remediation of 3rd party liability claims to pristine condition and the effect of stigma on 3rd parties.

Julio Videras & Anna Alberini, "The Appeal of Voluntary Environmental Programs: Which Firms Participate and Why?" (2000) 18 *Contemp. Econ. Policy* 449.

This article examines the determinants for developers in participating in voluntary environmental programs. The authors found that firms joined programs to enhance their environmental image, and that firms who publish environmental reports were significantly more likely to participate. In addition, larger firms were more likely to participate. However, firms with bad performance records were attracted to voluntary programs only if the program is directly related to their own pollution reduction.

Nickie Vlavianos, "Creating Liability Regimes for the Clean-up of Environmental Damage: The Literature" (1999) 9 J.E.L.P. 145.

Nickie Vlavianos is a professor in the Faculty of Law at the University of Calgary. This article focuses on contaminated sites legislation in Alberta, mostly with respect to the oil and gas industry. It explores who should bear the cost of cleanup, the theoretical basis for imposing liability, i.e., polluter pays and beneficiary pays principles, limits to liability, i.e., retrospective liability, and apportionment. It is a good general discussion of the theoretical issues central to contaminated sites law and policy.

Kris Wernstedt et al., "Attracting Private Investment to Contaminated Properties: The Value of Public Interventions" (2006) 25 J. Env'tl. Planning & Mgmt. 347.

The authors looked at developer attitudes to various forms of government intervention. The data indicates that generally reimbursement of environmental assessment costs and protection from future regulatory and third party liability are incentives, and that a public hearings requirement is a disincentive. Experienced developers placed a lower value on protection from cleanup and third party liability and the reimbursement of environmental assessment costs. Further, the disincentive of public hearings was less pronounced for experienced developers.

_____, "Incentives for Private Residential Brownfields Development in US Urban Areas" (2006) 49 J. Env'tl. Planning & Mgmt. 101.

The authors looked at residential brownfield redevelopment projects. Not surprisingly, this study of developer attitudes found a slight incentive for reimbursement of environmental assessment costs, as well as for protection from future regulatory liability and third party liability. The study also found public hearings a disincentive to developers. It indicates the continued importance of incentives and relaxed liability for promoting brownfield redevelopment.

_____, "Insuring Redevelopment at Contaminated Urban Properties" (2003) 8 Public Works Mgmt. Policy 85.

The authors examined developer's use of environmental insurance policies. They found only a small number of developers actually use environmental insurance, despite the fact those that do state their importance in risk management for the project.

Heather D. Wilson, *Brownfield Redevelopment: An Urban Revitalization Tool for Reducing Urban Sprawl* (Laval, QC: University of Laval, 2002) [unpublished].

Heather Wilson explores the brownfield redevelopment of the Angus rail shop in Rosemont, Montreal as a case study. It is a descriptive report of the project without much serious analysis.

Kristen R. Yount & Peter B. Meyer, "Project scale and private sector environmental decision making: Factors affecting investments in small- and large-scale brownfield projects" (1999) 3 *Urb. Eco.* 179.

An important early article on small-scale brownfield projects, this paper discusses developer and lender attitudes and the obstacles to brownfields redevelopment. The authors collected data from 48 projects, categorizing the data into two groups, large and small projects, and found that government and private financing tended to go to large projects, while smaller projects were usually self-financed. This suggested that funding is an important obstacle to small brownfield redevelopment. In addition, the developers of large projects have both information and expertise that the developers of smaller projects do not have, and further, the lack of government participation is a problem for smaller projects. The authors recommend specific legislative measures aimed at encouraging small projects.

Working Papers and New Releases

Alberta, News Release, "Province provides \$50 million for tank site remediation" (25 August 2006).

This new release outlines a program to assist municipalities and some gas station owners with the cost of removing underground petroleum storage tanks (USTs).

