



Chapitre de livre

2014

Published version

Open Access

This is the published version of the publication, made available in accordance with the publisher's policy.

Energy, Environment and Foreign Investment

Mbengue, Makane Moïse; Raju, Deepak

How to cite

MBENGUE, Makane Moïse, RAJU, Deepak. Energy, Environment and Foreign Investment. In: Foreign Investment in the Energy Sector. Balancing Public and Private Interests. Leiden : Martinus Nijhoff Publishers, 2014. p. 171–191.

This publication URL: <https://archive-ouverte.unige.ch/unige:56082>

Energy, Environment and Foreign Investment

Makane Moïse Mbengue and Deepak Raju

1 Introduction

This chapter seeks to analyse the interaction between international investment law and international environmental law in the context of the energy sector. The relationship between these two “fragments”¹ of international law has inspired a large amount of literature² highlighting, largely how the private interest of protection of investments is at odds with the public interest in protecting the environment. The abundance of investment arbitration cases where measures towards environmental regulation have been assailed as violations of commitments under investment treaties lends some credence to this

¹ See generally, M. Koskenniemi and P. Leino, “Fragmentation of International Law? Postmodern Anxieties”, *Leiden Journal of International Law* 15 (2002), 553; G. Hafner, “Pros and Cons Ensuing from Fragmentation of International Law”, *Mich. J. Int’l L.* 25 (2003–2004), 849; J. Pauwelyn, “Bridging Fragmentation and Unity: International Law as a Universe of Inter-Connected Islands”, *Mich. J. Int’l L.* 25 (2003–2004) 903; P.S. Rao, “Multiple International Judicial Forums: A Reflection of the Growing Strength of International Law or Its Fragmentation”, *Mich. J. Int’l L.* 25 (2003–2004) 929.

² J.E. Vinuales, “Foreign Investment and the Environment in International Law: An Ambiguous Relationship”, 80 *British Yearbook of International Law* (2009/2010), pp. 244–332; J.E. Vinuales, *Foreign Investment and the Environment in International Law* (Cambridge: Cambridge University Press, 2012); R.P. Tscherning, “Indirect Expropriation of Carbon-Intensive Investments and the Fair and Equitable Treatment Standard in International Investment Arbitration: A Commentary on the Pending Vattenfall v. Federal Republic of Germany Dispute”, University of Dundee Working Paper, at <http://www.dundee.ac.uk/cepmlp/gateway/?news=31345> (accessed 25 October 2013); Å. Romson, *Environmental Policy Space and International Investment Law* (Acta Universitatis Stockholm: Stockholmensis, 2012); D.A. Gantz, “Potential Conflicts Between Investor Rights and Environmental Regulation Under NAFTA’s Chapter 11”, *Geo. Wash. Int’l L. Rev.* 33 (2001), 651, 719–20; D.R. Loritz, “Corporate Predators Attack Environmental Regulations: It’s Time to Arbitrate Claims Filed Under NAFTA’s Chapter 11”, *Loy. L.A. Int’l & Comp. L. Rev.* 22 (2000), 533, 548; See generally, S.D. Franck, “The Legitimacy Crisis In Investment Treaty Arbitration: Privatizing Public International Law Through Inconsistent Decisions”, *Fordham Law Review* 73 (2005), 1521.

line of reasoning.³ Yet, the relationship between investment protection and environment protection is more nuanced than a simple categorisation of environmental concerns as “public” and investment protection as “private” goals. There are points of convergence and divergence between these disciplines that need to be analysed closely.

This is particularly the case in the energy sector. Investors operating in the energy sector have the capability to either foster environmental goals through pursuit of non-conventional energy sources, transfer of clean technology and import of international best practices, or to augment environmental harm by incentivising lax regulation and forcing a “race to the bottom.”⁴ These examples represent two extremes of the spectrum and most interactions of foreign investment with environmental regulation lies somewhere on the spectrum.

This piece discusses the relationship between international environmental law and investment law in the context of the energy sector. The first part discusses in brief the nature of the relationship and highlights potential points of convergence and divergence between the two fields. The second part deals with how substantive norms of international investment law may support or deter initiatives for the protection of the environment. In the third part, the focus will be on the procedural mechanisms of dispute resolution established under international investment agreements (IIAs) with a view to analysing whether and to what extent these mechanisms are capable of accounting for environmental concerns.

2 Understanding the Relationship

2.1 Historical Context

The energy sector has traditionally seen large volumes of cross border flow of investments.⁵ As early as 1930, the Texas Oil Company (now Texaco, part

3 *Saar PapierVertriebs GmbH v. Poland*, UNCITRAL Awards dated Oct 16, 1995 (not public); *Metalclad Corporation v. United Mexican States*, ICSID Case No. ARB(AF)97/1, Award, 30 August, 2000; *S.D. Myers Inc. v. Government of Canada*, Award 13 November, 2000; *Tecnicas Medioambientales SA (Tecmed) v. United Mexican States*, ICSID Case No. ARB(AF)00/2, Award, 29 May, 2003; *MTD Equity Sdn Bhd. & MTD Chile S.A. v. The Republic of Chile*, ICSID Case No. ARB/07/7, Award, 25 May, 2004.

4 Vinuales (2009/10), *supra* note 2; See generally, K.H. Engel, “State Environmental Standard-Setting: Is There a Race and Is It to the Bottom?”, 48 *Hastings Law Journal* 271 (1996–1997); Y. Xing & C.D. Kolstad, “Do Lax Environmental Regulations Attract Foreign Investment?”, *Environmental and Resource Economics* 21(1) (2002), 1.

