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# International Energy and Environmental Law

Dear Readers,

I am delighted to be writing this note for the Groningen Journal of International Law's (GroJIL) Vol. 02 Issue 1: International Energy and Environmental Law. This is an extremely important topic of current interest and controversy in international law, which is undergoing constant development and reform.

As GroJIL is geared towards academic innovation and development, the aim of this issue is to highlight some of the past, current and desirable changes taking place within energy and environmental law, as well as the various challenges it faces as an emerging field of international law. We hope to provide a platform for experts in the field to deliver their reflections and suggest possible solutions to the problems encountered in this area. Contributions range from an assessment of the obstacles to be overcome when energy law has to deal with international investment law, to the most appropriate method for regulating carbon emissions in transnational supply chains. As such, the approach of the articles in the present issue also differ, and include perspectives from law and governance, human rights, international investment law and dispute resolution.

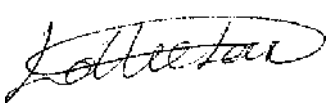
I am extremely proud to be publishing this issue of GroJIL, which, according to trend, is our largest issue yet. After several adjustments in GroJIL's internal structure, we have secured a sustainable and effective editing process carried out by our ever-growing number of committed editors. I would like to take the opportunity to thank all of our editors for their continued work and dedication to the Journal. I hope that in the future, the Journal will continue to benefit from the hard work of such individuals. The Editorial Board has again been unquestioningly dedicated throughout the whole editing process. I cannot thank them enough for their invaluable efforts and unstoppable work ethic.

In the six months that have passed since the publication of GroJIL's latest Issue, the Stichting has become more and more established within and outside of Groningen. We are very grateful for the valuable support of the Department of International and Constitutional Law at the University of Groningen without which our most recent success, our first public guest lecture, would not have been possible.

Led by the Promotional Director, the recently established Events Committee hosted an engaging lecture on Human Trafficking, the topic of GroJIL's Vol. 01 Issue 2. The commitment of the Events Committee in the organisation of this lecture was evident in the event's success, with two guest speakers, Judge Kees Klomp and Ms. Nicole Siller, attracting a large audience. I have no doubt that the Committee's next event will be as successful as the first.

Developments in the Journal since our last publication have not only been in terms of content and our presence in the academic community. We have also made some important developments in our online presence, particularly within social media. In March, GroJIL's new-and-improved website (groningenjil.com) was launched. Thanks to the Events Committee, we are now also the proud owners of active Instagram and Twitter accounts. These changes are particularly relevant given the topic of GroJIL's next issue: Vol. 02, Issue 2 on Privacy in International Law. I look forward to working with the editors, Editorial Board and future participants on what promises to be yet again our largest issue to date.

Happy reading!



Lottie Lane
President and Editor-in-Chief
*Groningen Journal of International Law*

# *Groningen Journal of International Law*

## Crafting Horizons


ABOUT

The Groningen Journal of International Law (GroJIL) is a Dutch foundation (Stichting), founded in 2012. The Journal is a not-for-profit, open-access, electronic publication. GroJIL is run entirely by students at the University of Groningen, the Netherlands, with supervision conducted by an Advisory Board of academics. The Journal is edited by volunteering students from several different countries and reflects the broader internationalisation of law.

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The Groningen Journal of International Law aims to promote knowledge, innovation and development. It seeks to achieve this by serving as a catalyst for author-generated ideas about where international law should or could move in order for it to successfully address the challenges of the 21st century. To this end, each issue of the Journal is focused on a current and relevant topic of international law.

The Journal aims to become a recognised platform for legal innovation and problem-solving with the purpose of developing and promoting the rule of international law through engaging analysis, innovative ideas, academic creativity, and exploratory scholarship.

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The Groningen Journal of International Law is not a traditional journal, which means that the articles we accept are not traditional either. We invite writers to focus on what the law could be or should be, and to apply their creativity in presenting solutions, models and theories that in their view would strengthen the role and effectiveness of international law, however it may come to be defined.

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**Renewable Energy in the International Arena: Legal Aspects and Cooperation**
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# Renewable Energy in the International Arena: Legal Aspects and Cooperation

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**Keywords**
RENEWABLE ENERGY; INTERNATIONAL ENVIRONMENTAL LAW; WTO; INTERNATIONAL DISPUTES ; INTERNATIONAL COOPERATION; IRENA

**Abstract**
This article aims at investigating the relevant aspects of international law and cooperation in the field of renewable energy. Part I provides an overview of the multiple soft law developments within and outside the UN framework as well as an assessment of a chosen set of extant treaty obligations either fostering or potentially constraining the development of the renewable energy sector. In light of these norms, Part II analyses a series of recent cases and international disputes triggered by non-environmental interests and rights allegedly impaired by the implementation of certain renewable energy-related plans and projects. In particular, this section considers the compatibility of renewable energy development with extant norms in the areas of human rights (ECHR), procedural environmental rights (Aarhus Convention) and international trade law (WTO). Despite the scarcity of binding norms on renewable energy generation and the persistence of various factors leading to disputes, global cooperation in the field of renewable energy is gaining momentum. Starting with an overview on CDM renewable energy projects under the Kyoto Protocol, Part III then shifts to the latest developments in renewable energy cooperation prompted respectively by the creation of the International Renewable Energy Agency (IRENA) and by the growing number of transnational private partnerships operating in the field of renewables.

## I. Is There an International Legal Framework for Renewable Energy? An Overview on the Current Status of Soft Law and Treaty Developments

### I.1. Renewable Energy Gaining Ground on the Global Sustainable Development Agenda

Renewable energy has always been an agenda item at the global environmental conferences convened by the UN and other international *fora*. However, issues such as the dissemination of its related technologies as well as the relationship between renewable energy and the principle of sustainable development or the creation of international rules binding States to their use were never fully explored on those occasions. In order to have a full picture of the international legal developments on this

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matter, the first step is to weigh the interest that the international community has collectively acknowledged to the use of renewable energy by means of soft law. Our starting point is the recognition of the scarcity of both binding and non-binding international legal instruments on renewable energy due to the persistency of interests sustaining the exploitation of traditional energy sources as well as of market imperfections and technical constraints hampering a wider reliance on renewable energy.[1] The 1987 Bruntland report by the World Commission on Environment and Development, considered as a milestone of international environmental law for providing a first definition of sustainable development, labelled renewable energy as an 'untapped potential' and considered that renewable energy should be the "foundation of the global energy structure during the 21st Century".[2] However, UN Members participating at the 1992 Rio Conference on Environment and Development (UNCED) embraced only timidly the straightforward indication of the Bruntland Commission. In fact, among the Principles shaping the Rio Declaration,[3] only a few are of a certain relevance to the renewable energy sector. Besides the Principle 2, which combines the sovereign right over natural resources with the prohibition of transboundary harm (*sic utere tuo ut alienum non laedas*),[4] of particular relevance are Principle 17, on environmental

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1 Quadri, S., *Lineamenti di diritto internazionale delle fonti di energia rinnovabile*, Editoriale Scientifica, Napoli, 2008, 41; Redgwell, C., "International Legal Responses to the Challenges of a Lower-Carbon Future: Climate Change, Carbon Capture and Storage, and Biofuels", *in:* Zillman, D. N. *et al.*, eds., *Beyond the Carbon Economy: Energy Law in Transition*, Oxford University Press, Oxford, 2008, 85-108, 100.

2 UN GA Resolution 427 (42), 4 August 1987, Report of the World Commission on Environment and Development (Bruntland Report), "Our Common Future", Chapter 7, para. 88. Sustainable development is defined as the 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. International jurisprudence only contributed to enrich such definition to a limited extent, see Sands, P., "International Courts and the Application of the Concept of Sustainable Development", *Max Planck UNYB,* vol. 3, 1999, 389-405. In the ICJ, 25 September 1997, *Gabcikovo-Nagymaros case/Hungary v. Slovakia*, ICJ Reports 1997, the Court refrained from defining sustainable development as an international law principle. The "normative value" enjoyed by the concept was nevertheless highlighted, see *Gabcikovo-Nagymaros Project/Hungary v. Slovakia*, Separate Opinion of Vice-President Weeramantry, and eminently described as a "meta-principle" exercising a kind of interstitial normativity, pushing and pulling the boundaries of true primary norms threatening to overlap and conflict with each other, see Lowe, A., "Sustainable Development and Unsustainable Arguments"*, in:* Boyle, A. and Freestone, P., eds., *International Law and Sustainable Development: Past Achievements and Future Challenges*, Oxford University Press, Oxford, 1999, 31. A large part of the doctrine reasoned on the complexity of defining sustainable development in legal terms, see e.g. Pallemaerts, M., "The Future of Environmental Regulation: International "Environmental Law in the Age of Sustainable Development: a Critical Assessment of the UNCED Process", The *Journal of Law and Commerce*, vol. 15, 1996, 623-676, 630-634 and Di Monte, M., "Il principio dello sviluppo sostenibile: affermazione ed evoluzione", *in:* Nascimbene, B. and Garofalo, L., eds., *Studi su ambiente e diritto. Il diritto dell'Unione europea*, Cacucci Editore, Bari, 2013, 49-62. Difficulties inherent to the implementation of the concept were recently addressed by Viñuales, J.E., "The Rise and Fall of Sustainable Development", *RECIEL,* vol. 22, ed. 1, 2013, 3-13.

3 United Nations Conference on Environment and Development, The 1992 Rio Declaration on Environment and Development, UN Doc. A/Conf.151/5/Rev.1, of 14 June 1992.

4 The customary nature of the 'no harm rule' has been affirmed by international jurisprudence, see ICJ, 8 July 1996, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, ICJ Reports 1996, paras. 29-30. It was observed, however, that state practice reveals inconsistencies between what is portrayed as a customary rule, on the one hand, and its effective implementation, on the other hand, see Munari, F. and Schiano Di Pepe, L., *Tutela transnazionale dell'ambiente*, Il Mulino, Bologna, 2012, 41. On the limited relevance of international custom to renewable energy, see Bradbrook, A., "The Development

impact assessments (EIA), and Principle 10, on access to justice and information in environmental matters. These Principles will be later explored, referring to some disputes involving the generation of energy from renewable sources.

Furthermore, no proper focus on energy appears in Agenda 21, where specific references on renewable energy can be tracked only in conjunction with the protection of the atmosphere.[5] Therefore, during the process that led to the 2002 World Summit on Sustainable Development (WSSD), energy was identified as one of the areas requiring further efforts in order to fully implement Agenda 21. To this end, the "Water, Energy, Health, Agriculture and Biodiversity Working Group" (WEHAB-WG) proposed "A Framework for Action on Energy",[6] extensively marking renewable energy as a key driver of sustainable development. However, WEHAB recommendations were only partially welcomed by the Johannesburg Plan of Implementation (JPoI),[7] which was deprived by the participating delegations of a thematic section on energy issues. The JPoI, in fact, concentrates on renewables and energy efficiency as cross-cutting issues (for poverty eradication and in the context of the needed changes to the patterns of consumption and production).[8] The choice made at the WSSD is ascribable to the pre-eminence accorded to developmental issues over the environmental ones as well as to the endorsement of the 2000 Millennium Developmental Goals (MDGs).[9] To some extent, this was counterbalanced by the recommendation to implement the work carried out in 2001 by the UN Commission on Sustainable Development (CSD).[10] CSD-9, in fact, had set the floor for international cooperation in the energy sector. Amongst its conclusions, premised on the acknowledgment that 'energy is central for achieving the goals of

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of Renewable Energy Technology and Energy Efficiency Measures through Public International Law", *in*: Zillman, D. N. *et al.*, eds., *Beyond the Carbon Economy: Energy Law in Transition*, Oxford University Press, Oxford, 2008, 109-131, 112.

5 See Agenda 21, Chapter 9, para. 9.12(f), in Report of the United Nations Conference on Environment and Development: UN Doc. A/151/6/Rev.1, 1992, reprinted in 31 *International Legal Materials*, 1992, 881, <sustainabledevelopment.un.org/content/documents/Agenda21.pdf> (accessed 23 January 2014).

6 WEHAB-WG, "A Framework for Action on Energy", 2002. The initiative was promoted by the UN Secretary-General Kofi Annan, in response to UN GA A/RES/55/199 of 5 February 2001 demanding further implementation of Agenda 21, available online at <www.iisd.ca/wssd/download%20files/wehab_energy.pdf> (accessed 9 April 2014).

7 Johannesburg Plan of Implementation (JPoI), in UN Report on the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002, A/CONF/199/20, 6-72, available online at <www.iisd.ca/wssd/download%20files/wehab_energy.pdf> (accessed 24 April 2014).

8 *Id.*, paras. 9(a)(e), 20. Instead, the WEHAB-WG also underlined the need for a 'dedicated global institution' with a specific mandate on assisting developing countries in the use of renewable energy, *supra* nt. 6, 12.

9 See Galizzi, P., "From Stockholm to New York, via Rio and Johannesburg: Has the Environment Lost its Way on the Global Agenda?", *Fordham International Law Journal*, vol. 29, ed. 5, 2005, 952-1008. GA Resolution 2 (55), 18 September 2000, the United Nations Millennium Declaration. The MDGs are aimed at eradicating global poverty by 2015. The omission of access to energy from the Millennium Declaration has been criticised by A. Bradbrook, *supra* nt. 4. The *JPoI,* instead, explicitly states that 'affordable and reliable energy services' are supportive of the goals established therein.