Anna Alberini & David H., Austin, *Strict Liability as a Deterrent in Toxic Waste Management: Empirical Evidence from Accident and Spill Data* (Discussion Paper 98-16) (Washington, DC: Resources for the Future, 1998).

The authors examined the US EPA's Emergency Response Notification System to study polluter behaviour, in particular, to see if strict liability regimes actually result in a reduction of uncontrolled releases of toxic substances. States with strict liability regimes had a higher rate of toxic spills, between 30 to 70% higher than states with negligence-based liability regimes. Furthermore, in states that have adopted strict liability regimes, a larger share of the spills were caused by small firms. The authors suggest this may be a realignment of risk, where larger firms subcontract riskier activities to smaller firms. The results of the study are counterintuitive, and they raise questions about the efficacy of strict liability regimes for discouraging risky activities.

Atlantic PIRI, *Atlantic PIRI in 2007: Harmonization: Moving Forward Together: Annual Report of Atlantic PIRI, April 2008*, prepared by Infoplexxus Inc. (Moncton: Infoplexxus, 2008).

A review of the Atlantic RBCA, including objectives, goals, framework, and future goals.

AUMA, *AUMA comments on the DRAFT Provincial Land-use Framework* (Edmonton: Alberta Urban Municipalities Association, 2008).

A short response to the Alberta government's Draft Land-use Framework, AUMA calls for a response from the Alberta government to its Sustainable Land Use Planning statement. It remains sceptical about some of the framework's recommendations, particularly with the top-down control framework and the suggested regions.

AUMA, *Sustainable Land Use Planning: Analysis and Recommendations* (Edmonton: Alberta Urban Municipalities Association, 2007).

The AUMA assessment of the Alberta government's proposed Land Use Planning Framework, the AUMA recommend a more comprehensive, coordinated approach to overall land use planning in the province, centred on a central provincial land use planning body, partnership with stakeholders, and public participation. It calls for criteria or performance measures. It also calls for greenbelts and urban growth boundaries to protect agricultural and natural areas. It is an essential policy statement from Alberta's municipalities for sustainability.

AUMA, *Urban Municipal Action on Climate Change Environmental Scan* (Edmonton: Alberta Environment, 2008).

A broad-based discussion paper from Alberta's municipalities for achieving climate change goals through the greening municipal policies and practices, the AUMA recommend the development of a Municipal Climate Change Action Plan, including an information centre, the training of experts, a comprehensive funding program, and some modest actions to reduce municipal emissions. The main goal of the proposed action plan is information.

D. Besner & Associates, *Five-Year Review of Canada-Wide Accord on Environmental Harmonization*, submitted to the CCME (Fredericton: D. Besner & Associates, 2003).

A review of progress in harmonizing standards across Canada. The authors note standardization for several pollutants including benzene, mercury, particulate matter and ozone, dioxins and furans, and petroleum hydrocarbons (PHC) in soil. The authors find that harmonization of standards establishes effectiveness, anecdotally, however, without any detailed or compelling evidence in support. A review of the signatories to the sub-agreements indicates otherwise. There is a long way to go.

British Columbia, News Release, "Brownfield Renewal Creates Greener B.C. Communities" (25 February 2008).

A news release that introduces BC's \$10 million remediation fund, a fund designed for brownfield redevelopment.

_____, News Release, "CRD and Province Partner to Clean Up Millstream Meadows" (1 April 2008).

A news release on the proposed redevelopment of Millstream Meadows.

John Byrne et al., *The Brownfields Challenge: A Survey of Environmental Justice and Community Participation Initiatives Among Ten National Brownfield Pilot Projects* (Newark, DE: Center for Energy and Environmental Policy, College of Human Resources, Education and Public Policy, University of Delaware, 1999).

Calgary, City of, News Release, "Community Revitalization Levy Notices" (21 August 2008).

A news release outlining the introduction of the Community Revitalization Levy ("CRL"), a TIFF, for use in The Rivers District of Calgary, the initiative implemented for 2008.