5 A. Beltran, *A Comparative History of National Oil Companies* (Brussels: PIE Peter Lang, 2010); T. Falola, *The Politics of the Global Oil Industry: An Introduction* (Westport: Praeger, 2005);

of Chevron) had its operations in the Persian Gulf.⁶ In 1933, Saudi Arabia granted oil concessions to California Arabian Standard Oil Company (Casoc), affiliate of Standard Oil of California (Socal, today's Chevron).⁷ In the following decades, a large part of oil extraction in the Middle East was controlled by foreign companies operating under concession contracts.⁸ The history of the oil industry elsewhere followed a similar trajectory.⁹ Similarly the power sector in several countries has seen active involvement of foreign investors.¹⁰ More recently, many countries have seen large scale FDI participation in the search for renewable energy sources.¹¹

A. Blackmana & X. Wub, "Foreign direct investment in china's power sector: Trends, benefits and barriers", *Energy Policy* 27(12) (1999), 695–711; S.J. Liong, Foreign Investment in Electric Power Generation Around the Globe: A Study of Nine Countries, at <http://www.iit.upcomillas.es/docs/TM-08-102.pdf> (accessed 3 October 2013); P.N. Satyan, "Foreign Direct Investment in India's Power Sector", *Journal of Infrastructure Development* 3(1) (2011), 65–89; M. Wilkins, "Multinational Oil Companies in South America in the 1920s: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, and Peru", *The Business History Review* 48(3) (1974), 414–446; J.C. Brown, "Why Foreign Oil Companies Shifted Their Production from Mexico to Venezuela during the 1920s", *The American Historical Review* 90(2) (1985), 362–385; United Nations Economic Commission for Latin America and the Caribbean, 'Foreign direct investment in electric energy in Latin America and the Caribbean' (Chapter IV) in *Foreign Direct Investment in Latin America and the Caribbean* (2012), at <http://www.cepal.org/publicaciones/xml/4/49844/ForeignDirectInvestment2012.pdf> (accessed 24 October 2013).

6 E.V. Thompson, A Brief History of Major Oil Companies in the Gulf Region, at <http://www.virginia.edu/igpr/APAG/apagoilhistory.html> (accessed 24 October 2013); Texas Almanac, Oil and Texas: A Cultural History, at <http://www.texasalmanac.com/topics/business/oil-and-texas-cultural-history> (accessed 24 October 2013).

7 Thomson, *supra* note 6.

8 E.T. Penrose, "Profit Sharing Between Producing Countries and Oil Companies in the Middle East", *The Economic Journal* 69 (1959), 238–254; A. Schill, "A Brief History of Middle Eastern Oil" (2012), at <http://www.abadieschill.com/2012/07/04/a-brief-history-of-middle-eastern-oil/> (accessed 24 October 2013); V. Marcel, *Oil Titans: National Oil Companies in the Middle East* (Washington DC: Brookings Institution Press, 2006).

9 Falola, *supra* note 5.

10 Liong, *supra* note 5; Satyan, *supra* note 5.

11 R. Krüger (UNCTAD), Attracting Foreign Direct Investment into Renewable Energy, Second International Energy Efficiency Forum, Dushanbe, Tajikistan (2011) at http://www.unecce.org/fileadmin/DAM/energy/se/pp/eneff/IEEForumDushanbeSept2011/1.2.2_Krueger.pdf; B. Cerdeira and J. Paulo, The role of foreign direct investment in the renewable electricity generation and economic growth nexus in Portugal: a cointegration and causality analysis (2012), at http://mpira.ub.uni-muenchen.de/41533/1/MPRA_paper_41533.pdf (accessed 24 October 2013); OCO Insight, FDI in Renewable Energy: A promising decade ahead

The significant involvement of foreign investors in the energy sector has in turn meant frequent clashes between investors and host governments in this field. The first wave of clashes surrounded the questions of ownership of energy sources.¹² After decolonisation in Asia, Africa and Latin America and the rise of nationalism, energy sources, particularly oil, came to be seen as a national resource.¹³ This nationalist outlook, accompanied by the emergence of the doctrine of "permanent sovereignty over natural resources"¹⁴ led to resentment of the existing market structures, often created during the colonial era, whereby a large share of profits went to foreign investor.¹⁵ This resentment culminated in nationalisation of oil resources in several parts of the world and stringent opposition to the same from foreign investors and their home states.¹⁶ For instance, the tensions between the West and Iran over the oil industry resulted, in part, in the Tehran hostage crisis and the events preceding and

(2012), at http://www.ocoglobal.com/uploads/default/files//FDI_in_Renewable_Energy__A_promising_decade_ahead.pdf (accessed 24 October 2013); See also, M. Hübler & Andreas Keller, "Energy savings via FDI? Empirical evidence from developing countries", *Environment and Development Economics* 15(1) (2010), 59–80.

- 12 R.C.A. White, "Expropriation of the Libyan Oil Concessions – Two Conflicting International Arbitrations", *International and Comparative Law Quarterly* 30(1) (1981), 1; C.E. Solberg, *Oil and Nationalism in Argentina: A History* (Stanford: Stanford University Press, 1979); F. Parra, *Oil Politics: A Modern History of Petroleum* (London/New York: I.B.Tauris, 2004); F.R. Teson, "State Contracts and Oil Expropriations: The Aminoil-Kuwait Arbitration", *Va. J. Int'l L.* 24 (1983–1984), 323.
- 13 *Ibid.*; H. Landau, "Economic and Political Nationalism and Private Foreign Investments", *Denv. J. Int'l L. & Pol'y* 2 (1972), 169; D. Hellinger, Nationalism, Oil Policy and the Party System in Venezuela, at the 2000 meeting of the Latin American Studies Association, at: <http://lasa.international.pitt.edu/lasa2000/hellinger.pdf> (accessed 24 October 2013); M. Rosado de Sa Ribeiro, "Sovereignty over Natural Resources Investment Law and Expropriation: The case of Bolivia and Brazil", *J World Energy Law Bus* 2(2) (2009), 129–148; G. Joffé, "Expropriation of oil and gas investments: Historical, legal and economic perspectives in a new age of resource nationalism", *J World Energy Law Bus* 2(1) (2009), 3–23.
- 14 Permanent Sovereignty over Natural Resources, G.A. res. 1803 (XVII), 17 U.N. GAOR Supp. (No.17) at 15, U.N. Doc. A/5217 (1962); E. Duruigbo, "Permanent Sovereignty and Peoples' Ownership of Natural Resources in International Law", *Geo. Wash. Int'l L. Rev.* 38 (2006), 33; G. Elian, *The principles of sovereignty over natural Resources* (The Hague: MartinusNijhoff, 1979); K.N. Gess, "Permanent Sovereignty Over Natural Resources", *International & Comparative Law Quarterly* 13 (1964), 398.
- 15 Penrose, *supra* note 8.
- 16 See the sources cited *supra* note 12.