10 CSD-9, Report of the 9th session, 5 May 2000 and 16-27 April 2001, available online at <un.org/ga/search/view_doc.asp?symbol=E/CN.17/2001/19%20(SUPP)&Lang=E> (accessed 23 January 2014), E/CN.17/2001/19 and JPoI, *supra* nt. 7, para. 20.

sustainable development'[11] and that 'energy resources are plentiful, and environmentally sound technological options exist and should be made available by developing countries to developing countries'[12] pursuant to the 'common but differentiated responsibilities' principle (CBDRs),[13] some identify renewable energy as a key issue. The increased development, utilisation and dissemination of renewable energy technologies are seen as the main challenges, significantly, for developed and developing countries alike.[14] Notwithstanding this recognition, in 2007 the CSD had to take note of the impossibility to reach a consensus on the need to adopt measurable targets for renewable energy. In fact, while praising the adoption of voluntary commitments by some countries, CSD-15 concluded that 'the mention of time-bound targets proved to be one of the areas in which agreement could not be reached'.[15] Meaningful political commitments in the field of renewable energy are steadily lacking also from the acts adopted during the more recent 2012 Rio+20 UN Summit.[16] Its final document, short of reflecting any State *consensus* on the recognition of a basic right to energy, conclusively affirmed the existing interlink between access to energy and sustainable as well as human development.[17] On this premise, UN Members built their commitment to facilitate the access to energy services to the 1.4 billion people currently deprived thereof.[18]

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[11] *Id.*, Decision 9/1 on "Energy for sustainable development", para. 1. CSD-15 reinforced this conceptual knot affirming that 'energy is crucial' also for poverty eradication, for the MDGs and the implementation of the JpoI. See, E/CN.17/2007/15, available online at <un.org/ga/search/view_doc.asp?symbol=E/CN.17/2007/15(SUPP)&Lang=E> (accessed 23 January 23).

[12] *Id.*, Decision 9/1, para. 3.

[13] *Id.*, paras. 5, 7. As pointed out, the CBDRs principle (Principle 7 of the Rio Declaration) does not enjoy legal autonomy for it must be translated for implementation into treaty-based norms establishing dual regimes for the attainment of environmental/developmental objectives, see Munari, F. and Schiano Di Pepe, L., *supra* nt. 4, 47. See also Pauwelyn, J., "'The End of Differentiated Treatment for Developing Countries? Lessons from the Trade and Climate Change Regimes", *Review of European, Comparative and International Environmental Law,* vol. 22, ed. 1, 2013, 29-41, calling for further differentiation so as to overcome the paradigm of developed/developing countries.

[14] See Decision 9/1, para. 16. Amongst recommended actions, CSD-9 proposed the promotion of renewable natural resources (solar, wind, biomass, geothermal, hydro and ocean) to partially meet energy needs for sustainable development, para. 17(e), the development and use of indigenous sources of renewable energy, para. 17(g) and the development and implementation of measures to make renewable energy technologies more affordable, para. 17(h).

[15] See E/CN.17/2007/15, *supra* nt. 11, para. 11, as also envisioned by Redgwell, C., *supra* nt. 1, 101. It has been recently suggested that 'as energy governance will continue to follow the "bilateral model", progress in the multilateral negotiations toward decarbonisation will remain elusive because the fossil energy path made possible at bilateral level will predetermine the pace and effectiveness of the multilateral decarbonisation negotiation'. See Viñuales, J. E., *supra* nt. 2, 11.

[16] Held in Rio de Janeiro, Brazil on 20-22 June 2012, focused, respectively, on green economy in the context of poverty eradication and on the enhancement of the international governance for sustainable development.

[17] According to some, an individual right to energy (as an essential service) is implicitly recognised by the 1948 Universal Declaration of Human Rights and the 1966 Covenant on Economic, Social and Cultural Right and other Conventions, e.g. see Clerc, M., "2nd World Forum on the Right to Energy, Marrakech, 19-21 June 2004", *Atoms for Peace: An International Journal*, vol. 1, 2005, 1-73, 11-13 and Tully, S., "The Contribution of Human Rights to Universal Energy Access", *Northwestern Journal of International Human Rights*, vol. 1, 2006, 518-548, 536-539.

[18] See GA Resolution 288 (66), 11 September 2012, para. 125.

However, no preferential footing in this respect seems to have been specifically acknowledged to the use of renewable energy. On the one hand, although its contribution is deemed important and thus encouraged, renewable energy technologies might not always pass the agreed-upon 'test' set in order to qualify for international financial cooperation as 'modern energy services'.[19] On the other hand, the sovereign right of States to choose the energy mix they deem more appropriate to meet their legitimate developmental needs is left untouched (renewable energy and cleaner fossil fuel technologies are formally regarded as equal options for sustainable development).[20]

The limited support for renewable energy emerging from the UN's soft law puzzle clashes with the greater activism independently shown by States favouring the proliferation of other ad hoc initiatives. Said activism is proved by the fact that from 2004 onwards already five International Renewable Energy Conferences (IRECs) have been held, respectively, by the Governments of Germany (Bonn),[21] China in 2005 (Beijing – BIREC) the United States in 2008 (Washington – WIREC), India in 2010 (Delhi – DIREC) and the United Arab Emirates in 2013 (Abu Dhabi – ADIREC) on the issue of renewable energy.[22] The first IREC was convened in Bonn and paved the way to its successors by producing a Declaration that already went well beyond what fragmentarily expressed by previous (and later) UN Conferences by clearly stating that

> renewable energies combined with energy efficiency, can significantly contribute to sustainable development, to providing access to energy, especially for the poor, to mitigating greenhouse gas emissions, reducing harmful air pollutants, thereby creating new economic opportunities, and enhancing energy security through cooperation and collaboration.[23]

In Bonn, consensus was gathered also on the urgent need to increase the share of renewable energy in the total energy supply, and Participating States reaffirmed their

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[19] *Id.*, para.126, according to which they are to be provided 'in a reliable, affordable, economically viable and socially and environmentally accepted manner in developing countries'. This formula forged by the CDS-9 (Decision 9/1, paras. 3, 12, *supra* nt. 11, gathered *consensus* both at the WSSD, see JPoI, para. 20 (a) and Rio+20 Summit.

[20] *Id.*, para. 127.

[21] 1st International Renewable Energy Conference (Bonn) of 1-4 June 2004. 154 States took part in the Conference, portrayed as a 'historic opportunity for nations to unite toward the common goal of a more sustainable energy future'. Sawin, J. L., *Mainstreaming Renewable Energy in the 21st Century*, World Watch Paper 196, 2004, 10. Others raised doubts on the contribution of this 'soft structure' to the 'international advancement of renewable energy', see Hirschl, B., "International renewable energy policy – between marginalization and initial approaches", *Energy Policy,* vol. 37, 2009, 4407-4416.

[22] IRECs are promoted by the non-governmental organization REN21 (*infra* § 3.2), supported by renewable-energy sensitive governments as the Beijing International Renewable Energy Conference (BIREC) of 7-8 November 2005, the Washington International Renewable Energy Conference (WIREC) of 3-6 March 2008 (8.600 persons from 113 countries participated, but contrary to other IRECs, it did not lead to any declaration), the Delhi International Renewable Energy Conference (DIREC) of 27-29 October 2010 and the Abu Dhabi International Renewable Energy Conference (ADIREC) of 15-17 January 2013 closing the proceedings of IRENA's annual General Assembly. On IRENA, *infra* § 3.2.

[23] See "Political Declaration" of 4 June 2004, para. 1, available online at <ren21.net/Portals/0/documents/irecs/renew2004/ Political_declaration_final.pdf> (accessed 23 January 2014).

commitment to achieving the MDGs.[24] Subsequent Conferences followed suit on all these points.[25] Beside this, a throughout look at the Declarations on renewable energy reveals some interesting traits. The first one is given by the constant reference to developments going on within the UN framework and to the institutional mechanisms provided therein. If Participating States at the Bonn Conference and BIREC expressed the willingness to avail themselves of the CSD,[26] at DIREC they backed up the UN Secretary General's Advisory Group on Energy and Climate Change (AGECC) by endorsing the goal of realizing the universal access to modern energy services by 2030 and supported the General Assembly's resolution to designate 2012 as the International Year of Energy Access.[27] More recently, at ADIREC Participating States welcomed the Secretary General's Sustainable Energy For All initiative and supported the General Assembly's decision of designating 2014-2024 as the UN Decade of Sustainable Energy.[28] The second trait, instead, is determined by the constant reference to the developments going on and the mechanisms instituted within the international climate change regime. Far from establishing any binding obligations concerning renewable energy technology use and quantified targets, Participating States attempted to build bridges with the Kyoto Protocol (KP) by initially pointing at the Clean Development Mechanism (CDM) as a viable tool in order to leverage public funds for private investments on renewable energy.[29] In the absence of post-Kyoto arrangements, States recalled the start-funding provision inserted in the 2009 Copenhagen Accord,[30] and subsequently stressed the importance of funding for climate change mitigation by pointing at the Green Climate Fund as a catalyst for the advancement of renewable energy.[31]

## I.2. Between Promotion and Constraints: Renewable Energy in the Context of Regional and International Agreements

The global environmental conferences addressed above proved unfruitful as to the development of substantial norms on the utilisation of renewable energy (i.e. defining the

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[24] *Id.,* paras. 2, 3.

[25] See BIREC Declaration, paras. 1, 3, DIREC Declaration, paras. 1, 45. However, while States at the Bonn Conference and BIREC emphasised the urgency to increase the share of renewable energy, in 2010 (DIREC) and 2013 (ADIREC) also began to note the steady growth of renewable energy occurring despite constraining factors (i.e. the global recession, lack of a new climate agreement).

[26] In order to measure the step taken to boost renewable energy in the context of the JPoI, see Political Declaration, para. 8 and BIREC Declaration, para. 12.

[27] See DIREC Declaration, paras. 6, 7. Besides universal energy access, AGECC also called for the reduction of energy intensity by 40 per cent by 2030. See the Secretary General's Advisory Group on Energy and Climate Change, "Energy for a Sustainable Future. Summary Report and Recommendations" of 28 November 2010, 8, available online at <unido.org/fileadmin/user_media/Publications/download/AGECCsummaryreport.pdf> (accessed 23 January 2014) and GA Resolution 151 (65), 16 February 2011 on "International year of sustainable energy for all".

[28] See ADIREC Declaration, paras. 6, 7 and GA Resolution 215 (67), 20 March 2013 on "Promotion of new and renewable sources of energy".

[29] See Beijing Declaration, para. 9. On CDM, *infra* § 3.1.

[30] See DIREC Declaration, para. 11 and COP15 Decision 2/CP15 "Copenhagen Accord", available online at <unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf#page=4> (accessed 23 January 2014).

[31] See ADIREC Declaration, para. 10.

terms of international cooperation and/or setting quantified targets), reaching only second-best outcomes (i.e. the drafting of soft law declarations and the setting of broad policy targets). In some circumstances, however, States decided to bind themselves to rules directly addressing the renewable energy sector. This process of norm creation has been mainly facilitated at a regional level thanks to the participation of a small number of States. A number of global treaties, as we shall see, also entail norms applicable to/implementable through the developments in this field.

In the Eurasian context (between the EC and CIS States), cooperation in the energy sector, through the trade and investment liberalisation measures, was underpinned by the creation of a common legal framework. Started off with the adoption of the European Energy Charter (a political declaration), the framework was later augmented by Energy Charter Treaty (ECT) and its Protocol on Energy Efficiency.[32] Article 19 ECT emerges as the only "environmental" provision of the Treaty requiring States to minimise environmental degradation, in the pursuit of sustainable development by, *inter alia*, having 'particular regard to improving energy efficiency, to developing and using renewable energy sources, to promoting the use of cleaner fuels and to employing technologies and technological means that reduce pollution'.[33] The Protocol, instead, entails more meaningful obligations concerning the development of laws, policies and regulations (Article 3), energy efficiency strategies (Article 5) and programs (Article 8).[34]

Energy cooperation was also commenced in the context of the Convention on the Protection of the Alps[35] when Contracting Parties concluded an Energy Protocol.[36] Widening the use of renewable energy stands out both as a basic commitment (Article 2, paragraph 1, c) and as a clear 'preference' of the Contracting Parties. In fact, while committing to domestic and transboundary EIA procedures in relation to 'the construction of new, large power plants and a significant increase in the capacity of existing ones' (Article 2, paragraph 2), the Protocol also acknowledges that the Alpine region 'lends itself to using renewable energy sources' (Article 2, paragraph 3), marking

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[32] European Energy Charter, 98/181/EC, 17 April 1991, The Hague (the Netherlands); Energy Charter Treaty, 17 December 1994, Lisbon (Portugal), 1995, 34 ILM, 360; Protocol on Energy Efficiency, 17 December 1994, Lisbon (Portugal), 1995, 34 ILM, 446. The Conventional system of the ECT has been regarded as interesting for the development of international energy trade law, representing a considerable part of the 'energy *acquis*' of the EU, CIS States, Central Asian States and Turkey (see Marletta, M., *Energia. Integrazione europea e cooperazione internazionale*, Giappichelli, Torino, 2011, 351-356), while criticised for not being informed by the principle of sustainability (see Bosselman, K., "Ethical Implications", in Bradbrook, A., *The Law of Energy for Sustainable Development,* Cambridge University Press, Cambridge, 2012, 91-92).

[33] Energy Charter Treaty, Art. 19, para.1(d), assessed as a 'hesitant first step to the environmental goal of promoting renewable energy and energy efficiency in the international law arena', see Bradbrook, A., *supra* nt. 4, 118.

[34] ECT-based model for cooperation underpinned action within the Economic Community of West African States (ECOWAS) where an Energy Efficiency Protocol was concluded, Dakar (Senegal), available online at <www.comm.ecowas.int/sec/en/protocoles/WA_EC_Protocol_English-_DEFINITIF.pdf> (accessed 31 January, 2003).

[35] Convention on the Protection of the Alps, Salzburg (Austria), 7 November, 1991, available online at <www.alpconv.org/it/convention/framework/default.html>, March 1995 (accessed 5 May 2014).