_____, News Release, "Manchester Water Centre" (15 February 2006).

A news release on the completion of the Manchester Water Centre, what the City considers a successful city-owned, major brownfield redevelopment.

_____, News Release, "Oil Gas Stations and Former Industrial Sites: They light neighbourhoods and take up useful space" (9 July 2007).

A news release on the submission of the City of Calgary's Brownfield Strategy to committee.

_____, News Release, "Ward 14 Newsletter July 2008" (30 June 2008).

A news release outlining the City of Calgary's planned revitalization of the Nose Creek brownfield region with the development of the New Science Centre 2011 Project.

Philippa Campste, *Smart Growth in Canada* (Toronto: Canadian Urban Institute, 2001).

This is a policy statement by the Canadian Urban Institute on smart growth to suggest a framework for analysis and new directions. After a short background, it goes on to discuss the elements of smart growth, the tools of smart growth, and prospects for the future of the concept in Canada. It should be weighed only as a policy statement.

Canadian Bankers Association, *Your Business, Your Bank and the Environment* (Toronto: Canadian Bankers Association, 2000).

A brief outline of the CBA's position on banking and the environment, this short paper describes the lending practice for brownfield projects.

Canadian Cancer Society/National Cancer Institute of Canada, *Canada Cancer Statistics 2008* (Toronto: Canadian Cancer Society/NCIC, 2008).

References statistics on cancer rates in Canada.

Canadian Council of Ministers of the Environment, *Contaminated Site Liability Report: Recommended Principles for a Consistent Approach Across Canada* (PN 1122) (Ottawa: Canadian Council of Ministers of the Environment, 1993).

The recommended principles from the CCME from its working group, consisting of various stakeholders from industry and all levels of government, the Ministers recommend liability principles consistent with polluter pays and beneficiary pays principles. It is a key policy paper in the development of the current Canadian approach to contaminated site liability.

Canadian Council of Ministers of the Environment, *A Canada-Wide Accord on Environmental Harmonization* (Ottawa: CCME, 2006).

The terms of the CCME Canada-Wide Accord on Environmental Harmonization adopted in every jurisdiction except Quebec.

_____, *Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil* (Ottawa: CCME, 2001).

A brief discussion of the Canada-Wide Standards for PHC in Soil, which lead to provincial initiatives for the removal of outdated underground storage tanks and the remediation of contaminated sites. It outlines its rationale and objectives, and targets and time frames for implementation.

_____, *Guide to the Canada-Wide Accord on Environmental Harmonization* (Ottawa: CCME, 1998).

A brief discussion on the Canada-Wide Accord on Environmental Harmonization.

_____, *Recommended Principles on Contaminated Sites Liability, 2006* (PN 1361) (Ottawa: CCME, 2006).

The recommended principles from the CCME for dealing with contaminated sites, the Ministers revisited contaminated sites liability in light of brownfields. The Ministers recommend liability based on polluter pays and beneficiary pays principles, but tempered by allocation. They also call for transparency in the process as well as the adoption of sustainability measures. Mostly, this approach is conservative, not adopting much more than that currently existing in the legislation. The major innovation of this approach is the call for transferability of liability, which has not been adopted by any jurisdiction. It is also the only change from their previous review of contaminated sites liability in 1993.

CMHC, *Brownfield Redevelopment for Housing: Literature Review and Analysis* (Socio-economic Series 05-013) (Ottawa: CMHC, 2005).

A short discussion of brownfields generally, and also the role of the CMHC in brownfield redevelopment.

_____, News Release, “Residential Intensification, Built Projects”.

A news release discussing the Garrison Woods redevelopment in Calgary.

_____, News Release, “Residential Intensification, Case Studies”.

A news release discussing the Revi-Sols program in Montreal.