succeeding it.¹⁷ Where investors sought to vindicate their position legally, they had to rely largely on concession contracts,¹⁸ and there existed some debate as to whether the norm of *pacta sunt servanda* would apply to such agreements.¹⁹ In a limited number of cases, the home state of the investor had the ability to invoke a treaty of friendship commerce and navigation or another substantive norm in international law and present the claim of the investor before an international adjudicatory forum using the institution of diplomatic protection.²⁰ It is interesting to note that more than half of the investment related claims brought before the International Court of Justice through the diplomatic protection route pertain to the energy sector – *ELSI*,²¹ *Barcelona Traction*,²² *Anglo Iranian Oil Company*,²³ *Electricité de Beyrouth Company (France v. Lebanon)*.²⁴

In the second wave of conflict between investors in the energy sector and the host governments, the former sought to protest operating conditions prescribed by the host governments. In several cases, the host governments characterised the controversial measure as environmental regulation while the investors sought to assail these measures as violations of the investment treaties.²⁵ By this time, the investors had the benefit of access to binding State

17 J.J. Norton & M.H. Collins, "Reflections on the Iranian Hostage Settlement", A.B.A. J. 67 (1981), 428; B.M. Clagett, "The Expropriation Issue before the Iran-United States Claims Tribunal: Is Just Compensation Required by International Law or Not", Law & Pol'y Int'l Bus. 16 (1984), 813.

18 K.S. Carlston, "Concession Agreements and Nationalisation", AJIL 52(2) (1958), 260; E.K. Leach & L.T. Kissam, "Sovereign Expropriation of Property and Abrogation of Concession Contracts", *Fordham Law Review* 28 (1959–1960), 177.

19 J.W. Yackee, "Pacta Sunt Servanda and State Promises to Foreign Investors Before Bilateral Investment Treaties: Myth and Reality", *Fordham International Law Journal* 32(5) (2008), 1549; R.Y. Jennings, "State Contracts in International Law", Brit. Y. B. Int'l L. 37 (1961), 156; R. Geiger, "The Unilateral Change of Economic Development Agreements", *International & Comparative Law Quarterly* 23 (1974), 73.

20 E.g. see *Case Concerning Elettronica Sicula S.p.A. (ELSI) (United States v. Italy)*, 1989 ICJ Rep. 15, para 128; *Barcelona Traction Light and Power Company (Belgium v. Spain)*, (New Application: 1962, Second Phase), 1970 ICJ Rep. 3.

21 Ibid.

22 Ibid.

23 *Anglo-Iranian Oil Co. Case (United Kingdom v. Iran)*, 1952 ICJ Rep. 93.

24 *Electricité de Beyrouth Company (France v. Lebanon)*, Order: Removal from the List, 1954 ICJ Rep. 107.

25 *Supra* note 12; Simon Baughen, "Expropriation And Environmental Regulation The Lessons Of NAFTA Chapter Eleven", *Journal of Environmental Law* 18(2) (2006), 207–228; OECD, "Indirect Expropriation' and the 'Right to Regulate' in International Investment Law", Working Paper No. 2004/4 (2004).

arbitration and were often able to obtain awards holding controversial regulatory measures to be in violation of the IIA commitments.²⁶ These awards contributed largely to the perception that investment protection and environment protection are inherently contradictory goals and that one can be pursued only at the cost of the other. In the recent times, the arbitration between Chevron and Ecuador²⁷ has gained much public attention. While Ecuador states that its courts merely imposed environmental damages on Chevron's subsidiary, the company accuses Ecuador of serious violations of its investment commitments including judicial corruption. Several other examples exist²⁸ in the second wave of investor claims against host states in relation to measures purportedly adopted for environmental regulation. They span most of the common provisions of IIAs – protection against expropriation, fair and equitable treatment, non-discrimination, etc. More of these examples will be discussed in detail below. But there are two key differences between the first wave of disputes between investors and host states in the energy sector that need to be noted – (i) the disputes in the second wave tend to concern conditions of operation of the investors, rather than formal ownership of the business; (ii) dispute resolution clauses in IIAs have granted investors access to binding dispute resolution, eliminating the political risk in seeking diplomatic protection as well as uncertainties associated with concession contracts.

2.2 *Investment Protection and Environmental Protection – Points of Convergence and Those of Conflict*

As briefly mentioned above, a dichotomy that categorises protection of environment as a public goal and protection of investment as a private one is inadequate to cover the complex possibilities of convergence or divergence between these interests and the corresponding areas of law. The paragraphs below highlight certain possible points of convergence and divergence which will help us understand the relationship better.

Perhaps the most well known point of divergence between investment protection and environment protection is the imposition of stringent environmental regulations which add the cost of compliance to the total cost of operations of the investor. In one of the most well known examples, the tribunal in *Metalclad v. Mexico* held that the denial of a construction permit for a hazardous waste land fill by the municipal authorities breached com-

26 *Supra* note 12.

27 *Chevron Corporation and Texaco Petroleum Company v. The Republic of Ecuador*, PCA Case No. 2009–23.

28 *Supra* note 12.

mitments of Mexico under NAFTA.²⁹ Other tribunals have held in favour of investors challenging, among other things, import restrictions on waste paper for recycling,³⁰ export restrictions on PCB waste material³¹ and denial of a construction permit in a designated green belt.³² Investors have also challenged, though unsuccessfully, the prohibition of methyl tertiary-butyl ether (MTBE) to unleaded gasoline due to water contamination.³³

Another point of divergence may be the non-discrimination provisions within IIAs.³⁴ These may come in the way of rewarding domestic or foreign investors for their environment friendly practices and punishing those not following such practices. In the investment context, there exists no cogent jurisprudence as to whether investments and investors not similarly placed in terms of environmental impact are to be accorded equal treatment.³⁵ One may seek to derive guidance from the WTO Appellate Body's ruling in *EC – Asbestos*³⁶ which held that the health and environmental effects of products could be relevant in determining whether they are "like products." However, that ruling was based on the fact that consumer tastes and preferences are relevant in determining "likeness of goods" in the trade context. There is no parallel jurisprudence in the investment context to indicate that perceptions of the consumers or the public are relevant in determining whether two investors are in "like circumstances." Also, that ruling was in the context of risks which were already well established. If a State seeks to take precautionary measures to protect the environment, differentiating between investors on the basis of anticipated environmental impact where the scientific evidence leaves a gap,

29 *Metalclad*, *supra* note 3.

30 *Saar Papier*, *supra* note 3.

31 *S.D. Myers*, *supra* note 3.