[36] Protocol on the Implementation of the Alpine Convention of 1991, Bled (Slovenia), 16 October 1998, described as an instrument of international law of great importance given the absence from this realm of legally binding rules in the energy sector in line with the principle of sustainable development, see Quadri, S., *Energia sostenibile. Diritto internazionale, dell'Unione europea e interno*, Giappichelli, Torino, 2012, 39.

this as a key factor of cooperation. This is fortified by the presence of an *ad hoc* provision on 'renewable energy sources'. Article 6, in fact, establishes that these sources shall be given 'preferential treatment' by virtue of their environmentally friendly characteristics (paragraph 1), be exploited by decentralised plants (paragraph 2),[37] used in combination with traditional technologies (paragraph 3) and rationally used as not to impair the sustainability of mountain forests (paragraph 4).[38] Renewable energy, as mandated by the Protocol, shall be taken into account by Contracting Parties in order to produce energy savings (Article 5, paragraph 1, b), as well as a substitute for fossil-fuels when technically, economically and environmentally feasible (as expressly required for existing fossil-fuel thermal plants: Article 8, paragraph 2).

It has been argued that States' domestic jurisdiction has been eroded by international cooperation on energy issues.[39] In the light of the provisions on renewable energy addressed above, however, this argument might need specification. On the one hand, the said provisions do not substantially bind States to undertake any definite course of action with respect to the use and dissemination of renewable energy since they rather set, in a broad fashion, the conditions for cooperation and assistance. On the other hand, in most cases, they are heavily qualified. Such conditions are also inherent to the obligations set under major MEAs, such as the United Nations Convention on Climate Change (UNFCCC) and the Kyoto Protocol.[40] This Convention is relevant to renewable energy developments as far as its Contracting Parties are required to control their sources of anthropogenic GHG emissions and to favour climate change mitigation by adopting programs to these ends while also streamlining climate change, *to the extent feasible*, in the preparation of their social, economic and environmental initiatives.[41] The Protocol, for its part, mandates Annex I Parties to 'implement and/or further elaborate policies and measures *in accordance with national circumstances*' on research and development of renewable energy technologies.[42] In this regard, it must be highlighted, however, that the Protocol provides its Contracting Parties with the possibility of undertaking additional efforts (complementing domestic ones) under the so-called 'flexibility mechanisms' in

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[37] The provision refers solely to the use of solar, biomass and hydro-power, suggesting that negotiating States might have experienced difficulties in finding *consensus* on the inclusion of other renewable sources (e.g. wind energy).

[38] Sustainability of mountain ecosystems shall be also be preserved by the Contracting Parties in relation to the exploitation of hydroelectric powers, as established under Art. 7.

[39] See Quadri, S., *supra* nt. 1, 24-25 and Quadri, S., *supra* nt. 36, 41. On the contrary, underlining the absence of an ongoing multilateral energy process, see, Hirschl, B., *supra* nt. 21, 4408. According to the prevailing doctrine, the erosion of domestic jurisdiction results from the accumulation of international obligations that a State decides to take on by virtue of treaty ratification, see D'Amato, A., "Domestic Jurisdiction", *in*: Bernhardt, R., *Encyclopedia of Public International Law*, Instalment 10, North-Holland, 1987, 132-136. If this holds true for bilateral agreements with rules on fossil fuels imports and exports, it appears less evident in respect of the rules on renewable energy generation (due also to the primarily local characteristic of said activity) as well as of those on the international cooperation for sustainable development (i.e. financial and technical assistance under the climate change regime), ultimately ascribable to initiatives undertaken pursuant to Chapter IX of the UN Charter.

[40] United Nations Framework Convention on Climate Change (UNFCCC), 1992, New York (United States), 1771 UNTS, 107; Kyoto Protocol to the United Nations Framework Convention on Climate Change, 1997, Kyoto, Japan, available online at <unfccc.int/essential_background/kyoto_protocol/items/1678.php> (accessed 5 May 2014).

[41] See UNFCCC, Article 4, para. 1 (b) and (f). On the implicit relevance of these provisions to renewable energy production and dissemination, see Bradbrook, A., *supra* nt. 4, 116.

[42] *Emphasis* added. See KP, Article 2, paragraph 1, (i) and (iv).

Articles 6 ('Joint Implementation') and 12 ('Clean Development Mechanism'). Although only indirectly related to the use of renewable energy technologies, these instruments, addressed as a matter of international cooperation, certainly hold the potential to sustain their increase in the world energy supply.[43]

There are, however, branches of international law relevant to the renewable energy field by virtue of the negative obligations imposed on the conduct of States. Such norms may affect States' policy choices when regulating the renewable energy sector.[44] In this sense, particular relevance is to be attributed to the multilateral trade rules agreed upon in the context of the World Trade Organization (WTO). From an international trade standpoint, the increasing importance of the utilisation of clean technologies for the realisation of sustainable development results in a renewed interest toward the compatibility between 'green policies' and multilateral trade rules. Despite a reference to the importance of sustainable development in the WTO Agreement's Preamble,[45] the covered agreements do not provide for any specific discipline regulating trade in energy-related products and services,[46] let alone the trade in clean energy technologies. As a consequence, their trade obeys the same multilateral rules other goods are subject to.[47] The relevance of WTO rules in non-trade areas is demonstrated by the fact that, unlike other legally binding instruments (e.g. multilateral environmental agreements (MEAs)), the WTO system provides for a well-functioning dispute settlement mechanism empowered not only to decide on the legality of certain national measures, but also to authorise the suspension of trade concessions whenever a breach of one of the WTO provisions by a respondent State results in economic damage to the industry of a

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[43] See Quadri, S., 2012, *supra* nt. 36, 94 and Chandler, W., "Technological implications", *in*: Bradbrook. A., ed., *supra* nt. 4, 99. The *favor legis* of international climate change law for renewable energy developments has also been acknowledged by the Italian Constitutional Court, see Italian Constitutional Court, Judgment n. 282, of 6 November 2009.

[44] The United Nations Convention on the Law of the Sea, Montego Bay (Jamaica), 1982, 1883 UNTS, 3, constitutes one example in this respect. For instance, Zedalis, R. J., *International Energy Law. Rules Governing future exploration, exploitation and use of renewable resources,* Ashgate, Farnham, 2000, reflected on the balance of rights and duties attributed to States for the use of marine natural resources like tidal, geothermal and wave energy, as struck by the rules variously applicable to the different sea areas.

[45] The 1994 WTO Agreement, in its Preamble, refers to the need for its Contracting Parties to make 'optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment'. See Marrakesh Agreement establishing the World Trade Organization (WTO Agreement), LT/UR/A/2, Marrakesh , 15 April, 1994, Preamble, 1st indent.

[46] On the WTO relevance for trade in energy products and services, see Buonomenna, F., *Diritto Internazionale dell'energia, sovranità territoriale e governance internazionali*, Editoriale Scientifica, Napoli, 2012, 58-62.

[47] Legal uncertainty still exists within the WTO as to whether energy constitutes a good under the GATT or a service subject to GATS obligations. In this sense, see Bigdeli, S. Z., "Incentive schemes to promote renewables and the WTO law of subsidies" *in:* Cottier, T., Nartova, O., Bigdeli, S. Z., *International Trade Regulation and the Mitigation of Climate Change*, Cambridge University Press, 2009, 177. On the energy trade and WTO rules, see. Selivanova, Y., "The WTO and energy, WTO rules and agreements of relevance for the energy sector", ICTSD N.1, 2007, 11 *et seq*. On WTO rules and the global energy governance, see the remarks of former WTO Secretary Lamy, P., at the *Workshop on the Role of Intergovernmental Agreements in Energy Policy* organised by the Energy Charter Secretariat, 29 April, 2013, available online at <www.wto.org/english/news_e/sppl_e/sppl279_e.htm> (accessed 16 February 2014).

complainant State.[48] Moreover, under certain conditions, the system allows WTO Members to enact unilateral trade remedies.[49]

The lack of specific regulatory instruments within the WTO gives rise to two main sets of issues. One question WTO negotiators have been facing concerns the market access of renewable energy related products. The Doha Development Agenda (DDA),[50] providing a specific section on 'trade and environment', calls WTO Members to negotiate the 'reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services (EGS)'.[51] In relation to renewable energy, the breakthrough of this proposal would have the immediate effect of lowering the price of essential technologies for renewable energy generation. However, negotiations on EGS have immediately stalemated due to the impossibility of reaching *consensus* on a general definition of environmental goods and because of the WTO Members' tendency to propose lists of products solely reflecting the interests of their national industries.[52] So far then, notwithstanding the general plea in the WTO Agreement Preamble to promote sustainable development and climate change mitigation, market access rules for EGS remain subject to the general WTO principle of non-discrimination enshrined in the WTO agreements and the general Lists of tariff concessions annexed to the Marrakesh Protocol.[53] More importantly, pursuant to the Agreement on Subsidies and Countervailing Measures (ASCM)[54] and the Anti-Dumping Agreement (ADA),[55]

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48 Understanding on rules and procedures governing the settlement of disputes (DSU), WTO Agreement, LT/UR/A-2/DS/U/1, Annex 2, Article 22, available online at <docs.wto.org/dol2fe/Pages/FE_Browse/FE_B_009.aspx> (accessed 16 February 2014).

49 Such possibility is provided for in GATT Article VI.2 and 3 and it has been further elaborated in subsequent interpretative agreements, *infra* nt. 54 and 55. According to the doctrine, this provision confers on WTO Members an implicit power to promptly re-establish the equilibrium achieved through multilateral negotiations. See, Picone, P., Ligustro A., *Diritto dell'Organizzazione Mondiale del Commercio*, CEDAM, Padova, 2001, 248.

50 The Doha Development Agenda (DDA) is the latest round of multilateral trade negotiations among WTO Members, See, WT/MIN(01)/DEC/1, Ministerial Declaration, 20 November, 2001.

51 *Id.*, para. 31(iii).

52 An internationally agreed definition of Environmental Goods and Services (EGS) does not yet exist. The OECD/Eurostat defined the industry of environmental goods and services as consisting of 'activities which produce goods and services to measure, prevent, limit, minimise or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems. This includes cleaner technologies, products and services that reduce environmental risk and minimise pollution and resource use. See, OECD/Eurostat, "The environmental goods & services industry", Manual for data collection and analysis, OECD Publication service, 1999, 9. See also, OECD, "Opening Markets for Environmental Goods and Services", Policy Brief, September 2005, 5. Some progress has been achieved (outside the WTO), in the context of the Asia-Pacific Economic Cooperation (APEC). In 2012 APEC leaders committed to reduce to 5% (or less) the duties applied to a specific list of environmental goods by the end of 2015. See, 20th APEC Economic Leaders Declaration, Annex C, available online at <apec2012.ru> (accessed 5 May 2014).

53 The principle of non-discrimination in trade in goods and services is declared, respectively, in Arts. I and III GATT and Arts. II and XVII GATS. However, under the GATS, national treatment obligations (Art. XVII) are applicable only where Members undertake specific commitments.

54 Agreement on Subsidies and Countervailing Measures (ASCM), WTO Agreement, LT/UR/A-1A/9, Annex 1A, available online at <docs.wto.org/dol2fe/Pages/FE_Browse/FE_B_009.aspx> (accessed 16 February 2014).

55 Agreement on the implementation of Article VI of the General Agreement on Tariffs and Trade 1994 (ADA), WTO Agreement, LT/UR/A-1A/3, Annex 1A, available online at <docs.wto.org/dol2fe/Pages/FE_Browse/FE_B_009.aspx> (accessed 16 February 2014).

environmental products are not immune from unilateral and multilateral actions if it is demonstrated that they have benefited from export subsidisation or illegal dumping practices.[56] In this sense, mounting trade tensions between major producers and importers of renewable energy technologies have already resulted in unilateral actions aimed at countervailing the negative effects of (alleged) export subsidisation and dumping practices.[57]

The second issue resulting from the lack of a WTO discipline tailored to renewable energy relates to the uncertainty about the compliance to the ASCM of financial incentive schemes enacted by governments as a response to energy security and climate change concerns.[58] At the present status of technological development, government intervention (either direct or indirect) is a crucial component of many public policies aiming at stimulating the dissemination of renewable energy technologies.[59] Under the ASCM perspective, this practice can raise particular problems. Indeed, even if explicit prohibitions are exclusively provided for with regard to two types of measures (export and import substitution subsidies as established by Article 3.1), other types of specific subsidisation,[60] regardless of their stated goals, can be 'actionable' through the DSB if resulting in an 'adverse effect' within the meaning of Article 5 and 6 of the ASCM.[61] At the outset, the ASCM included a provisional waiver for subsidies granted in pursuance of certain specific goals, among which was the 'adaptation of existing facilities to new environmental requirements'.[62] This exception, however, lapsed after five years in 1999,[63]

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[56] In the event of exports supported by subsidies, WTO Members considered to have suffered a *nullification or impairment* of the benefits accrued under the Agreements, can recur to the DSB or, in certain circumstances, unilaterally adopt countervailing duties to counteract the trade distorting effect provoked by what is considered an unlawful subsidisation. As for dumping practices, the ADA provides exclusively for the unilateral procedure. See ASCM Part V and Part X, ADA Part I.

[57] *Infra* § 2.3.

[58] On the promotion of renewables and WTO subsidy law, see Rubini, L., "Ain't wasting time no more: subsidies for renewable energy, the SCM Agreement, policy space and law reform", *Journal of International Economic Law*, vol. 15 ed. 2, 2012, 527-579, Rubini, L., "The Subsidization of Renewable Energy in the WTO: Issues and Perspectives", 3 August 2011, available online at <ssrn.com/abstract=1904267> (accessed 5 May 2014) and Bigdeli, S. Z., *supra* nt. 47. For review of the ASCM discipline, see Horlick, G. N., Clarke, P. A., "WTO Subsidies discipline during and after the crisis", *Journal of International Economic Law* 13(3), 2010, 859–874.