Contaminated Sites Management Working Group, *Taking action on federal contaminated sites: An environmental and economic priority* (Ottawa: Gov’t of Canada, 1999).

An action paper for the federal response to federal contaminated sites in Canada. Mostly a review of current cleanup projects across Canada.

Environmental Law Centre, *A Review of Regulatory Approaches to Contaminated Site Management*, Report prepared for Alberta Environment (Edmonton: Alberta Environment, 2004)

FCM Centre for Sustainable Community Development, News Release, “FCM’s Green Municipal Fund Offers Low-Interest Loans for Brownfield Remediation” (10 July 2008).

A news release for Fort Eire’s brownfield site environmental improvement plan.

_____, News Release, “The Green Municipal Fund Commits \$350,000 to the Sustainable Redevelopment of Dockside Green” (12 October 2008).

A news release on the brownfield redevelopment of Dockside Green.

_____, News Release, “Green Municipal Fund Commits \$12,024 to the Municipality of Saint-Damien-de-Brandon for a Brownfield Remediation Study” (6 September 2007).

A news release on a remediation study for the Sherbrooke, QC region.

_____, News Release, “Green Municipal Fund Commit \$55,000 to the City of St. Albert for a Riel Park Brownfield Remediation and Redevelopment Plan” (2 November 2007).

A news release on a remediation and redevelopment plan for St. Albert.

Dan Hara, *Market Failures and The Optimal Use of Brownfield Redevelopment Policy Instruments*, prepared for the NRTEE (Ottawa: Hara Associates, 2003).

From an economic point of view, Hara assesses brownfields as a market failure and focuses his attention on means to encourage redevelopment based on incentives. It is a useful discussion of the sources of market failure, as well as on various forms of incentives. However, it is largely anecdotal rather than empirical or strongly principled.

Jodie Hierlmeier, *Brownfield Redevelopment in Alberta: Analysis and Recommended Reforms* (Edmonton: Environmental Law Centre, 2006).

A basic review of brownfields law with emphasis on the Alberta situation, Jodie Hierlmeier reviews brownfields in terms of the NRTEE framework. Some review of other jurisdictions, particularly Ontario, British Columbia, and Quebec provides this working paper with a comparative framework. Overall, the work is largely a summary of the NRTEE.

Infrastructure Canada, Information Sheet, "The Government of Canada is Taking Action on a Stronger Economy, a Cleaner Environment and more Prosperous Communities" (6 November 2007).

A news release on the federal infrastructure program, *Building Canada*.

_____, News Release, "Ontario Communities Benefit from Partnership Investment" (26 August 2008)

A news release outlining the federal Building Canada Fund, a joint project with the provinces to fund municipal infrastructure projects, including brownfields.

Manitoba, News Release, "Green Space to Replace Brandon Brownfield under Province's \$39-Million Greening Initiative" (2 October 2008).

A news release outlining a proposed cleanup of a brownfield in Brandon.

_____, News Release, "Innovative Tax Increment Financing would Support Inland Port, Affordable Housing, Revitalization Initiatives: Ashton" (12 June 2008).

This news release outlines Manitoba's introduction of the Community Revitalization Tax Increment Financing Act, a form of TIFF to permit municipalities to raise funds for brownfield redevelopment.

National Round Table on the Environment and the Economy, *Capital Markets and Sustainability: Investing in a sustainable future* (Ottawa: National Round Table on the Environment and the Economy, 2007).

A review and framework on encouraging private investment in sustainable development.

_____, *Cleaning Up the Past, Building the Future: A National Brownfield Redevelopment Strategy for Canada* (Ottawa: National Round Table on the Environment and the Economy, 2003).