32 *MTD Equity*, *supra* note 3.

33 *Methanex Corp. v. United States of America*, Award, 3 August, 2005.

34 Most IIAs contain 'national treatment' clauses that prohibit treating the investors protected by the IIA less favourably than the domestic investors of the host state, and 'most favoured nation' clauses which prohibit treating the investors protected by the IIA less favourably than the investors of third countries.

35 IIAs typically make the non-discrimination obligation contingent on the entities in question being in 'like circumstances. Yet, there is no coherent jurisprudence on the definition of the expression.

36 *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS 135/AB/R, para. 122 – "In this case especially, we are also persuaded that evidence relating to consumers' tastes and habits would establish that the health risks associated with chrysotile asbestos fibres influence consumers' behaviour with respect to the different fibres at issue".

it is not clear whether such differentiation will be acceptable in the IIA framework. Non-discrimination may also obstruct policies oriented towards building of domestic capacity in clean technology.

A further point of divergence may be that the guarantees under IIAs treat intellectual property as investment and offer augmented protection to intellectual property,³⁷ at the risk of hampering the actual transfer of clean technology.

A point of convergence may be the promotion of foreign investment in clean technologies.³⁸ It may be that foreign investors attracted by the protection afforded by the investment treaty (among other things), seek to meet the domestic demand for clean technology. This may also result in the import of certain international best practices in environmental self regulation, at least when they do not add significant economic cost. At the same time, a point of divergence may be that certain investors seek out states with the least stringent environmental requirements, in doing so, encouraging under-regulation and triggering what economists term a "race to the bottom."

Another point where investors, as well as environmental activists converge is the call for strong, fair, transparent and predictable institutions with well defined mandates. While investment protection may require one course of action by these institutions and protection of environment may require a completely different course of action, the broad defining characteristics of the institutional framework sought by both the interests converge largely. For instance arbitrariness and selective enforcement of environmental standards or delayed adjudication of environment related objections to investment projects are likely to hurt both the investment and the environment.

There may also be instances where the guarantees under an IIA entitle an investor to certain minimum standards of environment protection. While claims of this nature are rare, they are not unprecedented. For instance, a Canadian investor operating an ecotourism facility brought an action against Barbados for alleged failure to enforce national and international norms

37 See, C.M. Correa, Bilateral investment agreements: Agents of new global standards for the protection of intellectual property rights? (2004), at <http://www.grain.org/article/entries/125-bilateral-investment-agreements-agents-of-new-global-standards-for-the-protection-of-intellectual-property-rights> (accessed 3 October 2013); R.C. Bernieri, "Intellectual Property Rights in Bilateral Investment Treaties and Access to Medicines: The Case of Latin America", *The Journal of World Intellectual Property* 9(5) (2006), 548–572; P. Ranjan & D. Raju, "Losing ground to Big Pharma, bit by BIT", *The Hindu* (6 September 2013), at <http://www.thehindu.com/opinion/op-ed/losing-ground-to-big-pharma-bit-by-bit/article5097623.ece> (accessed 24 October 2013).

38 Vinuales 2012, *supra* note 2.

relating to the conservation of wetlands.³⁹ Costa Rica faced two similar actions for alleged mistreatment of parcels of land designated for the protection of leatherback turtles.⁴⁰

What are cited above are merely a few examples of convergence and divergence between the interest of protection of investment and that of protection of environment. These conflicts of interests may at times result in "normative conflicts,"⁴¹ where international investment law requires an action or omission by the state, which would be violative of international environmental law or *vice versa*. On the other hand, there may also be situations of "convergence of norms" where the same action or omission is mandated by both international environmental law and international investment law as highlighted in examples cited above where investors are suing under international investment law claiming that they had a legitimate expectation of adherence to international environmental law.

Some authors have argued that a principle of mutual supportiveness is emerging in the international legal order and have suggested that such a principle could also govern the relationship between international environmental law and international investment law.⁴² Some other voices have been also promoting the principle of mutual supportiveness in the field of investment and environment. The 2005 IISD Model International Agreement on Investment for Sustainable Development provides that "the Parties agree that the provisions of other international trade agreements to which they are a Party are consistent with the provisions of this Agreement. The Parties shall seek to interpret such agreements in a mutually supportive manner."⁴³ In the commentary attached to that provision it is said, "this Article sends an important legal signal that the Parties or a dispute settlement panel should interpret this agreement to be consistent with trade agreements where there are overlapping provisions, and should interpret those provisions in trade agreements to be

39 *Peter A. Allard v. The Government of Barbados* (Notice of Dispute) (8 September 2009), at <http://graemehall.com/legal/papers/BIT-Complaint.pdf> (accessed 3 October 2013).

40 *See Reinhard Hans Unglaube v. Republic of Costa Rica*, ICSID Case No. ARB/09/20; *Marion Unglaube v. Republic of Costa Rica*, ICSID Case No. ARB/08/1.

41 *Vinales* (2009/10), *supra* note 2.

42 L. Boisson de Chazournes & M.M. Mbengue, "A principle as a footnote: Mutual supportiveness and its Relevance in an Era of Fragmentation", in H.P. Hestermeyer et al. (eds.), *Coexistence, Cooperation and Solidarity. Liber Amicorum Rüdiger Wolfrum*, vol. II, (Martinus Nijhoff Publishers: Leiden/Boston, 2012), 1615–1638.

43 H. Mann et al. (eds.), *IISD Model International Agreement on Investment for Sustainable Development*, Article 34, at 47 (2nd ed. 2005), available at http://www.iisd.org/pdf/2005/investment_model_int_handbook.pdf (accessed 3 October 2013).

consistent with this agreement. It seeks a mutually supportive approach in the event of potential conflicts.”⁴⁴

The purpose of this section is not to exhaustively list all the possible conflicts and convergences between international investment law and international environmental law. The purpose of this discussion was merely to highlight that the two “fragments” of international law can be in conflict or convergence depending on the situation, and it would be incorrect to engage in characterisations that place them in perpetual opposition to each other.

3 Environmental Regulation and Substantive Clauses in Investment Treaties

The paragraphs below undertake a closer examination of certain common provisions of investment treaties and analyse how they may interact with the protection of environment. At the very outset, it needs to be mentioned that the actual interaction of a provision in an investment agreement with the objective of environmental protection will depend on the exact wording of the treaty language as well as the circumstances within which the interaction occurs. However, our attempt here is to identify, using past incidents and some hypothetical examples, the possible courses that such interactions may take.