[59] Measures granted by WTO Members are classified as *i*) incentives to promote the invention of climate-friendly technologies and *ii*) incentives to encourage the deployment of such technologies. The latter are further distinguished between *i*) fiscal measures, *ii*) price support measures or *iii*) investment support measures. See, WTO/UNEP *Report on Trade and Climate Change*, available online at 114 <www.wto.org/english/res_e/booksp_e/trade_climate_change_e.pdf> (accessed 15 February 2014). See also Vergano, P. R., Laterza, E. C., "Subsidies to renewable energy sources and international trade", *Global Trade and Customs Journal*, vol. 5, ed. 6, 2010, 224-227.

[60] Only subsidies defined as 'specific' within the meaning of Article 2 ASCM are actionable for WTO purposes.

[61] Pursuant to Article 3 ASCM prohibited subsidies are always assumed to be specific and harmful for international trade and hence cannot be maintained by WTO Members. All the other types of specific subsidies are considered "actionable" under the meaning of Articles 5 and 6. This means that they might be subject to challenge only if they are demonstrated to cause an adverse effect to the interests of other WTO Members. See, among others, Lowenfeld, A. F., *International Economic Law,* Oxford University Press, Oxford, 2008, 238 *et seq.*, Van den Bossche, P., *The Law and Policy of World Trade Organization*, Cambridge University Press, Cambridge, 2005, 561 *et seq*., Picone, P., Ligustro, A., *Diritto dell'Organizzazione Mondiale del Commercio*, *supra* nt. 49, 241 *et seq*.

[62] Article 8.2(c) ASCM.

leaving prohibited and actionable categories as the only two possibilities to define a specific subsidy for WTO purposes.[64] It results that, at the moment, uncertainty remains mainly with regard to the compatibility of government subsidisation programs for renewable energies with the "specificity" and "adverse effect" tests foreseen in the ASCM.[65] As further illustrated below, the DSB jurisprudence might be of great help in clarifying to what extent the ASCM rules constrain the WTO Members' policy space when it comes to incentivising the production of energy through renewable sources.[66]

## II. Renewable Energy Generation as a Trigger For International Disputes

The utilisation of renewable energy sources for the production of electricity may lead to disputes involving the impairment of private interests to the benefit of the public interest. Such disputes are settled by domestic authorities and typically do not involve any transnational environmental harm (although this possibility cannot be ruled out *a priori*). This is confirmed by the slim record of cases regarding energy generation from renewable sources handled either by the international judiciary or by international extra-judicial means. A first case surged when a Chamber of the European Court of Human Rights (ECtHR) decided on the admissibility of an application concerning the operation of wind turbines and their alleged interference with the enjoyment of the right to private and family life by Swedish nationals.[67]

Another one has been recently handled by the Aarhus Compliance Committee. On the basis of a communication lodged by an Irish citizen, this body has recommended the EU to better comply with the Aarhus Convention in relation to the implementation of certain aspects of its legislation on the use of renewable energy resources.[68] However, technologies exploiting renewable energy sources like photovoltaic panels and wind turbines, as objects of international trade, are also capable of triggering inter-State

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[63] Non-actionable subsidies were conceived, from the outset, as provisional. Pursuant to Article 31 ASCM they could have been extended by the Committee on Subsidies and Countervailing Measures with the consent of all the Parties.

[64] It is argued that a legal shelter for certain types of subsidies could be re-introduced in the ASCM. See Horlick, G.N., Clarke, P. A., *supra* nt. 58., 870 *et seq*. On legal shelters specifically targeted at renewable energy subsidies, see Horlick, G. N., "The WTO and climate change incentives", *in*: Cottier, T., Nartova, O., Bigdeli, S. Z., *supra* nt. 47, 193.

[65] In this sense, see Rubini, L., (2012), *supra* nt. 58, 544-545. On the specificity and the adverse effect of renewable energy subsidies, see Bigdeli, S. Z., *supra* nt. 47, 179-185. It has been argued that many proposals for energy subsidies are made with no knowledge of the ASCM rules or they rely on Article XX of the GATT 1994 which is by most considered not applicable to the ASCM. See Horlick, G. N., "The WTO and climate change incentives", *in*: Cottier, T., Nartova, O., Bigdeli, S. Z., *supra* nt. 47, 192.

[66] Rubini, L., Written submission of Non-Party Amicus Curiae before the WTO Appellate Body, 12 March 2013, para. 99, available online at <birmingham.ac.uk/Documents/college-artslaw/law/iel/rubini-2013-amicus-curiae.pdf> (accessed 05 May 2014).

[67] ECtHR, 26 February 2008, *Fägerskiöld v. Sweden*, *Decision as to the admissibility of appl. No. 37664/04*, Application No. 37664/04, available online at <hudoc.echr.coe.int/sites/eng/pages/search.aspx?i=001-85411> (accessed 21 February 2014).

[68] Aarhus MOP, October 2012, Compliance Committee, *'Findings and recommendations with regard to communication ACCC/C/2010/54 concerning compliance by the European Union'*, ECE/MP/PP/C.1/2012/12.

disputes. In this regard, tensions concerning the market access of renewable energy-related products have already resulted in the significant utilization of trade defence instruments, both anti-dumping and countervailing duties, by the EU and the US against solar panels imported from China. Furthermore, the allegedly protectionist provisions of 'local content requirements' (LCRs) in a Canadian regional policy on clean energy production have led to a long-awaited WTO decision which touches upon the very delicate relationship between WTO subsidy rules and climate change incentives.[69] This section attempts to analyse these disputes in the light of the relationship between renewable energy and sustainable development as a principle of international law.

## II.1. Renewable Energy Generation and the Protection of Human Rights: a comment on the Fägerskiöld v. Sweden ECHR case

The facts underpinning the commencement of *Fägerskiöld v. Sweden* before the ECtHR concern the granting of construction permits for three wind turbines neighbouring the applicants' property in the municipality of Ödeshög. The property, in particular, was bought as a second home and used for recreational purposes.[70] When the third turbine was erected in 1998 the applicants publicly denounced the disturbance caused by the noise and the light effects produced by the wind power plant. In front of the ECtHR, they retained that the operation of these turbines prevented them from fully enjoying some rights protected under the 1950 European Charter of Human Rights as the right to respect of private and family life (Article 8), the right to property (Article 1, Protocol N. 1) and the right to effective domestic remedies (Article 13).[71] In sum, when decided on the admissibility of the case, the Court dismissed all claims as ill-founded.

While easily finding that the applicants had not in fact exhausted the available domestic remedies, the Court reflected on the possible admissibility on the basis of the other two alleged violations. As concerns Article 8, while admitting the absence from the Convention of any right to 'a clean and quiet environment',[72] the Court also reaffirmed that an individual may be affected by noise and pollution likely to cause an infringement

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[69] WTO Panel Report, 19 December 2012, *Canada - Certain Measures Affecting the Renewable Energy Generation Sector, Canada – Measures Relating to the Feed-in Tariff Program*, WT/DS412/AB/R, WT/DS412/R, WTO Appellate Body Report, 6 May 2013, *Canada - Certain Measures Affecting the Renewable Energy Generation Sector, Canada – Measures Relating to the Feed-in Tariff Program*, WT/DS426/AB/R, WT/DS426/R.

[70] By recalling *Demades v. Turkey*, application No. 16219/90, judgment of 31 July 2003, paras. 31-34, the Court removed all doubt on secondary homes as falling within its interpretation of 'home' *ex* Art.8, para. 1. See *Fägerskiöld v. Sweden*, *supra* nt. 67, 14.

[71] European Convention on Human Rights and Fundamental Freedoms, adopted 4 November 1950, into force 3 September 1953 and Protocol to the Convention on Human Rights and Fundamental Freedoms, adopted 20 March 1952, into force 18 May 1954, both ratified by 47 Council of Europe's Member States. Both texts available online at <www.echr.coe.int/Documents/Convention_ENG.pdf > (accessed 8 March 2014).

[72] In relation to the positive obligation to protect ECHR rights, the Court has consequently referred to the *jouissance d'un environnement sain et protégé* (enjoyment of a healthy and protected environment), see ECtHR, *Tatăr and others v Romania*, Judgment of 27 January 2009, Application No. 67021/2001, para. 107, and ECtHR, *Di Sarno and others v. Italy*, Judgment of 10 January 2010, Application No. 30765/2008, para. 110.

of the right to private and family life.[73] After recalling its previous Article 8 environmental jurisprudence,[74] the Court focused on the severity test, according to which in order to raise an issue under the provision at stake 'interference must directly affect the applicants' home, private and family life and the effects of the environmental pollution must attain a certain minimum level of severity',[75] two criteria satisfied by the circumstances of all Article 8 cases. In the case at hand, the Court admitted that the combined nuisance caused by the turbine noise and blades rotation was direct; however, after an assessment of the evidence reproduced by the applicant carried out in light of i) international noise standards ii) requirements set under the Swedish legislation and iii) a comparison with the noise levels reached in other Article 8 cases, the Court determined that the nuisance did not amount to 'severe environmental pollution'.[76]

Similarly, the allegations under Article 1 of Protocol 1 were also ill-founded in the Court's view. In relation to this provision, the Chamber had to decide on the proportionality of the alleged violation of the right to property and the general interest being pursued through the operation of the wind power plant. In this regard, it verified the lawfulness of the building permits issued for the construction of the third (particularly controversial) turbine against Swedish legislation and found no infringement, before passing to the test of the general interest attached to electricity generation and finding it to be superior to the negative impacts suffered by the applicants. Some aspects of the reasoning used by the Court to decide on the admissibility of *Fägerskiöld v. Sweden* are interesting as they repeatedly touched upon the relationship between renewable energy and the principle of sustainable development (crucial to understand in order to develop any international obligation on renewable energy).[77] To a certain extent, for instance, the Court seemed to embrace the allegation of the Swedish Government affirming that the necessity test *ex* Article 8, paragraph 2 is *a priori* satisfied, in relation to wind power plants, thanks to the peculiarities of this energy source and its related technologies (they being environmentally friendly and contributing to the sustainable development of the society).

It must be admitted, however, that this faith in the utilisation of a renewable energy technology would not have appeared as such had the Court found that the adverse effects

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[73] *Fägerskiöld v. Sweden*, *supra* nt. 167, 14. 'The Court has constantly affirmed that the positive obligation to undertake adequate measures in order to protect the right under Art. 8 primarily involves the adoption of a legal and administrative framework ensuring the effective prevention of environmental and human health damages.' See *Tatăr and others v Romania*, *supra* nt. 72, para. 88 and *Di Sarno and others v. Italy*, *supra* nt. 72, para. 108. On this case law, Ferrara, M., "La sentenza *Di Sarno e altri c. Italia*: un'ulteriore passo avanti della Corte di Strasburgo nell'affermazione di obblighi di protezione dell'ambiente", *La Comunità internazionale*, vol. 68, ed. 1, 2013, 161-177.

[74] Ushered in by ECtHR, *López Ostra v. Spain*, Judgment, 9 December 1994, Application No. 16798/90, [1994] Series A, No. 303-C. For related case-law, see e.g. Dejeant-Pons, M., "Le droit de l'homme à l'environnement das le cadre du Conseil de l'Europe", *Revue Trimestrielle des Droits de l´Homme*, 60/2004, 861-888 and Pedersen, O., "European Environmental Human Rights and Environmental Rights: A Long Time Coming?", *Georgetown International Environmental Law Review*, vol. 21, ed.1, 2008, 83-93.

[75] *Fägerskiöld v. Sweden*, *supra* nt. 67, 15.

[76] *Id.*, 16.

[77] Briefly on this decision, Tegner Anker, H., Egelund Olsen, B., Rønne, A., "Wind Energy and the Law: a Comparative Analysis", *Journal of Energy & Natural Resources Law*, vol. 27, 2009, 145 and Shelton, D., "Resolving Conflicts Between Human Rights and Environmental Protection", *in*: De Wet, E. and Jure, V., eds., *Hierarchy In International Law*, Oxford University Press, Oxford, 2012, 229.

of the debated developments were actually reaching the degree of severity registered in other cases. In fact, the task of the Court is not to pronounce itself on the desirability of the activities likely to cause nuisance but rather to assess their compatibility with the rights protected by the Charter as, in certain circumstances, their effects may be detrimental to the enjoyment of those same rights. In relation to the right to property under Article 1 of Protocol N.1 affirming that 'no one shall be deprived of its possession except in the public interest and subject to the conditions provided by law and the general principles of international law' the Court went beyond the only apparently unconditioned support to renewable energy generation. In fact, when assessing the negative impact of the wind turbines on the enjoyment of the right to property against the general interest pursued through their operation, the Court found the interference to be proportionate and explicitly attached great relevance to the 'positive environmental consequences of wind power for the community as a whole'.[78]

The implications of this decision are significant, even though not much has been added to the solid ECtHR environmental jurisprudence. In particular, the Court acknowledged the existence of a direct link between renewable energy generation – inherently implicating a less likely degree of interference with the rights protected under the Convention – and sustainable development, the latter being characterized both as a public and general interest, on the basis of which States can legitimately authorize activities interfering with the use of property.

## II.2. Renewable Energy Generation and Procedural Environmental Rights: the Aarhus Compliance Committee on the Compatibility of Directive 28/2009/EC on Renewable Energy with Public Participation and Information Requirements

Another case concerning renewable energy generation (in a broader context) has been handled by the compliance mechanism provided for under the Aarhus Convention.[79] The issue, brought to the attention of the Compliance Committee[80] by an Irish citizen, regarded the alleged failure to comply with a series of obligations of the Convention on

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[78] *Fägerskiöld v. Sweden*, *supra* nt. 67, 19, stressing that 'the wind turbine at issue in the present case is capable of producing enough energy to heat between 40 and 50 private households over one-year period, which is beneficial both for the environment and for society'.