One of the critical documents on brownfields in Canada, this paper establishes a framework for a national brownfields strategy. Developed with stakeholders from all sectors of Canadian society, the paper reviews the brownfield problem in Canada, the current brownfield laws, including case studies of current projects, and a strategy that would deal with liability and incentives, and greater public participation in the process. It calls for a two-step implementation process: a quick start and a medium-start. The NRTEE report facts, assertions, and recommendations lack proper academic support; and the failure to ground itself in the literature requires great caution in drawing much from its findings. However, any study of Canadian brownfields law and policy, whether you agree with the NRTEE or not, must deal head on with this report, along with the other NRTEE reports. The NBNWG report is largely a response to the NRTEE report.

_____, *Environmental Quality in Canadian Cities: A Federal Role* (Ottawa: National Round Table on the Environment and the Economy, 2003).

A major source for urban sustainability and smart growth from the municipal perspective, this paper establishes a framework for the federal role in urban revitalization. It sets out a number of recommendations, focusing on five broad areas: (1) addressing federal sites, (2) supporting urban transit, (3) promoting sustainable infrastructure, (4) encouraging the efficient use of energy and land, and (5) a catch-all, other areas for further consideration. The NRTEE recommends significant investment in urban transit and municipal infrastructure, including increasing the municipal GST rebate to 100%, and tax incentives for green building.

_____, *Environment and Sustainable Development Indicators for Canada* (Ottawa: National Round Table on the Environment and the Economy, 2003).

A review and framework for establishing measures of sustainable development in Canada.

_____, *Greening Canada's Brownfields: A National Framework for Encouraging Redevelopment of Qualifying Brownfields through Removal of Crown Liens and Tax Arrears* (Ottawa: National Round Table on the Environment and the Economy, 2005).

A specific discussion on Crown liens and tax arrears as a tool of policy for encouraging brownfield redevelopment. As a part of the original NRTEE, *Cleaning Up the Past, Building the Future*, this sets out the rationale for removing these barriers to redevelopment originally recommended by the NRTEE in 2003.

New Brunswick Brownfield Development Working Group, *Final Report of the New Brunswick Brownfield Development Working Group: Options and Recommendation for Facilitating*

Brownfield Redevelopment in New Brunswick (Fredericton: New Brunswick Brownfield Development Working Group, 2007).

Another important document in the Canadian literature, the NBBWG report makes recommendations for brownfields law coming after a review of the New Brunswick experience and in response to the NRTEE report. It recommends both liability relief and financial incentives among its list of 24 recommendations. The report lacks support for its facts, assumptions, and recommendations, but it too, like the NRTEE, must be dealt with by any thorough review of Canadian brownfields laws.

Niagara Falls, *Niagara Falls Brownfields Redevelopment, Community Information Package* (Niagara Falls: City of Niagara Falls Planning and Development Dept., 2004).

A short discussion of Niagara Falls' CIP for brownfield redevelopment.

Nova Scotia, News Release, "\$400 Million Committed for Tar Ponds Cleanup" (12 May 2004).

Announcement of the \$400 million cleanup of the Sydney Tar Ponds and the formation of the Sydney Tar Ponds Agency.

_____, News Release, "New Criteria for Domestic Fuel Oil Spills" (1 December 2005).

A news release on changing regulatory or numerical standards based on RBCAs.

_____, News Release, "New Policy Improves Clean Up of Home Oil Spills (13 December 2002).

A news release announcing changes for domestic oil spill cleanup practice and standards.

_____, News Release, "Prevent Oil Tank Spills, Protect Environment" (1 June 2005).

A news release on new standards for heating oil tanks.

OCETA, *State of Canada's Brownfield Redevelopment Industry: A Review of Canada's Response to the National Round Table on the Environment and the Economy's 2003 National Brownfield Redevelopment Strategy*, prepared for the NRTEE (Mississauga, ON: OCTA, 2008).

A review of progress on each recommendation of the NRTEE in 2003.

Ontario, News Release, "Canada and Ontario Sign \$6.2-Billion Building Canada Infrastructure Agreement" (24 July 2008).

A news release outlining the Building Canada Fund, a joint federal-provincial effort to fund municipal infrastructure initiatives.