3.1 *Specific References to Environment*

A recent OECD study surveys the use of specific language addressing environmental concerns in IIAs.⁴⁵ The study divides environment related language in IIAs into the following categories: (i) general references to environmental concerns in the preamble, (ii) reserving policy space for environmental regulation, (iii) reserving policy space with respect to certain treaty provisions, (iv) precluding non-discriminatory regulation as a basis for claims of indirect expropriation, (v) specific provisions for environmental matters in investor-state dispute settlement (vi) discouraging relaxation of environmental standards to attract investment and (vii) general promotion of progress in environmental protection and cooperation.⁴⁶

44 Ibid.

45 K. Gordon & J. Pohl, “Environmental Concerns in International Investment Agreements: a Survey”, OECD Working Papers on International Investment, No. 2011/1 (2011).

46 Ibid.

Preambular texts in IIAs, as such, are not enforceable. Thus, no matter how strongly they express the concern of the parties for the environment,⁴⁷ they do not create or mitigate rights or obligations for the state parties or the investors. Yet, as well accepted in customary international law, the preamble of a treaty is a relevant tool for interpretation of the text.⁴⁸ Thus where the accurate meaning of a substantive provision is in dispute, the preambular text may be helpful in lending support to the more environment friendly solution.⁴⁹ In this regard, one may draw an analogy with the reliance, by the WTO Appellate Body, on the preambular language relating to sustainable development, while interpreting the meaning and scope of the Article XX exception to GATT commitments.⁵⁰

Reserving policy space for environmental regulation either in general⁵¹ or with specific reference to certain provisions of the IIA⁵² may serve to eliminate any legitimate expectations of the investor that the law would remain static. However, it is well accepted presently that in the absence of a stabilisation clause, there exists no legitimate expectations against a change in law.⁵³

47 E.g. see, United States-Uruguay BIT (2005) and US-Rwanda BIT (2008): "Desiring to achieve these objectives in a manner consistent with the protection of health, safety, and the environment, and the promotion of internationally recognized labor rights"; Australia – Chile FTA (2008): "Implement this Agreement in a manner consistent with sustainable development and environmental protection and conservation".

48 Article 31, Vienna Convention on the Law of Treaties: "1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose. 2. The context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, including its preamble and annexes."

49 See M.M. Mbengue, "The Notion of Preamble", in R. Wolfrüm (ed.), *Max Planck Encyclopedia of Public International Law* (Oxford: Oxford University Press, 2012).

50 *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, para. 129.

51 See Canada-Armenia BIT (1997); Canada-Barbados BIT (1996): "Nothing in this Agreement shall be construed to prevent a Contracting Party from adopting, maintaining or enforcing any measure otherwise consistent with this Agreement that it considers appropriate to ensure that investment activity in its territory is undertaken in a manner sensitive to environmental concerns".

52 Canada-Peru BIT (2006): "A measure that requires an investment to use a technology to meet generally applicable health, safety or environmental requirements shall not be construed to be inconsistent with paragraph 1(f). For greater certainty, Articles 3 and 4 apply to the measure."

53 *Saluka Investments BV v. Czech Republic*, UNCITRAL, Award, 17 March 2006, para 442; M. Hirsch, "Between Fair and Equitable Treatment and Stabilization Clause: Stable Legal Environment and Regulatory Change in International Investment Law", *Journal of World*

Even where policy space is reserved, a regulatory measure may still be challenged for the manner in which it is implemented or for the effect it has on foreign investors. Similarly, a preclusion of non discriminatory regulatory measures from the ban on expropriation still leaves the measure open to challenge under other IIA commitments, particularly the fair and equitable treatment standard. However, in certain cases, the language of reservation of regulatory power tends towards laying down exceptions similar to those contained in Article XX of the GATT.⁵⁴ In these circumstances, the environmental clauses are more likely provide a shield to the state in the event of allegations invoking any substantive provision of the IIA.

Specific provisions on environment in the context of investor State dispute settlement pertain to fact finding mechanisms in disputes with an environmental angle⁵⁵ and exclusion of certain environmental undertakings from mandatory arbitration.⁵⁶ For instance, the Energy Charter Treaty, despite providing for extensive environmental commitments under Article 19, excludes such commitments from the scope of disputes subject to binding arbitration under Article 27 and sets up an alternative mechanism whereby disputes relating to such commitments are "reviewed by the Charter Conference aiming at

Investment & Trade 12 (2011); F.M. Téllez, "Conditions and Criteria For The Protection of Legitimate Expectations Under International Investment Law", *ICSID Review – Foreign Investment Law Journal* 27(2) (2012), 432.

- 54 Argentina-New Zealand BIT (1999): "The provisions of this Agreement shall in no way limit the right of either Contracting Party to take any measures (including the destruction of plants and animals, confiscation of property or the imposition of restrictions on stock movement) necessary for the protection of natural and physical resources or human health, provided such measures are not applied in a manner which would constitute a means of arbitrary or unjustified discrimination"; Canada-Egypt BIT (1996); Canada-El Salvador BIT (1999): "Provided that such measures are not applied in a discriminatory or arbitrary manner or do not constitute a disguised restriction on foreign investment, nothing in this Agreement shall be construed to prevent a Contracting Party from adopting measures to maintain public order, or to protect public health and safety, including environmental measures necessary to protect human, animal or plant life".
- 55 Canada-Jordan BIT (2009); Canada-Peru BIT (2006): "Without prejudice to the appointment of other kinds of experts where authorized by the applicable arbitration rules, a tribunal, at the request of a disputing party or, unless the disputing parties disapprove, on its own initiative, may appoint one or more experts to report to it in writing on any factual issue concerning environmental, health, safety, or other scientific matters raised by a disputing party in a proceeding, subject to such terms and conditions as the disputing parties may agree."
- 56 Belgium/Luxembourg-Colombia BIT (2009) – excludes Article 7 which expresses environmental concerns from the scope of dispute settlement.

a solution.”⁵⁷ These provisions are yet to be tested in dispute resolution, and it would be impossible to comment on the efficacy of such fact finding mechanisms at this stage.