[79] Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus, Denmark), adopted 25 June 1998, into force 30 October 2001 (as of 2 April 2013 it has 47 Contracting Parties) available online at <unece.org/env/pp/treatytext.html> (accessed 21 February 2014).

[80] Instituted by MOP1 (Lucca, Italy, 21-23 October 2002) pursuant to Aarhus Convention Article 15 through the adoption of Decision 1/7, on 'Review of compliance', in ECE/MP.PP/2/Add.8, of 2 April 2004, available online at <unece.org/fileadmin/DAM/env/pp/documents/mop1/ece.mp.pp.2.add.8.e.pdf> (accessed 21 February 2014), the Compliance Committee is one of the most active non-compliance mechanisms provided under multilateral environmental agreements (MEAs). See Pitea, C., "Procedures and Mechanisms for Review of Compliance under the 1998 Aarhus Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters" in Treves, T. *et al.*, eds., *Non-Compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements*, Asser Press, Den Haag, 2009, 221-250.

part of the EU[81] in relation to the Irish Renewable Energy Feed-In Tariff Program (REFIT I), supported by the European Commission by means of direct funding and State aid approval, and in relation to the Ireland's National Renewable Energy Action Plan (NREAP), a policy instrument required to Member States *ex* Article 4, paragraph 1 of directive 2009/28/EC.[82] According to the complainant, EU institutions failed, *inter alia*, in monitoring the 'implementation of EU law related to the Convention' by Ireland, with respect to the preparation and subsequent communication of its NREAP.[83] The Compliance Committee ultimately decided to centre its final evaluation around this issue, dismissing other allegations concerning State aid as well as those on the implementation of EU environmental legislation.[84] Specifically, the Committee found Ireland's NREAP to fall into the definition of plan and program requiring public participation as set under Article 7 of the Aarhus Convention, since it had established 'the framework for activities by which Ireland aims to enhance the use of renewable energy in order to reduce greenhouse gas emissions'.[85] However, giving that authorities responsible for the identification of the concerned public were the Irish ones and Ireland is not a Party to the Convention, the Committee was unable to reach a conclusion on 'direct' compliance with Article 7. Accordingly, it turned its attention to the requisites for public participation singled out by directive 2009/28/EC because, as stated in the findings, while the integration of such requisite was a choice of the EU, 'it is the task of the Committee to examine whether the Party concerned has indeed properly implemented Article 7 of the Convention'.[86] In the light of this, the Committee analysed the obligations under Article 4 of the directive[87] and held them as of 'very general nature', contemplating 'minimum requirements' for Member States not in line with those concerning public participation established by Article 7 of the Convention.[88]

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81 Unlike Ireland, the EU is an Aarhus Contracting Party. See Decision 2005/370/EC of the Council of the European Union, of 17 February 2005, on the conclusion, on behalf of the European Community, of the Convention on access to information, public participation in decision-making and access to justice in environmental matters, in *OJ* L-124 of 17 May 2005, 1-3.

82 Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, in *OJ* L-140 of 5 June 2009, 16-62.

83 Aarhus MOP, October 2012, Compliance Committee, ECE/MP/PP/C.1/2012/12, *supra* nt. 68, para. 3, 2.

84 *Id.*, paras. 73-74, 12. In particular, the communication challenged the missed submission of the Irish NREAP to the strategic environmental assessment procedure set for plans and programs by the Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 (commonly known as 'SEA Directive') and the violation of Directive 2003/35/EC (the so-called 'EIA Directive') in relation to an interconnector project (under REFIT I) in turn funded on the basis of Regulation (EC) No 663/2009 of the European Parliament and the Council of 13 July 2009 establishing a program to aid economic recovery by granting Community financial assistance to projects in the field of energy (then labelled as the 'European Energy Program for Recovery' or EEPR).

85 Aarhus MOP, October 2012, Compliance Committee, ECE/MP/PP/C.1/2012/12, *supra* nt. 68, para. 75, 12.

86 *Id.*, para. 77, 13.

87 Having regard also to the Directive's Preamble (recital 90) and further guidance provided by the Commission Decision of 30 June 2009 establishing a template for National Renewable Energy Action Plans under Directive 2009/08/EC (required by Art. 4, para. 2).

88 Aarhus MOP, October 2012, Compliance Committee, ECE/MP/PP/C.1/2012/12, *supra* nt. 68, para. 79, 13.

In this regard, it specified that measures consistent with the latter provision would have required Member States to report on the public participation arrangements made for NREAP preparation, on how information was made available and, most importantly, would have been set within a regulatory framework incorporating the requirements under Article 6, paragraph 3, 4 and 8 of the Convention, ensuring the availability of adequate time-frames for informing the public providing the conditions for effective participation.[89] On this point the Committee observed that consultation with the public in the case *a quo* were carried out in a limited time-span and that it would not have been so had the EU included standards in line with Article 7.[90] Finally, having ascertained EU failure in ensuring implementation of this provision ('by way of its monitoring responsibility'), the Committee recommends ending non-compliance.[91]

Although only incidentally related to renewable energy, the Committee's findings have interesting EU and international law implications. On the one hand, they deal with the consistency of EU secondary legislation with agreements ratified by the Union and with the implementation of their principles by Member States not having ratified them in the first place but contextually bound by virtue of Article 216, paragraph 2 TFEU. On the other hand, the findings should be taken into account for developing any international law instrument entailing procedural environmental requirements for renewable energy plans and project.

## II.3. Renewable Energy Generation and Trade Defence Instruments: A Comment On EU Unilateral Trade Measures Against Chinese Solar Panels

Due to the growing economic relevance of trade in renewable energy technologies, the application of countervailing or antidumping duties in this field is becoming an increasingly common practice. In an effort of safeguarding national producers from unfair competition, WTO Members have reacted very quickly when alleged anti-competitive practices enacted by third countries and manufacturers were threatening their national industries operating in the same field.[92] At the moment, China is by far the larger exporter of solar photovoltaic (PV) technologies and its trade balance vis-à-vis the US and the EU has grown exponentially in the last few years.[93] Not surprisingly then,

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[89] *Id.*, para. 80, 13. The Committee went further by declaring that the Commission ('Party concerned') did not reproduce evidence concerning any control on the Irish NREAP in the light of Aarhus Convention's Article 7 (para. 81).

[90] *Id.*, paras. 82-83. The Committee recalled its findings on communication ACCC/C/2006/16 (Lithuania), ECE/MP.PP/2008/5 Add. 6, para. 69: Two weeks are not reasonable for the public 'to prepare and participate effectively'.

[91] *Id.,* paras. 95 and 98. The Committee refers to the monitoring power of the Commission and to the judicial control of the European Court of Justice. Short of suggesting means for correction (i.e. amending Directive 2009/28/EC) the Committee only re-states the causes of non-compliance.

[92] *Supra* nt. 48.

[93] Latest UN statistics (United Nations Commodity Trade Statistics Database - UN Comtrade) show a strong imbalance in favour of China in the international trade of photovoltaic modules and components. In 2011 China exports of photosensitive semiconductor devices (HS 854140) amounted to almost 28 billion USD against the 2 billion exports of the US. According to the European Commission the EU is China's main export market for solar panels, accounting for around 80% of all Chinese export sales. See MEMO/13/497, 'EU imposes provisional anti-dumping duties on Chinese solar panels', of 4

both the US and the EU have recently questioned the legality of subsidies and dumping practices applied by the Chinese government and Chinese manufacturers to their export of solar PV and related products. On the basis of investigations carried out by the US Department of Commerce (DoC) in 2012, the U.S. International Trade Administration (ITA) has already issued its final determination finding that solar PV imported from China to the US had benefited from various forms of illegal subsidies and dumping practices.[94] Consequently, the US is now applying additional tariffs ranging from 24% to 36% on most of the solar PV cells originating from China.[95] Similarly, the EU has initiated four parallel investigations aimed at verifying the existence of export subsidies and dumping practices on certain solar PV products imported from China.[96] One of these has already led to the imposition by the European Commission (EC) of a provisional (six-months) anti-dumping duty on Chinese solar PV amounting to an average 47%[97] calculated as the minimum threshold in order to counteract the negative effect of the dumping practice.[98]

The concerns of States and industrial sectors feeling threatened by unfair competition practices are justifiable as one thinks that a large amount of imports of low-cost renewable energy generators from third countries can delay, if not prevent, the development of a national industry, with a series of implications in terms of tax collection, jobs losses and self-sufficiency.[99] However, the imposition of further duties on renewable energy goods may raise concerns if seen from other perspectives. Trade defence instruments to renewable energy technologies, for instance, seem to run counter to the aforementioned DDA objective of market opening for environmental products.[100]

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June. 2013, available online at <europa.eu/rapid/press-release_IP-13-501_en.htm> (accessed 2 February 2014).

94 See ITA, 'Commerce Finds Dumping and Subsidization of Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled into Modules from the People's Republic of China', available online at <ia.ita.doc.gov/download/factsheets/factsheet_prc-solar-cells-ad-cvd-finals-20121010.pdf> (accessed 2 February 2014).

95 See, ITA press release available online at <trade.gov/press/press-releases/2012/final-determinations-in-the-antidumping-duty-and-countervailing-duty-investigations-of-imports-of-solar-cells-from-china-101012.asp> (accessed 2 February 2014).

96 European Commission, 'Notice of initiation of an anti-dumping proceeding concerning imports of crystalline silicon photovoltaic modules and key components (i.e. cells and wafers) originating in the People's Republic of China', OJ *C* 269/5, 6.9.2012. European Commission, 'Notice of initiation of an anti-subsidy proceeding concerning imports of crystalline silicon photovoltaic modules and key components (i.e. cells and wafers) originating in the People's Republic of China', OJ *C* 340/13, of 8 November 2012. European Commission, 'Notice of initiation of an anti-dumping proceeding concerning imports of solar glass originating in the People's Republic of China', OJ *C* 58/6, of 28 February 2013. European Commission, 'Notice of initiation of an anti-subsidy proceeding concerning imports of solar glass originating in the People's Republic of China', OJ *C* 122/24, of 27 April 2013.

97 Commission Regulation (EU) No 513/2013 of 4 June 2013 'imposing a provisional anti-dumping duty on imports of crystalline silicon photovoltaic modules and key components (i.e. cells and wafers) originating in or consigned from the People's Republic of China and amending Regulation (EU) No 182/2013 making these imports originating in or consigned from the People's Republic of China subject to registration', OJ *L* 152/5, of 5 June 2013.

98 The other investigations are expected to reach provisional or final conclusions by end of 2013.

99 All EC anti-subsidy and anti-dumping investigations were initiated following a complaint lodged by EU Pro SUN on behalf of EU companies representing more than 25% of the total Union production of the technology at stake.

100 The cases addressed here might be seen as an indicator of the reasons behind the failure of EGS negotiations.

Furthermore, the imposition of additional tariffs (either anti-dumping or countervailing measures) to the import of solar PV from China may not be in the interest of the whole industry operating in the upstream and downstream markets. Significantly, right after the commencement of the investigations against the allegedly WTO-inconsistent practice of China, many EU and US-based companies started to fear the potentially negative effects likely to be caused by the imposition of anti-dumping and countervailing measures on solar PV for the global solar value chain.[101] Finally, from the consumer's perspective, it is easy to argue that countervailing and anti-dumping duties, whether legitimate or not, have the immediate effect of increasing the costs of technologies needed for the production of clean energy (i.e. the cost of solar installations), ultimately increasing the average price of energy from renewable sources, to the detriment of end-users.

Safeguarding the interests of subjects other than national industries is certainly not the main objective of trade defence measures. WTO relevant agreements (ADA and ASCM) do not require parties to take non-trade interests into consideration when applying anti-dumping and anti-subsidy duties.[102] Conversely, however, the EU system envisages specific rules for this purpose. Before applying any trade defence measure, in fact, the EC must undertake the so-called "Union Interest test" by which trade concerns of EU companies damaged by the alleged unlawful behaviour of third Parties are weighted against the interest of the society as a whole.[103] The Union Interest test is based on "an appreciation of all the various interests involved", including, in the case of Chinese solar panels, "those of the Union industry, companies in the upstream and downstream markets of the PV sector, importers, users and consumers of the product concerned".[104] For this reason one can consider the test as offering an ideal platform for discussing sustainability goals in the context of trade defence measures. However, in deciding on provisional anti-dumping duties against Chinese exporters, the EC seems to have opted for a narrow interpretation of the test so to exclude the possibility for it to encompass wider sustainability and environmental concerns.

In assessing the harm likely to be caused by the imposition of an anti-dumping duty, the EC focuses greatly on the impact of an increased pricing for undertakings operating in the upstream and downstream markets and for the end-users.[105] Only under the heading "other arguments" the thorny issue of the contrast between the imposition of anti-dumping duties and the renewable energy goals of the 2020 Agenda is briefly addressed.[106] Significantly, in deciding on the imposition of trade defence instruments,

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[101] These companies are currently grouped into two coalitions: Alliance for Affordable Solar Energy (AFASE) in the EU and the Coalition for Affordable Renewable Energy (CASE) in the US.

[102] The three-fold requirement to be fulfilled for imposing anti-dumping duties and countervailing measures (GATT Article VI) consists in proving the existence of *i*) a dumping practice (or a subsidy), *ii*) an injury to the domestic market and *iii*) a causal link between the two.

[103] The legal basis of the test rests in Article 21 of Council Regulation (EC) n. 1225/2009 of 30 November 2009 'on protection against dumped imports from countries not members of the European Community', OJ *L* 343/51, 22 Dec. 2009 and Article 31 of Council Regulation (EC) n. 597/2009 of 11 June 2009 'on protection against subsidised imports from countries not members of the European Community', OJ L 188/93, 18 Jul. 2009. See, Wellhausen, M., "The Community Interest Test in Antidumping Proceedings of the European Union"*, American University International Law Rev*iew, 2001, vol. 16, ed. 4, 1027-1082.