Paulo Rosato et al., *Redeveloping Derelict and Underused Historic City Areas: Evidence from a Survey of Real Estate Developers* (Venezia, Italy: Fondazione Eni Enrico Mattei, 2008).

The authors examined underused historic sites in Venice and found that the presence or absence of contamination was less a concern for potential developers than obsolete land uses, zoning and infrastructure concerns. The authors conducted a survey of developers, lenders, consultants, advisors, and investors, asking them about their willingness in participating in brownfields in the downtown of Venice. Interestingly, and similar to other finds, relaxing conservation requirements had no effect on participant choice.

Sydney Tar Ponds Agency, *Remediation of the Tar Ponds and Coke Ovens Sites: Design and Construction Oversight Services, LEB Annual Report*, prepared by Ann Wilkie (97918-GEN-LEB-D-001 RA) (Sydney, NS: Sydney Tar Ponds Agency, 2008).

An overview of the Sydney Tar Ponds Agency listing its accomplishments and goals, but useful for some statistical data from the cleanup.

_____, News Release, “\$400 Million Committed for Tar Ponds Cleanup” (12 May 2004), online: Government of Nova Scotia <<http://www.gov.ns.ca/news/details.asp?id=20040512001>>.

Urban Land Institute, *Brownfields Redevelopment, Selected References, October 2006* (InfoPacket No. 388) (Washington, DC: Urban Land Institute, 2006).

A collection of articles and materials on brownfields, mostly drawn from real estate developer journals, and providing information on specific U.S. case studies. Useful for trends and issues.

H. Wade VanLandingham et al., “Public Strategies for Cost-Effective Community Brownfield Redevelopment” (Louisville, KY: Center for Environmental Policy and Management, Univ. Of Louisville, 2002).

This is a primer on cost-effective community brownfield redevelopment intended as a practice guide. As such, it gives a brief overview of the problems and issues without much analysis, and provides an appendix with a list of guidebook sources.

Kris Wernstedt et al., *The Brownfields Phenomenon: Much Ado about Something or the Timing of the Shrewd?* (Discussion Paper 04-46) (Washington, DC: Resources for the Future, 2004).

Kris Wernstedt is a Fellow of the Resources for the Future. This is an important work in the area of empirical analysis of brownfields laws, as well as a review of the literature.

Wernstedt's study examines the current empirical research on brownfields, to determine whether the current policies are achieving their stated goals. The authors suggest that if brownfield laws are to address sustainability, the government needs to be more interventionist, tackling the problem with a comprehensive, area-wide program. To move towards sustainable policies several fundamental questions need to be addressed.

Magazines and Newspapers

Katie Goldberg Zwick & Sarah Powell, "brownfields & clean water" *Cdn. Consulting Engineer* 48:4 (Jun/Jul 2007) 28.

A magazine article comparing the Ontario EPA and the *Clean Water Act* with reference to brownfield redevelopment and contaminated site cleanup.

"Green Municipal Funds: Low-Interest Loans for Brownfield Remediation" *Municipal World* 118:9 (September 2008) 45.

A magazine article on the FCM's GMF.

Garry Marr, "Blighted sites heat up: Developers embrace polluted lands for home projects" *National Post* (21 August 2001).

A brief newspaper article on residential brownfields in Canada.

"Overview of brownfield redevelopment in Australia" *Construction Contractor* (11 September 2003).

Provides statistics for the number of brownfields in Australia.

Bob Ransford, "Transforming city's first-ring suburbs a priority" *Vancouver Sun* (22 July 2006).

A short newspaper article on the Vancouver shoreline redevelopment plan.

Michael Sasges, "Victoria Hill from Onni demonstrates environment zeitgeist: Woodlands School conversion ('brownfield, not 'greenfield') preserves historic buildings, grounds" *Vancouver Sun* (28 February 2007).

A short newspaper article on the development of a brownfield in New Westminster, BC.