While the discouragement of relaxing environmental regulation⁵⁸ or general agreement to cooperate in environmental protection may express the best intentions of the parties and their shared concerns, they are hardly enforceable guarantees. First, these provisions are often couched in language that calls for best efforts or creates obligations of conduct rather than those of result. Moreover, an undertaking to not relax environmental standards is unlikely to be invoked for enforcement by investors through the same channels as other provisions of the IIA. Thus, these provisions remain mere rhetoric except in cases like the ones discussed above,⁵⁹ where investors claim a legitimate expectation of high environmental protection. In the energy sector, one such possibility is the investors in the renewable or clean energy segment suing on expectations that conventional energy would be discouraged and stringently regulated.

Most recently, the 2012 versions of the Model BITs of United States and Canada have incorporated extensive references to environment. One of the preambular recitals in the US Model BIT states: “Desiring to achieve these objectives in a manner consistent with the protection of health, safety, and the environment, and the promotion of internationally recognized labor rights”. Article 8 of the Model BIT that deals with ‘performance requirements’ has a built in exception on the line of Article XX of the GATT. This exception expressly states that the measures permitted under it include environmental measures. Article 12 of the Model BIT reiterates the commitment of the parties to the environment and states: “Nothing in this Treaty shall be construed to prevent a Party from adopting, maintaining, or enforcing any measure otherwise consistent with this Treaty that it considers appropriate to ensure that investment activity in its territory is undertaken in a manner sensitive to environmental concerns”. This provision also provides for consultation between the parties with a view to arriving at a mutually satisfactory solution to issues arising under this article. However, environmental commitments under this model BIT are not capable of forming the foundation of a claim in investor –

⁵⁷ Energy Charter Treaty, Article 19, Article 27(2).

⁵⁸ Canada-Jordan BIT (2009), Canada-Latvia BIT (2009); Canada-Peru BIT (2006): “The parties recognize that it is inappropriate to encourage investment by relaxing domestic health, safety or environmental measures. Accordingly, a Party should not waive or otherwise derogate from, such measures as an encouragement for the establishment, acquisition, expansion or retention in its territory of an investment or an investor”.

⁵⁹ *Supra* notes 39 and 40.

State arbitration under Article 24 of the Model BIT. In the Canada Model BIT, Article 18 lays down general exceptions on the same lines as Article XX of GATT. In both these Model BITs, it appears that the environmental provisions are capable of serving as interpretative tools and defences, but not as foundations of claims, in binding dispute settlement.

3.2 *Non-discrimination*

The relationship between the non-discrimination obligation under IIAs and the protection of the environment has been discussed above briefly. In that discussion it has been pointed out how non-discrimination provisions may hinder differentiations between environmentally sound and unsound practices. It has also been noted how non-discrimination provisions may also tend to prevent the building of domestic capacity in clean technology. However, non-discrimination provisions may, on the other hand, serve to prohibit arbitrary promotion of unclean and conventional energy sources or processes to serve vested or parochial interests. If the markets are structured in such a way that the market itself rewards innovation in clean or unconventional energy, the non-discrimination provisions will help them access a level playing field. In such a market, the non-discrimination provisions will ensure that the governments do not create artificial barriers to clean technology or create advantages for conventional energy suppliers based on protectionist considerations. An example of this may be seen in the domestic content requirements that some countries impose in relation to their renewable energy programmes and how the non-discrimination provisions in WTO law have been employed by other countries to challenge these requirements.⁶⁰ While the non-discrimination provisions strike at the domestic content requirements, they leave the renewable energy programmes intact, in result ensuring that energy suppliers are free to base their procurement decisions on effectiveness and cost considerations rather than the geographical origins of the components. A domestic content requirement in such a programme skews the market for renewable energy and creates inefficiencies. While the non-discrimination provisions in IIAs are yet to be invoked in relation to such requirements, it is likely that they may be able to bring about the same effect, if invoked.

60 *Canada – Certain Measures Affecting The Renewable Energy Generation Sector*, WT/DS412/AB/R; *Canada – Measures Relating To The Feed-In Tariff Program*, WT/DS426/AB/R; *India – Certain Measures Relating to Solar Cells and Solar Modules*, WT/DS 456.

3.3 *Fair and Equitable Treatment*

The fair and equitable treatment standard (FET) is one of the most litigated provisions in IIAs, and it has been interpreted very broadly by investment arbitral tribunals. The exact meaning and scope of the commitment depends on the actual wording of the agreement at hand.⁶¹ According to Muchlinski, “the concept of fair and equitable treatment is not precisely defined. It offers a general point of departure in formulating an argument that the foreign investor has not been well treated by reason of discriminatory or other unfair measures being taken against its interests. It is, therefore, a concept that depends on the interpretation of specific facts for its content. At most, it can be said that the concept connotes the principle of non-discrimination and proportionality in the treatment of foreign investors.”⁶² The fluidity of the FET standard has led some commentators to call it the “catch all” provision in IIAs.⁶³ The FET standard has, inter alia, been held to include the protection of legitimate expectations.⁶⁴

The jurisprudence on FET clause has sought to strike a balance between the expectations of the investor and the regulatory freedom of the host state. For instance, the *Saluka* Tribunal held that the FET standard “requires a weighing of the Claimant’s legitimate and reasonable expectations on the one hand and the Respondent’s legitimate regulatory interests on the other.”⁶⁵

While the right to impose environmental regulation is undisputedly recognised, the FET standard may strike at the manner and the context in which the regulation is imposed. For instance, in *Metalclad*, the denial of building permit violated FET standard because the permit “was denied at a meeting of the Municipal Town Council of which Metalclad received no notice, to which it received no invitation, and at which it was given no opportunity to appear.”⁶⁶

61 OECD, Fair and Equitable Treatment Standard in International Investment Law, Working Papers on International Investment – Number 2004/3 (2004) online: <http://www.oecd.org/daf/inv/internationalinvestmentagreements/33776498.pdf> (October 3, 2013).

62 P.T. Muchlinski, *Multinational Enterprises and the Law* (Oxford: Oxford University Press, 2ndEd, 2007), 625.

63 N. Bernasconi, “Background paper on Vattenfall v. Germany arbitration”, International Institute for Sustainable Development (2009), 5, at http://www.iisd.org/pdf/2009/background_vattenfall_vs_germany.pdf (accessed 3 October 2013).