[104] Commission Regulation (EU) No 513/2013, *supra* nt. 97, para. 225.

[105] *Id.*, paras. 235-254.

[106] Besides increasing to 20% the quota of energy consumption produced from renewable resources by 2020, the 2008 EU Energy and Climate Package (comprising *inter alia* Directive 28/2009/EC on

the EC quickly dismisses this important point by stating that "the 2020 goals do not depend on the solar energy exclusively. Equally important are other green energies such as: wind, biomass, hydro etc. Since no particular percentage is attributed to the solar energy for the 2020 goals, a slightly lower number of PV installations is not expected to raise the overall cost of the 2020 Agenda" adding that "the price of solar panels is only one of many factors, which are vital for the development of the PV industry in Europe".[107]

In light of the above, it might be tempting to argue that the economic importance of the case and the political will to react quickly to the threat posed by cheap import of solar technologies have led the EC to refrain from investigating further on the relationship between trade remedies and renewable energy policies.[108] Forthcoming decisions on anti-subsidies and anti-dumping will certainly be of great help in confirming or discarding this interpretative position.

## II.4. Renewable Energy Generation and WTO Subsidy Rules: The WTO Consistency of Financial Assistance Programs and their Local Content Requirements in the Canada – FIT Program dispute

Compatibility concerns with regard to WTO rules and renewables have been mounting also in the context of domestic climate change incentives for the production of clean energy.[109] The first, and so far the only decision by a WTO Panel and the Appellate Body (AB) regarding the consistency of financial assistance programs for renewable energy generation was reached in relation to the 'Ontario Feed-in Tariff Program (FIT Program)' at the request of Japan and the EU.[110] Similarly to other government assistance schemes, the Canadian Program is a comprehensive guaranteed pricing structure aiming at increasing the production of electricity from certain renewable energy sources with the two-tier goal of improving air quality and diminishing the dependence on coal-fired energy generation[111]. In order to boost investments in this otherwise non-profitable business, the Ontario FIT Program offers fixed and favourable long-term contracts for the purchase of electricity.[112] One of the requirements for eligibility of operators to the FIT Program and the main target of complaints from WTO Members is the inclusion in each

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renewable energy), pursues other two goals: reducing GHG emissions by 20% from 1990 levels and raising by 20% the overall EU's energy efficiency. Said goals are core to the 2020 Agenda. See European Commission, "Europe 2020. A strategy for smart, sustainable and inclusive growth", COM(2010) 2020 final, 3 March 2010, 11.

[107] Commission Regulation (EU) No 513/2013, *supra* nt. 97, para. 258.

[108] The Commission showed particular concern for the disappearance of the Union industry and for the price consequences of having one single supplier (China) of solar PV modules. *Id.*, para. 253.

[109] Besides the dispute on the Ontario FIT Program, other requests for consultations on WTO Members' feed-in tariff programs have been recently issues to the DSB. See, DS419, 'China - Measures concerning wind power equipment', DS452, 'European Union and certain Member States - Certain Measures Affecting the Renewable Energy Generation Sector', DS456, 'India - Certain Measures Relating to Solar Cells and Solar Modules'.

[110] *Supra* nt. 69.

[111] See Ontario's Ministry of Energy, *FIT and MicroFIT Program*, available online at <energy.gov.on.ca/en/fit-and-microfit-program> (accessed 2 February 2014).

[112] See WT/DS412/R, WT/DS426/R, *supra* nt. 69, para. 7.65.

project of a "minimum amount of goods and services that come from Ontario".[113] This requirement entailing a local content obligation (LCR) is explicitly adopted for the purpose of enabling "new green industries through new investments and job creation".[114] Japan and the EU asked the Panel to rule on the legality of the FIT Program's LCR with both the general non-discrimination clause provided for in GATT Article III:4[115] and the subsidy discipline of the ASCM.

As for the first claim, the Panel and then the AB had no difficulties in demonstrating the clear discriminatory character of the LCR and that no exception could be invoked.[116] In rebutting Canada's claim according to which the FIT Program would constitute a form of government procurement, as such exempted from Article III applicability, the Panel noticed that the commercial character of the transaction in the FIT program (the energy ultimately being sold to consumers) prevented the applicability of the exception. The AB reversed the Panel's reasoning - but not the final decision - by highlighting that the government procurement exception of GATT Article III:8 could not be invoked insofar as the product being allegedly procured (electricity) was not the same product being allegedly discriminated because of its origin (generation equipment).[117] In distinguishing between the two different products, the AB probably aimed at clearing the field from the misconception that energy-related products are to be subjected to a more lenient WTO discipline merely because of their specific function. In the end, as requested by the complainants, the LCR was declared inconsistent with GATT Article III and also with Article 2.1 of the TRIMs Agreement.[118]

Secondly, the Panel and the AB were asked to rule on the consistency of the LCR with the ASCM. The complainants alleged that the FIT contracts constituted a prohibited subsidy within the meaning of ASCM Article 3.1(b) because the granting of a favourable treatment was contingent upon the use of domestic over imported goods.[119] In these circumstances, before turning to the analysis of the import substitution measure (the LCR, in the case at hand), it is necessary, to determine the existence of the subsidy itself. For WTO purposes a subsidy exists when a financial contribution is granted and a

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[113] See, 'FIT Program Overview', Version 2.1, Ontario Power Authority, para. 3.1, available online at: <fit.powerauthority.on.ca/sites/default/files/page/FIT_Program_Overview_Version_2.pdf> (accessed 2 February 2014).

[114] WT/DS412/R, WT/DS426/R, *supra* nt. 69, para. 7.65.

[115] Mandating that "the products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use".

[116] On this point, Canada contended that FIT contracts constituted "laws and requirements that govern the procurement of renewable electricity for the governmental purpose of securing supply for Ontario consumers from clean sources" and were thus covered by the provision of GATT Article III:8(a) exempting government procurement from the non-discrimination principle. WT/DS412/R, WT/DS426/R, *supra* nt. 69, para.7.88 *et seq*.

[117] WT/DS412/AB/R, WT/DS426/AB/R, *supra* nt. 69, para. 5.79.

[118] The claimants further asked the DSB to find the inconsistency of the FIT program with Article 2 of the Agreement on Trade Related Investment Measures (TRIMs Agreement). According to TRIMs Article 2.1, a measure constituting a TRIM within the meaning of Article 1, which is also inconsistent with GATT Article III:4, violates the TRIMs Agreement.

[119] ASCM Article 3 distinguishes between prohibited and actionable subsidies. Subsidies contingent upon export and upon the use of domestic over imported goods (import substitution subsidies) fall within the "prohibited" category and cannot be maintained by WTO Members.

benefit is conferred.[120] In the present dispute, both the Panel and the AB found that the FIT Program amounted to a financial contribution within the meaning of ASCM Article 1.1(a)(1).[121] However, with regard to the benefit, the Panel was of the view that, in the specific context of the electricity market, government intervention is always necessary in order to safeguard a safe, reliable and long-term sustainable electricity supply.[122]

For this reason, the Panel concluded that a free marketplace for electricity could not exist. Hence, it was not possible to find an appropriate market benchmark to verify that the FIT contracts conferred a benefit within the meaning of ASCM Article 1.1(b).[123] The reasoning of the AB on the benefit partially departed from the Panel's. The AB in fact refused to confirm the Panel's view that the relevant market for the determination of the benefit is the whole electricity market. Instead, it ruled that, taking the supply mix decided by the Ontario government as given, the relevant market against which a benchmark needs to be found to prove the conferral of a benefit is the specific market for wind and solar generated electricity shaped on the basis of the energy-supply mix determined by the government.[124] Consequently, the benchmark for the comparison of the FIT Program fixed prices is to be found in each specific market. Eventually, however, neither the Panel nor the AB were in the position to identify an appropriate benchmark for comparison. Therefore the existence of a subsidy for ASCM purposes could not be ascertained.

The decision on the Ontario FIT Program has been the first in which the DSB addressed the delicate subject of subsidies and renewable technologies. If the decision with regard to the discriminatory nature of LCRs has not received any criticism, the reasoning of the Panel and the AB with regard to the definition of the benefit has raised more perplexities. Indeed, some important divergences on how to define the existence of the benefit had already emerged among the Panel experts, with one of the adjudicators issuing a dissenting opinion on this specific point.[125]

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[120] See ASCM, Art. 1.

[121] Although reaching the same conclusion with respect to the characterization of the financial contribution at issue as a "purchase of goods" under ASCM Article 1.1(a)(1), the AB reversed the Panel's finding that the categories for the characterization of a subsidy are mutually exclusive. See WT/DS412/AB/R, WT/DS426/AB/R, *supra* nt. 69, paras. 5.121-5.128. Interestingly, the litigants never questioned the existence of a "financial contribution" within the meaning of the ASCM. However, the possibility for a pricing requirement such as a FIT Program to amount to a financial contribution has been questioned in doctrine because it has been maintained that such a minimum price purchase requirement should be intended as a market regulation activity. See, Howse, R., "Climate Mitigation Subsidies and the WTO Legal Framework: a policy analysis", IISD Paper 2010, 12. Contrary to the concept of subsidy as defined in WTO Agreements, the ECJ has ruled that minimum price purchase requirements for renewable electricity cannot constitute "state aid" within the meaning of Article 87 TEC because it does not entail a transfer of State resources. See CJEU, Case C-379/98, *PreussenElektra AG v. Schleswag AG*, 13 March 2001, *ECR* I-02099, paras. 59-60.

[122] According to the Panel, modern electricity systems "by their very nature, need to draw electricity from a range of diverse generation technologies that play different roles and have different costs of production and environmental impacts", see WT/DS412/R, WT/DS426/R, *supra* nt. 69, para. 7.320.

[123] *Id.*, para.7.312.

[124] The AB considered that government intervention resulting in the *creation* of a market which would not otherwise exist does not impede treating the resulting price as "market price" for the purpose of the benefit analysis. WT/DS412/AB/R, WT/DS426/AB/R, *supra* nt. 69, para. 5.185.

[125] See WT/DS412/R, WTDS426/R, 'Dissenting Opinion of one Member of the Panel with respect to whether the challenged measures confer a benefit within the meaning of Article 1.1.(b) of the SCM Agreement', para. 9.1 *et seq*.

In criticising the decision, the dissenting judge and some commentators pointed out that, by refusing to acknowledge that a benefit is conferred, the Panel first and the AB later erroneously mixed up two different analytical dimensions. It has been maintained that, by trying to justify the absence of the benefit through the impossibility of finding a benchmark within the Ontario energy market, the Panel had implicitly justified the existence of the subsidy already in the benefit analysis. This, being a preliminary stage of the overall evaluation, should only have been aimed at the investigation of potential trade distortion of the measure at stake.[126] The justification of the subsidy at issue could have become relevant at a later stage, namely in the context of the determination of the specificity of the measure or its adverse effect.[127] Instead, it has been argued, by confusing the two different dimensions the Panel and, to a lesser extent, the AB, have missed the opportunity to proceed to the next phases of the analysis in which policy objectives, such as energy supply reliability and environmental sustainability, could have been raised as a possible justification for the adverse economic effect generated by the subsidy. This could have led to a much clearer understanding of the possible recognition, within the WTO, of a legal shelter, or at least a greater level of tolerance, for those domestic measures specifically targeted to renewable energy objectives.[128]

Criticism aside, it should be noted that, in overturning the Panel's reasoning by recognizing the existence of different relevant markets for each specific generation technology, the AB has implicitly ascertained the peculiarity of renewable technologies for the production of clean energy. This, coupled with a clear stand on the impossibility for WTO Members to question the legitimacy of each government definition of the appropriate energy supply mix, might render it difficult in the future to challenge the legitimacy of domestic climate change financial schemes not containing LCRs. Finally, from a more pragmatic standpoint, it is difficult to imagine why, in the absence of a discriminatory LCR, a WTO Member should embark in a costly and politically sensitive WTO dispute to challenge another Member's feed-in tariff scheme.[129] In any case, it is left to the upcoming DSB decisions to confirm or overturn the reasoning developed by the AB in the *FIT Canada* dispute.[130]

## III. Some Aspects of International Cooperation in The Field of Renewable Energy

Despite the reticence on the definition of global quantified renewable energy targets, the absence of binding norms on renewable energy generation and the persistence of various factors leading to disputes, global cooperation in the field of renewable energy is gaining

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[126] As noted, "one thing is to find that there are sound economic and policy reasons for the government to step in and direct the economy, surely quite another to suggest that we should not call an out-of-the-market incentive as such, only because it is a good one". See L. Rubini, *supra* nt. 66, para. 57. The AB however disregarded this position by confirming that the Panel 'did not err in using Article 14 of the ASCM as a context to determine whether a benefit is conferred under Article 1.1(b)', WT/DS412/AB/R, WT/DS426/AB/R, *supra* nt. 69, paras. 5.163-5.165.

[127] See, Rubini, L., *supra* nt. 66, para. 89.

[128] *Id.*, para. 96.

[129] It has been argued that the Ontario FIT Program dispute has been perceived, in trade circles, as a 'mistake', somewhat altering the previous equilibrium. See, Rubini, L. (2012), *supra* nt. 58, 557.

[130] *Supra* nt. 109.

momentum. Starting with an overview on CDM renewable energy projects under the Kyoto Protocol, this section will then shift to the latest developments in renewable energy cooperation respectively triggered by the creation of the International Renewable Energy Agency and by the growing number of transnational private partnerships operating in the field of renewables.