Books

Ahab Abdel-Aziz & Nathalie Chalifour, eds., *The Canadian Brownfields Manual*, looseleaf (Markham, ON: LexisNexis Canada, 2004).

A collection of articles covering all aspects of brownfields law, legislation, policy, and practice in Canada, *The Canadian Brownfields Manual* is probably the leading Canadian source on brownfields. Of particular interest are the articles on civil and regulatory liability in Canada, environmental site assessment and site-specific risk assessment, and brownfield initiatives.

Richard E. Bereti, *British Columbia Environmental Management Legislation & Commentary*, 2008 ed. (Markham, ON: LexisNexis Canada Inc., 2008).

An important summary and analysis of the *Environmental Management Act* and regulations, including the text of the EMA and the *Contaminated Sites Regulation*, Bereti breaks down the legislative provisions, discusses it, and explains the case law related to contaminated sites law in B.C. It is an easily accessible primer on the EMA and CSR. Most of the commentary deals with contaminated sites remediation.

Stanley Berger & Dianne Saxe, eds., *Environmental Law: The Year in Review 2006* (Aurora, ON: The Cartwright Group Ltd., 2007).

This is a selection of articles from 2006 from Canadian sources and relating to Canadian environmental issues of interest. Of particular interest is the Stepan Wood article on civil liability and brownfields and the Graham Rempe article on municipalities and environmental regulation. Wood is cautious of any statutory relaxation civil liability for contaminated sites. Rempe outlines the features of municipal authority in environmental matters, particularly since *Spraytech*.

E. Beriatos & C. A. Brebbia, eds., *Brownfield Sites IV: Prevention, Assessment, Rehabilitation and Development of Brownfield Sites* (Southampton, UK: WIT Press, 2008).

A collection of articles from the *Fourth International Conference on Prevention, Assessment, Rehabilitation and Development of Brownfield Sites*, this book is divided into six sections, covering articles on 1) rehabilitation of brownfields, 2) development issues, 3) remediation studies and technologies, 4) case studies, 5) risk assessment and management, and 6) community and public involvement. Of particular interest are the articles on sustainability and those on community and public involvement, each of which are goals of current brownfield approaches.

David R. Boyd, *Unnatural Law: Rethinking Canadian Environmental Law and Policy* (Vancouver: UBC Press, 2003).

As a general primer, Boyd's criticism of the Canadian environmental law is essential reading. Boyd points out the difference between law on the books and the actual enforcement of environmental law on the ground. Enforcement is lax in Canada due to systemic problems such as the lack of adequate resources available for enforcement.

C. A. Brebbia et al., eds., *Brownfield Sites: Assessment, Rehabilitation and Development* (Southampton, UK: WIT Press, 2002).

A collection of articles from the *First International Conference on Brownfield Sites: Assessment, Rehabilitation and Development*, this book is divided into 9 sections, covering articles on 1) case studies, 2) community and public involvement, 3) environmental assessment, 4) development issues, 5) financial and insurance aspects, 6) risk management, 7) multimedia modelling and assessment, 8) lessons from the field, and 9) cleanup methodologies. Of particular interest are the articles on community and public involvement and smart growth.

Raymond Côté et al., eds., *Law and the Environment: Problems of Risk and Uncertainty* (Montreal: Les Éditions Thémis, 1993).

A collection of articles in the Canadian context, this early series of articles discusses how the law addresses uncertainty in a variety of circumstances. These articles were collected at the Canadian Institute for the Administration of Justice's National Conference on Law and the Environment, Problems of Risk and Uncertainty held in Halifax, Nova Scotia in October, 1988. The early date of these articles, in light of the rapid changes in environmental law since then, makes these articles of limited use. The article by Mary Gade on lessons from the U.S. Superfund is particularly important. There are a number of articles on the role of the courts.