64 *International Thunderbird Gaming Corporation v. The United Mexican States*, UNCITRAL, Separate Opinion of Professor Thomas Walde, para. 37 (December 2005); *Saluka*, *supra* note 53; Abhijit PG Pandya & Andy Moody, “Legitimate Expectations in Investment Treaty Arbitration: An Unclear Future”, *Tilburg Law Review* 15(2010–11) 93, 105.

65 *Saluka*, *supra* note 53, Partial Award, para. 306.

66 *Metalclad*, *supra* note 3, para. 91.

In *Tecmed*, the lack of prior notice to the investor about the non-renewal of the landfill operating licence and the social and political pressure on the authority to relocate the landfill which provided the background to the decision, were crucial in sustaining a finding of violation of the FET standard.⁶⁷

While the FET standard protects legitimate expectations, the jurisprudence is clear that absent a stabilisation clause, the investors cannot legitimately expect that the regulatory framework will remain static.⁶⁸ For instance, the *Saluka* Tribunal held that "in order to determine whether frustration of the foreign investor's expectations was justified and reasonable, the host State's legitimate right subsequently to regulate domestic matters in the public interest must be taken into consideration as well"⁶⁹ and highlighted the "high measure of deference that international law generally extends to the right of domestic authorities to regulate matters within their own borders."⁷⁰

Thus, the FET standard does not necessarily frustrate non-discriminatory, reasonable, transparent regulatory measures for the protection of the environment even when the measure imposes additional costs on the investor. Also, as discussed above, in certain circumstances, investors may use the FET standard to force the host state to adhere to higher environmental standards. In the energy sector, this may be particularly important where a government attracts investments in clean or renewable energy sector by announcing its intention to provide incentives to the investors in this sector. If the government goes back on these representations to support conventional players instead, the foreign investors may be able to resort to the FET provision for a remedy.

3.4 Expropriation

Guarantee against expropriation was, in the initial phases of international investment law, the most important guarantee sought by investors. Today, the expropriation clauses have evolved to cover not merely the classic cases of direct expropriation, but also indirect expropriation irrespective of the form it takes.⁷¹ Indirect expropriation has been defined broadly to include any

⁶⁷ *Tecmed*, *supra* note 3.

⁶⁸ *Saluka*, *supra* note 53.

⁶⁹ *Saluka*, *supra* note 53, para. 305.

⁷⁰ *Ibid.*

⁷¹ R.D. Sloane & W.M. Reisman, "Indirect Expropriation and its Valuation in the BIT Generation", *British Yearbook of International Law* 75 (2004), 115; C. Henckels, "Indirect Expropriation and the Right to Regulate: Revisiting Proportionality Analysis and the Standard of Review in Investor-State Arbitration", *J Int Economic Law* 15(1) (2012), 223; E.g., see US – Bangladesh BIT (1986), Art. III:1 – "No investment or any Part of an investment of a national or a company of either Party shall be expropriated or nationalized

governmental action that deprives the investor of the use or enjoyment of the assets or unduly delays such use or enjoyment.⁷²

There has been a consensus among international lawyers that not all taking of property by the government amounts to expropriation. Brownlie reflects this position in stating, "state measures, prima facie a lawful exercise of powers of governments, may affect foreign interests considerably without amounting to expropriation. Thus, foreign assets and their use may be subjected to taxation, trade restrictions involving licenses and quotas, or measures of devaluation. While special facts may alter cases, in principle such measures are not unlawful and do not constitute expropriation."⁷³ Sornarajah categorises non-discriminatory measures for the protection of environment as "non-compensable taking" along with measures relating to anti-trust, consumer protection, securities, and land planning.⁷⁴

In practice, what separates expropriation from regulation appears to be: "i) the degree of interference with the property right, ii) the character of governmental measures, i.e. the purpose and the context of the governmental measure, and iii) the interference of the measure with reasonable and investment-backed expectations."⁷⁵ In *Pope & Talbot*, the NAFTA Tribunal observed, "mere interference is not expropriation; rather, a significant degree of deprivation of fundamental rights of ownership is required."⁷⁶ While some actions falling within the "police powers" of the State may not be characterised as expropriation at all, "public purpose" may act as the first prong of justification of certain measures even if they amount to expropriation.

Termination of concessions or other measures calling for termination of the whole or a part of the operations of the investors may be argued to be expropriation. It would be for the investor to demonstrate that the measure has had the effect of interfering with the ownership, control or enjoyment of the

by the other Party or subjected to any other measure or series of measures, direct or indirect tantamount to expropriation (including the levying of taxation, the compulsory sale of all or part of an investment, or the impairment or deprivation of its management, control or economic value), all such actions hereinafter referred to as 'expropriation', unless the expropriation [...]".

72 Ibid.

73 I. Brownlie, *Principles of Public International Law* (Oxford: Oxford University Press, 6thEd, 2003), 509.

74 M. Sornarajah, *The International Law on Foreign Investment* (Cambridge: Cambridge University Press, 1994), 283.

75 OECD (2004, Expropriation) *supra* note 25.

76 *Pope & Talbot Inc. v. The Government of Canada*, UNCITRAL, Interim Award, para. 99.

investment. The state would be able to avoid liability by – (i) demonstrating that there is no deprivation of property, or (ii) the deprivation is in exercise of the police powers, or (iii) the deprivation is a permissible expropriation complying with the requirements of the IIA or (iv) that the conduct is exempted from the applicability of the IIA commitments by operation of the exceptions specifically provided for in the IIA.

There may also be a situation, though it is yet to arise, where an investor whose operations depends on the existence of a minimum environmental standard may, alleges an indirect expropriation against the government for not maintaining the said standard and thereby causing economic prejudice to the investor.

4 Environment Protection and Procedural Aspects of Investment Arbitration

The interaction between substantive norms of international investment law and the interest of protection of environment has been discussed above. The paragraphs below discuss the procedural aspects of dispute resolution in international investment law and examine whether they are suited to accommodate environmental concerns.