## III.1. The Kyoto Protocol and CDM renewable energy projects

It has often been highlighted how the utilization of renewable energy is a key to the achievement of sustainable development. This relationship should also inform the conduct of international cooperation. It has been observed in particular how increasing the share of renewable energy in the global energy mix, while maximising energy efficiency and guaranteeing universal access to energy services is a crucial tripartite challenge for the international community as a whole.[131] Alternative sources of energy are one of the means to accelerate poverty reduction and cut the bulk of greenhouse gas (GHG) emissions responsible for anthropogenic global warming with the help of utility-scale renewable power projects and more flexible small-scale renewable energy systems.[132] Therefore, unprecedented political, financial and technological cooperation is required at all levels to achieve the globally agreed targets on sustainable energy. Notwithstanding these pressing needs, international cooperation in the field of renewable energy is supported only by a few *ad hoc* international (mostly regional) norms and is conducted in the absence of an efficient institutional framework (which is in turn the product of a fragmented and dispersed global environmental governance).[133]

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[131] *Supra* § 1.1. The International Energy Agency (IEA) however projects a challenging future for the three targets requiring more rigorous policies and stronger political engagement, although new deployment of energy-efficient technologies were announced in different countries and new targets were set (e.g. the US opted for new fuel-economy standards, the EU hopes to cut by 20% its energy demand no later than 2020, Japan intends to reduce by 10% its energy consumption by 2030 while China plans to cut back by 16% its energy intensity before 2015). Notwithstanding commitments, the energy efficiency target will still not be achieved, according to the IEA estimations. Equally, the share of renewable energy in the world energy mix will still be small, though it has grown steadily (in 2010-2011 renewables provided for about 16.7% of global energy consumption). In this scenario, the EU advanced in reaching its goals: the portion of energy from alternative sources has increased constantly from 7.9% in 2004 to 12.7% in 2010. As for energy poverty, IEA considers that future investments should be at least five times the level of 2009 (9 billion USD). Increasing financing will presumably not be easy due to the diminishing political will of industrialised countries struggling with growing national debts. See, OECD/IEA, REPORT: *'World Energy Outlook 2012', Renewable Energy Policy Network for the 21st Century, 'Renewables 2012. Global Status Report'* and European Commission, COM, 175, 2013, 'Renewable Energy Progress Report' of 27 March 2013.

[132] Fossil fuels, however, keep on constituting a relevant portion of the world energy mix. It is impossible and for many reasons preposterous to renounce the use of less polluting traditional fuels (i.e. natural gas), which in the long run may be an excellent fuel for a transition from traditional sources to the renewable ones. The importance of natural gas was indeed recognised in the Bonn Agreements on the implementation of the Buenos Aires Plan of Action. See 'Report of the Conference of the Parties on the second part of its sixth session', held in Bonn from 16 to 27 July 2001, UN Doc. FCCC/CP/2001/5, of 25 September 2001, 52, available online at <unfccc.int/resource/docs/cop6secpart/05.pdf#page=36> (accessed 19 February 2014).

[133] See *supra* § 1.2 as well as Ivanova, M. H. and Esty, D. C., "Revitalizing Global Environmental Governance: A Function-Driven Approach", *in*: Ivanova, M. H., and Esty, D. C., eds., *Global Environmental Governance: Options & Opportunities*, Yale School of Forestry & Environmental Studies, 2002, 181-204.

As briefly anticipated, one of the early instruments that up until now has been promoting joint action among States in the renewable energy sector is the 1997 Kyoto Protocol (KP) to the UNFCC. The KP can be regarded as the fruit of a large consensus on the seriousness and legitimacy of pressing climate change concerns and the inevitability of undertaking binding commitments in order to curb carbon dioxide ($CO_2$) emissions. When entered into force in 2005, after a difficult ratification path, the Protocol's so-called 'flexibility mechanisms' were finally set in motion. KP Article 3 mandates the general obligation of Annex I Parties[134] to ensure that their aggregate anthropogenic GHG emissions do not exceed their assigned amounts, 'with a view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012'. Flexibility mechanisms were inserted in the Protocol in order to facilitate compliance with this provision and to enhance cooperation among all the UNFCCC Contracting Parties. Thus, Article 6 establishes a Joint Implementation (JI) system whereby Annex I Parties may transfer or acquire emission reduction units among themselves 'resulting from the projects aimed at reducing anthropogenic emissions by sources or enhancing anthropogenic removals by sinks of greenhouse gases in any sector of the economy'.

The second instrument provided by the KP is known as Clean Development Mechanism (CDM). From a technical standpoint, the CDM projects work the same way as the JI ones with the only exception that they are aimed at reducing emissions in the territory of developing countries (Non-Annex I Parties). The CDM pursues a twofold purpose: to assist developing countries 'in achieving sustainable development and in contributing to the ultimate objective of the Convention', while helping developed countries to respect their commitments under Article 3. Lastly, Article 17 enables an 'emission trading scheme' where extra carbon credits resulting from the implementation of the JI and the CDM projects can be traded. The provision actually created a new commodity and a new 'carbon market', as carbon dioxide accounts for 56.6% of all the anthropogenic GHGs.[135]

Notwithstanding the obligation under Article 3 and the provision of flexibility mechanisms, the Protocol does not require the adoption of renewable technologies as a mandatory method for cutting GHG emissions.[136] However, during the negotiations following the adoption of the Protocol, several developing countries expressed the view that renewable energies should have been specifically given priority within activities under the CDM.[137] Thus far, this proposal remained only on paper.[138] One of the reasons

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[134] Annex I Parties include industrialised OECD countries as of 1992 and States with economies in transition (Russia, the Baltic States, several Central and Eastern European countries). Non-Annex I Parties are those Contracting Parties recognised as 'developing' and 'least developed'.

[135] Data available online at <ipcc.ch/publications_and_data/ar4/syr/en/figure-spm-3.html> (accessed 19 February 2014).

[136] Indeed 'renewable forms of energy' are referred to only once by the Protocol, in Art. 2, a), iv.

[137] See UNFCC/SBSTA, REPORT*: 'Mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol. Text for further negotiation on principles, modalities, rules and guidelines'*, 11 May 2000, UN Doc. FCCC/SB/2000/3, para.137 (79, f), available online at <unfccc.int/resource/docs/2000/sb/03.pdf> (accessed 5 May 2014).

[138] While Contracting Parties agreed to elaborate principles, modalities, rules and guidelines on flexibility mechanisms (COP4, 1998), they initially failed to reach consensus (COP6, 2001). COP7 adopted a decision on 'Principles, nature and scope of the mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol'. However, any measure advantaging renewable energy in the context of these mechanisms was left out. Modifications to the CMD have been scholarly invoked, too. While noting

preventing its materialisation might have been that, at the time of the inception of the KP and for several years after its adoption, renewable energy technologies were not cost-efficient and such a condition could have created another stumbling block in the negotiations.[139] However, the Protocol does not exclude investments in renewable energy either, but rather encourages them through its flexibility mechanisms designed to supplement the efforts undertaken by Annex I countries in achieving their national targets of emission reduction, particularly the CDM. In fact, 70% of the total amount of the CDM projects from the start of the crediting period until the end of 2012 are related to renewable energies.[140]

By the analysis of the data, it might appear that the mechanism is indeed serving well in expanding and providing support to renewable energies. Yet, the significance of renewables lessens if the weight of the Certified Emission Reductions (CERs) credits issued for different projects is taken into consideration. Project developers in fact opt mostly for ventures that capture and eliminate gases with high global warming potential, namely hydro-fluorocarbons (HFCs), per-fluorocarbons (PFCs), sulphur hexafluoride (SF) and nitrous oxide ($N_2O$).[141] These types of activities received 58% of CERs, twice the amount issued for the projects related to renewable energy (25%).[142] Ventures in the field of renewables usually create smaller volumes of emission reductions and sustain higher total investments per project.

A comparison between two large-scale CDM projects may highlight downsides encountered by clean energy initiatives. On the one hand, there is a Dutch investment company that financed a project for conversion of $SF_6$ into alternative cover gas $SO_2$ at a Brazilian magnesium plant. On the other hand, there is a Spanish energy company that invested in a 61.5MW wind farm in South Korea. Total investment was roughly estimated to be at around USD 1.4 million in the Brazilian project and USD 123 million in the case of the Korean one. But whereas the conversion initiative creates emission reductions equal to 274,715 $tCO_2e$ per year, the wind farm delivers less than a half, 112,812 $tCO_2e$ per year.[143] In addition, transaction costs under the CDM mechanism may

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the CDM investment potential as Streck, C. and Lin, J., "Making Markets Work: A Review of CDM Performance and the Need for Reform", *European Journal of International Law*, vol. 19, ed. 2, 2008, 409-442, the doctrine also stressed the need for its reform. In this respect, see Voigt, C., "Is the Clean Development Mechanism Sustainable? Some Critical Aspects", *Sustainable Development Law & Policy*, vol. 2, ed. 7, 2008, 15-21, Kneteman, C. and Green, A., "The twin failures of the CDM: recommendations for the "Copenhagen Protocol" *Law and Development Review*, vol. 1, ed. 2, 2009, 225-256, Headon, S., "Whose Sustainable Development? Sustainable Development under the Kyoto Protocol, the "Coldplay Effect," and the CDM Gold Standard", *Colorado Journal of International Environmental Law and Pol*icy, vol. 20, 2009, 127-156.

[139] On the significant distributional consequences of the KP, see Barret, S., "International Cooperation and the Global Environment", *in*: Kaul, I., Grunberg, I., and Stern, M. A., eds., *Global Public Goods: International Cooperation in the 21st Century* Oxford University Press, New York, 1999, 192-219.

[140] More details available online at <cdmpipeline.org/cdm-projects-type.htm> (accessed 5 June 2013).

[141] A table for comparison of different global warming potentials of GHG gases is available online at <unfccc.int/ghg_data/items/3825.php> (accessed 5 June 2013).

[142] Notwithstanding, the expected amount of CERs is almost equal: 31% for the HFC, PFC and N2O projects and 34% for renewable energy projects. See statistical data at <cdmpipeline.org/cdm-projects-type.htm> (accessed 5 June 2013).

[143] Further information on the 'Yeong Yang 61.5MW Wind Farm Project' available online at <cdm.unfccc.int/Projects/DB/KFQ1210856027.26/view> (accessed 19 February 2014). For the 'Conversion of $SF_6$ to the alternative cover gas $SO_2$ at RIMA magnesium production site', see <cdm.unfccc.int/Projects/DB/TUEV-SUED1239262577.48/view> (accessed 19 February 2014).

discourage small-scale renewable energy projects that are relatively less economical than the large ones.[144]

In spite of all the difficulties, the number of projects related to renewable technologies under the CDM scheme is growing as they progressively become cost-efficient. The legal framework of the CDM remains a powerful instrument of international cooperation and undoubtedly helps to develop an international market for renewable energy.[145]

## III.2. The birth of IRENA and the current consolidation of international cooperation

In order to enhance and systematize international cooperation in the field of renewables, the International Renewable Energy Agency (IRENA) was founded in 2009. As provided under its Statute, the Agency has been conferred an exclusive mandate for the promotion of 'the widespread and increased adoption and the sustainable use of all forms of renewable energy'.[146] Being 'a centre of excellence for renewable energy technology',[147] the Agency retains a broad range of activities, such as analysis and monitoring of renewable energy policies,[148] interactions with governmental and non-governmental organisations and networks,[149] advice and assistance to the Member States on various issues (including financing and technical standards)[150]and the promotion of R&D activities through knowledge and technology transfer.[151]

It should be noted that there are other international organisations active in the field of renewable energy and that IRENA should coordinate its work in order to avoid the

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[144] Transaction costs may include legal expenses, registration fees, consultants and auditors remuneration. See Chadwick, B. P., "Transaction costs and the clean development mechanism", *Natural. Resources For*um, vol. 30, 2006, 256-271 and Del Río, P., "Encouraging the implementation of small renewable electricity CMD projects: An economic analysis of different options", *Renewable and Sustainable Energy Reviews*, vol. 11, 2007, 1361-1378, individuating also other barriers encountered by CDM projects on renewable energy (e.g. fewer economies of scale, difficulties in proving 'additionality' and the market failure determined by the absence of a market value for their contribution to sustainable development).

[145] Benefits of the Clean Development Mechanism 2012, UN Framework Convention on Climate Change, 2012, 1771 *UNTS* 107.

[146] See Statute of the International Renewable Energy Agency (IRENA), Bonn (Germany), 26 January 2009, in force 8 July 2009, Art. 3. On the Statute, see Wright, G., "The International Renewable Energy Agency: A Global Voice of the Renewable Energy Era?", *Renewable Energy Law and Policy Review*, vol. 4, 2011, 251-268. The creation of the agency was originally advocated by Hermann Scheer, former president of Eurosolar and the World Council for Renewable Energy. He proposed the draft for a Supplemental Protocol to the Nuclear Non Proliferation Treaty (NPT) of 1 June 1970 to be called 'Renewable Energy Proliferation Treaty' (REPT), mandating the institution of an IRENA to promote the transfer of renewable energy technology and energy efficiency, according to the principle of subsidiarity. See, Scheer, H., "Torwards a Solar Proliferation Treaty. Leaving the Global Atomic Trap", *in*: Stockhinger, H., Van Dyke, E., eds., *Updating International Nuclear Law: Papers Derived from the Conference on the Human Right to a Safe and Healthful Environment and the Responsibilities Under International Law of Operators of Nuclear Facilities, Held in Salzburg, Austria, October 20-23, 2005* Intersentia, Antwerp, 2007, 306-310.

[147] See IRENA Statute, Art. IV, a.

[148] *Id.*, Art. IV. A.1.a.

[149] *Id.*, Art. IV. A.1.b.

[150] *Id.*, Art. IV. A.1.c, d, e and f.