Todd S. Davies, ed., *Brownfields: A Comprehensive Guide to Redeveloping Contaminated Property*, 2d ed. (Chicago: American Bar Association, 2002).

This collection of articles from the American Bar Association covers a wide variety of topics. Davis is one of the leading authorities on brownfields and contaminated sites in the U.S. The introductory 3 chapters, forming Part I, explore the brownfield problem, the governing laws, and the federal brownfields initiatives. Part II is important reading. Consisting of 12 chapters, this section covers issues important to developers such as due diligence, acquisition, valuation, financing, tax deductions, team building and consensus building, environmental insurance, and experts. Part III addresses community participation and sustainability. Part IV deals with risk-based assessment. The longest section, Part V, discusses the various state VCPs in detail, and includes a chapter on brownfields in the Canadian context.

Mark S. Dennison, *Brownfields Redevelopment: Programs and Strategies for Rehabilitating Contaminated Real Estate* (Rockville, MD: Government Institutes, 1998).

An early, comprehensive source book on brownfields, Dennison gives a good foundation on the early development of brownfields legislation in the U.S., particularly under CERCLA and the state VCPs. The chapter on brownfields financing tools is useful as a discussion on equity participation, debt financing, tax incentives, grants, environmental insurance, and government assurance. Also, the discussion on CERCLA and the development of state VCPs is useful.

A. Donati et al, eds., *Brownfield Sites II: Assessment, Rehabilitation and Development* (Southampton, UK: WIT Press, 2004).

A collection of articles from the *Second International Conference on Brownfield Sites: Assessment, Rehabilitation and Development*, this book is divided into 9 sections, covering articles on 1) environmental assessment, 2) risk assessment and management, 3) monitoring of contaminated sites, 4) cleanup methodologies, 5) lessons from the field, 6) case studies, 7) development issues, 8) community and public involvement, and 9) financial aspects. Of particular interest are the articles on smart growth and sustainability, community and public involvement, and the effectiveness of grants.

Elizabeth Glass Geltman, *Recycling Land: Understanding the Legal Landscape of Brownfield Development* (Ann Arbor, MI: University of Michigan Press, 2000).

An early analysis of brownfield law in the U.S., Glass Geltman explores various US EPA programs throughout the U.S., and the federal initiatives under the Brownfields Act. She recommends an overhaul of the legislative scheme, since administrative reforms have only marginally improved the brownfield cleanup system.

Elaine L. Hughes, Alastair R. Lucas & William A. Tilleman, eds., *Environmental Law and Policy*, 3d ed. (Toronto: Emond Montgomery Publications Ltd., 2003).

A useful primer on environmental law and policy in Canada, providing key notes on contaminated sites legislation and the basis for current environmental policy. It is a useful starting point for further exploration.

Harold J. Rafson & Robert N. Rafson, *Brownfields: Redeveloping Environmentally Distressed Properties* (New York: McGraw-Hill, 1999).

This is an early collection of articles on brownfields laws and policy in the U.S. Two-thirds of this book focuses on the private developer, discussing issues for a developer when considering a brownfield, as well as issues of due diligence, remediation, and closure. While somewhat dated, the foundation theory is still useful as a primer.

Mark Reisch & David M. Bearden, eds., *Superfund and the Brownfields Issue* (New York: Novinka Books, 2003).

A short, concise pocketbook introduction to the U.S. Superfund and the brownfields problem, Reisch and Bearden compile a significant amount of statistical data on brownfields, mostly from U.S. sources.

Robert A. Simons, *Turning Brownfields into Greenbacks: Developing and Financing Environmentally Contaminated Urban Real Estate* (Washington, DC: Urban Land Institute, 1998).

An important early foundation source for brownfields, Simons is one of the key authorities on U.S. brownfields. The first half of this work discusses the early issues related to brownfields, including definition, costs, regulation, market, incentives, risk allocation, and recommendations. The second half consists of case studies. It is an important starting point.