4.1 *Government as the Perpetual Respondent?*

Though there is some discussion on allowing claims and counterclaims by the host state before investment arbitration tribunals,⁷⁷ the present state of affairs is one where the state is the perpetual respondent in investment arbitration. The fact that it is an “investment dispute” which is capable of investment arbitration and “investment dispute” is typically defined to mean dispute about alleged non-conformity with obligations assumed under the IIA, ensures that

77 *Spyridon Roussalis v. Romania*, ICSID Case No. ARB/06/1, Award, 7 December 2011; *Goetz v. Burundi*, ICSID Case No. ARB/01/2, Award, 21 June 2012; G. Laborde, “The Case for Host State Claims in Investment Arbitration”, *Journal of International Dispute Settlement* 1(1) (2010), 97–122; Y. Kryvoi, “Counterclaims in Investor-State Arbitration”, LSE Law, Society and Economy Working Papers 8/2011, at http://www.lse.ac.uk/collections/law/wps/WPS2011-08_Kryvoi.pdf (accessed 3 October 2013); J.E. Kalicki, “Counterclaims by States in Investment Arbitration”, *Investment Treaty News* (14 January 2013), at <http://www.iisd.org/itn/2013/01/14/counterclaims-by-states-in-investment-arbitration-2/> (accessed 3 October 2013).

the investor, who has not undertaken commitments under the IIA, cannot be put in the position of a respondent in investment arbitration.

The confinement of the investor's role to that of a claimant and the state's role to that of a claimant makes it nearly impossible to address environmental violations by the investor, except as a justification for a government action challenged by the investor, or in some exceptional situations, as counterclaims with a view to offset any compensation payable to the investor. This heavily narrows down the scope of environment related claims that can be placed before the arbitral tribunal.

4.2 *Jurisdictional Limitations*

International environmental law has developed over the last few decades through the emergence of custom and treaties as well as soft law standards. Yet, these sources of law cannot sustain a claim before an investment arbitral tribunal. Investment tribunals have limited jurisdiction to deal with investment disputes alone. In this regard, the tribunal in *Bernhard Von Pezold and Others v. Republic of Zimbabwe*⁷⁸ clarified that BITs do "not incorporate the universe of international law into the BITs or into disputes arising under the BITs." Unless a claim is based on a provision of the relevant IIA, it will not fall within the jurisdiction of the tribunal no matter how well founded in international environmental law the claim may be and however intrinsically linked the fact situation of the environmental dispute may be to the fact situation of the investment dispute. Thus investment tribunals are able to adjudicate environmental claims only so far as they form part of an investment claim or of the defence to one.⁷⁹

78 *Bernhard Von Pezold and Others v. Republic of Zimbabwe*, ICSID Case No. ARB/10/15, Procedural Order No. 2, s.d., para. 57.

79 See *Antoine Biloune v. Ghana Investment Centre*, UNCITRAL, Award on Jurisdiction and Liability, 27 October 1989, paras. 202–203: "This Tribunal's competence is limited to commercial disputes arising under a contract entered into in the context of Ghana's Investment Code. As noted, the Government agreed to arbitrate only disputes 'in respect of' the foreign investment. Thus, other matters – however compelling the claim or wrongful the alleged act – are outside this Tribunal's jurisdiction. Under the facts of this case it must be concluded that, while the acts alleged to violate the international human rights of Mr Biloune may be relevant in considering the investment dispute under arbitration, this Tribunal lacks jurisdiction to address, as an independent cause of action, a claim of violation of human rights".

4.3 *Third Party Participation*

At present, third party participation before an investment arbitral tribunal remains heavily constrained. While some recent tribunals have invoked the procedural rules to hold that they had the authority to allow or disallow amicus submissions,⁸⁰ a coherent jurisprudence is yet to evolve in this matter. In several instances, investment arbitration occurs in absolute confidentiality, with interested third parties not even being informed about the existence of the arbitration, let alone being permitted to participate. A state may be dissuaded for several reasons from pursuing an environmental claim to its fullest. Nongovernmental organisations and representatives of affected communities may be in a better position to advocate environmental causes. Yet, the present state of investment arbitration raises hurdles for the meaningful participation by these stakeholders, significantly curtailing the ability of the system to address environmental concerns.

5 *Conclusions*

From our discussion above, it appears that environmental protection and the protection of foreign investment are not interests necessarily opposed to each other. These interests, as well as, the normative frameworks governing them are capable of both convergence and divergence depending on a number of variables.

Our discussion of the substantive provisions of the investment treaties establishes that these provisions are capable of both fostering and hampering

80 *Commerce Group Corp. and San Sebastian Gold Mines, Inc. v. Republic of El Salvador*, ICSID Case No. ARB/09/17; *Pac Rim Cayman LLC v. Republic of El Salvador*, ICSID Case No. ARB/09/12; *Methanex*, *supra* note 33, Decision of the Tribunal on Petitions from Third Persons to Intervene as Amici Curiae, 15 January 2001; *United States Parcel Service of America v. Canada*, Decision of the Tribunal on Petitions for Intervention and Participation as Amici Curiae, 17 October 2001; Contra, see: *Aguas dal Tunari SA v. The Republic of Bolivia*, ICSID Case No. ARB/03/02, Decision on Respondent's Objections to Jurisdiction, 21 October 2005; See also, E. Levine, "Amicus Curiae in International Investment Arbitration: The Implications of an Increase in Third-Party Participation", *Berkeley Journal of International Law* 29(1) (2011), 200; Eric De Brabandere, "NGOs and the 'Public Interest': The Legality and Rationale of Amicus Curiae Interventions in International Economic and Investment Disputes", *Chicago Journal of International Law* 12 (2011), 85–113 and K.F. Gómez, "Rethinking the Role of Amicus Curiae in International Investment Arbitration: How to Draw the Line Favorably for the Public Interest", *Fordham International Law Journal* 35 (2012), 510.

the interest of protection of environment, depending on how they are invoked. In the energy sector, it has been highlighted that these provisions are capable of being invoked by investors pursuing clean and renewable energy with a view to forcing governments to remove disincentives to such energy and to call for higher environmental standards or to demand uniform and augmented enforcement of environmental norms.

Yet, the procedural framework established by IIAs remains inadequate for addressing environmental claims. As long as substantive obligations under the IIAs fall only on states, it will be difficult to address any environmental harm caused by the investors before such tribunals. Also, restricting the jurisdiction of the tribunals to claims based on IIA provisions alone, as well as obstacles to third party participation hampers the ability of the system to address protection of environment except where environmental guarantees of a state are incorporated within an investment claim by an investor or to the limited extent that such concerns feature as counterclaims (where permissible) or defences. Efforts need to be made in the direction of reworking the procedural aspects of investment arbitration with a view to accommodate a broader range of concerns, including the environment.