[151] *Id.*, Art. IV. A.1.g and h.

overlapping of mandates.[152] Certain doubts might arise apropos of its relationship with the UN and the likelihood that it might cover part of the same activities, thus making IRENA a duplicate of a UN institution active in the renewable energy sector. In spite of the fact that IRENA's Statute mentions the importance of principles and policies of the UN,[153] the concerns that the new Agency might lose its original purpose in the wide network of the UN institutions are groundless. None of the UN agency or program is dedicated to the sole matter of alternative energies. The United Nations Environment Program (UNEP) has a general task to assist developing nations in all kinds of environmental activities and to advise on policies that are not limited to climate change mitigation but include wise environmental management and technology transfer for sustainable development.[154] Another UN body, the United Nations Development Program (UNDP), focuses on development and collaborates with poor countries in capacity-building to integrate environmental considerations into their domestic policies.[155] However, the United Nations Industrial Development Organisation (UNIDO) promotes mainly cleaner energy and environmentally sustainable use of electricity in the industrial and agro-processing sectors.[156]

One institution having common operational ground with IRENA is the IEA. However, given its limited membership (OECD countries only) and its extensive work in other energy-related domains (i.e. energy security, economic development through stable energy supply, analysis of the traditional energy sources employment), renewable energy issues do not constitute its main focus.[157] Some might recall that other two institutions operate in the renewable energy sphere, the Renewable Energy and Energy Efficiency Partnership (REEEP) and the Renewable Energy Policy Network for the 21st Century (REN21), potentially challenging IRENA initiatives. However, it must be recalled, both REN21 and REEEP are nongovernmental organisations.[158] Whereas REN21 has indeed

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[152] As stressed by Wright, G., *supra* nt. 146, such risk is minimal for those who considered the agency as a peculiar organisation playing an 'epistemic' role instead of a legal and financial ones carried out by pre-existing bodies, as Meyer, T., "Epistemic Institutions and Epistemic Cooperation in International Environmental Governance", *Transnational Environmental Law*, vol. 1, ed. 2, 2013, 38-43.

[153] See IRENA Statute, Art. IV. B.1.

[154] UN GA resolution A/RES/27/2997 of 15 December 1972 on 'Institutional and financial arrangements for international environmental cooperation'.

[155] UN GA resolution A/RES/20/2029 of 22 November 1965 on 'Consolidation of the Special Fund and the E panded Program on Technical Assistance in a United Nations Development Programme'.

[156] UN GA resolution A/RES/21/2152 of 17 November 1966 on 'United Nations Industrial Development Organization'.

[157] Agreement on an International Energy Programme of 17 November 1984, available online at <ebv-oil.org/cms/pdf/iep.pdf> (accessed 19 February 2014). An IEA/IRENA partnership agreement was signed in January 2012. Enhancing inter-agency cooperation, as suggested, is a way to reduce overlapping risks, see Van de Graaf, T., "Obsolete or resurgent? The International Energy Agency in a changing global landscape", *Energy Policy*, vol. 48, 2012, 233-241.

[158] REEEP is a non-profit organization operating in developing countries in order to support clean energy projects. It acts as catalyst for investments in renewable energy. Its field operations are supported by various governments (e.g. certain EU countries, Australia, Canada, New Zealand, Switzerland and the US), as well as financial institutions (e.g. the OPEC Fund for International Development). See more REEEP, *Program & People*, available online at <reeep.org/program-peoplelivepage.apple.com> (accessed 5 May 2014). REN 21 is a non-profit association which tries to connect governments, international organisations, industry and academia in an effort to promote joint action in the renewable energy deployment. Its primary function relates to providing information and policy analysis. See more

certain goals in common with the Agency, being a multi-stakeholder network and a fine platform for knowledge exchange and joint action development, REEEP is mostly involved in hands-on operations and has so far gathered funds for over 180 clean energy projects in 58 countries (on the contrary, IRENA's Statute does not contemplate any provision on direct financing of green projects).

Recognising the possibilities that could stem from the collaboration with these two organisations, on the basis of its Statute (Article XIV),[159] IRENA forged strategic partnerships by signing two joint Memoranda of Understanding (MoU). In August 2011 the Agency and REEEP agreed on a partnership to cooperate, exchange information and expertise and implement various programs and best practices.[160] A closer collaboration between the Agency and REEEP will be beneficial as the latter has already secured a group of donors to appropriately fund the projects and has acquired the necessary field experience. IRENA, in turn, could guarantee fundraising to seek a financing support from other states and non-governmental organisations. Later, in January 2012 IRENA and REN21 signed a MoU in order to enhance their mutual efforts in the deployment of renewable energy.[161] The above-mentioned partnerships will help IRENA expand its range of activities, giving an impulse for developing new ways of promoting renewable energy worldwide.

However, establishing relationships with other organisations 'to ensure added value in the work with external partners'[162] is not the only goal of IRENA. Pursuant to its Statute and 'Medium-term Strategy', released in January 2013, the Agency operates independently as well. The 'Strategy' expressly states a mission of IRENA which consists in being 'the principal platform for international cooperation, a centre of excellence on renewable energy and a repository of policy, technology, resource and financial knowledge'[163] and in supporting 'countries in their transition to a renewable energy future'.[164] Basically the mission represents a concise version of Article IV of the Statute and gives the essence of IRENA's *raison d'être*. The 'Strategy' moreover elaborates and articulates in detail the specific strategic objectives of the Agency. Article II of the Statute in fact gives only a general idea of what IRENA's objectives are: promotion of 'the widespread and increased adoption and the sustainable use of all forms of renewable energy'.[165]

In its turn the 'Medium-term Strategy' outlines three main equally important objectives, three pillars, upon which IRENA should build its leadership in renewable energy cooperation. First, the document reaffirms the primary goal of becoming a centre

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REN21, 'About REN21', available online at <ren21.net/AboutREN21.aspx> (both accessed 19 February 2014).

[159] Mandating that: 'Subject to the approval of the Assembly the Council shall be authorised to conclude agreements on behalf of the Agency establishing appropriate relations with the United Nations and any other organisations whose work is related to that of the Agency'.

[160] See REEEP Press Release, available online at <irena.org/DocumentDownloads/FinalPRcooperationIRENA-REEEP.pdf> (accessed 19 February 2014).

[161] See Ren21 & IRENA, Press Release of 18. January 2012, available online at <ren21.net/Portals/0/documents/Resources/REN21-IRENA_Cooperation_signed.pdf> (accessed 19 February 2014).

[162] Decision on the Work Program and Budget for 2013, IRENA Doc. A/3/DC/13, 14 January2013, para. 12.

[163] Medium-term Strategy of IRENA: Report of the Director-General, IRENA Doc. A/3/25, 14 January 2013, para. 12.

[164] *Ibidem*.

[165] See IRENA Statute, Art II.

of excellence for renewable energy in order to provide a comprehensive existing and IRENA-originated information and to avoid an information overload as well as to organise proactive communication between stakeholders providing analytical and policy advice.[166] Second, the Agency should become a 'renewable energy advisory resource for countries' in order to assist them with the advanced technical knowledge and to help enhancing institutional, legal and business frameworks for a better investment environment.[167] Third, IRENA envisages itself as a 'network hub of country, regional and global programs' as a means to create transparency over financial support mechanisms and facilitate cooperation between different stakeholders on various levels.[168] As a matter of fact, the lack of information hinders investments. An array of financial mechanisms might be in need of a centralised coordination. A step in the right direction, chosen by the Agency, is a creation of a unified database with all the possible financial solutions (including the Global Environmental Facility, the World Bank, the UN backed funds and private sector grants) for various potential investors.

On the basis of the objectives and the provisions of the Statute, the Agency's practice has been developed in three main areas: 1) knowledge, policy and finance issues; 2) country support and partnerships; 3) promotion of innovation and spread of information on new technologies. One of the latest initiatives, developed in collaboration with the UNEP, concerns the creation of a Global Atlas for Solar and Wind Energy. Internet-based maps and data on solar and wind energy resources will provide systematic and reliable information helping to identify areas with high renewable energy potential and to direct cooperation.

Another important activity initiated by IRENA is Renewables Readiness Assessments (RRAs).[169] Initial studies were conducted in 2011 in Senegal, Mozambique and Kiribati, two African nations and a small island nation in the Pacific, where renewable energy was already deployed but where further development would be needed.[170] The fourth RRA report concerned the Caribbean Island of Grenada, whose government is willing to accomplish an ambitious transition from an oil-dependent economy into one where renewables would be a primary energy source. In each case the RRAs delivered evaluation and analysis of national potential and conditions for the deployment of renewables and the development of a renewable energy market. It aimed at giving a comprehensive vision of how a State could harness clean energy and contribute to its own economic development while becoming energy independent. An RRA report usually assesses all economic aspects related to energy (i.e. transportation and electricity generation) and the renewable energy endowment of the country. It moreover identifies and recommends particular actions to scale up the use of alternative energy. Alongside the advice services, IRENA is also committed to the promotion of educational programs

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[166] IRENA Doc. A/3/DC/13, *supra* nt. 162, paras. 14-17,

[167] *Id.*, paras. 18-24.

[168] *Id.*, paras. 25-27.

[169] RRA presents, in a form of a report, an evaluation of a country's renewable energy situation in its whole and suggests necessary actions to improve the overall state of affairs in the renewable energy sector.

[170] For more details see Kiribati Renewables Readiness Assessment 2012: Exploring sustainable and secure pathways towards energy independence, IRENA, 2012, Senegal Renewables Readiness Assessment 2012, IRENA, 2012, Mozambique Renewables Readiness Assessment 2012, IRENA, 2012, Grenada Renewables Readiness Assessment 2012,IRENA, 2012, available online at <irena.org/Publications/ReportsPaper.aspx?mnu=cat&PriMenuID=36&CatID=141> (accessed 19 February 2014).

in order to assist Member States in acquiring specialised technical skills and qualified labour. For this purpose, IRENA's Renewable Energy Learning Partnership (IRELP) was created. It intends to bridge a gap in the information on existing training in the renewable energy sector, and to provide access to learning materials and to enable interaction between education providers.

## III.3. The emergence of transnational private sector cooperation on renewables

Although IRENA is gaining ground in the field of the international cooperation, it is worth noting that there additionally exist separate and independent initiatives - an outcome of voluntary collaboration among States and non-State actors. The so-called 'voluntary carbon markets' were born and are having success among developed countries (especially in the U.S. where no federal cap-and-trade scheme exists).[171] State willingness to cooperate in spite of difficult global climate negotiations[172] made possible the development of a dozen of new voluntary programs. The demand in these markets is driven by companies autonomously choosing to offset their own emissions by choice. In 2011 the volume of transacted carbon credits barely reached a 0.1% of the global carbon markets, yet it is growing in value terms and proving the readiness of private sector to contribute to the green economy.[173] Renewable energy projects as a category have generated 45% of all volumes of carbon credits, with wind technologies as the dominant type.[174] Most transacted wind credits (65%) were generated in Asia and Turkey and the transaction volumes of the US-based renewable energy projects have grown.[175]

Europe is one of the most active participants in the environmental initiatives and distinguished itself in the field of renewables as well. Two examples can illustrate its readiness to promote the development of clean energy worldwide: the Small Developing Island Renewable Energy Knowledge and Technology Transfer Network (DIREKT) and the DESERTEC project.[176] The former is an EU-funded cooperation scheme under the ACP Science and Technology program. It originates from the collaboration between universities in Germany, Fiji, Mauritius, Barbados and Trinidad and Tobago with a goal to enhance sustainable cooperation and technology transfer by filling a gap in a scarce expertise and an insufficient access to the latest technologies. In its turn, DESERTEC objective is to strengthen the renewable energy capacity (mainly of solar energy) by constructing solar-thermal power plants in desert areas. The electricity generation from

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[171] Ecosystem Marketplace & Bloomberg New Energy Finance, 'Developing Dimension: State of the Voluntary Carbon Markets 2012'.

[172] CMP8 established a second commitment period (1 January 2013 - 31 December 2020) pursuant to the mandate of the Durban Platform for Enhanced Action (COP17/CMP7), requiring to 'adopt a protocol, another legal instrument or an agreed outcome with legal force as soon as possible but no later than 2015', see Decision 1/CP.8, Amendment to the Kyoto Protocol pursuant to its Article 3, paragraph 9, the Doha Amendment, UN Doc. FCCC/KP/CMP/2012/13/Add.1, 28 February 2013.

[173] Peters-Stanley, M., Hamilton, K., "Developing Dimension: State of the Voluntary Carbon Markets 2012", Ecosystem Market Place/Bloomberg Energy Initiative, 10, available online at <www.forest-trends.org/documents/files/doc_3166.pdf> (accessed 8 March 2014).

[174] *Id.*, 17.

[175] *Id.*, 18.

[176] For further details, respectively see <direkt-project.eu> and <desertec.org> (both accessed 19 February 2014).

those plants will supplement the electricity coming from already existing intermittent renewable energy generators (PV and wind turbines). The project was initiated by the DESERTEC Foundation, an NGO established in 2009 by the German Association of the Club of Rome and a group of scientists, economists and politicians interested in alternative energy. The DESERTEC Concept was created as a result of their collaboration. It consists in harnessing renewable energy in places where it is largely and almost constantly available and, once converted into electricity, transmitting it to centres of demand. The concept was first developed for the MENA (Middle East and North Africa) region and aimed at interconnecting Europe and Northern Africa in order to export electricity generated from renewables to the European countries thus pursuing two goals: to guide developing countries along the sustainable development path while bringing more clean energy to EU countries. Early activities took place in Morocco, Tunisia and Egypt and mostly concerned the development of technical skills and expertise. The DESERTEC Foundation, for instance, has recently participated in the TuNur-project,[177] an initiative designed to produce clean energy in the Tunisian desert and export it on the other side of the Mediterranean.[178] All these activities demonstrate the existence of an expanding interest towards the development of transnational renewable energy networks. Private initiatives thus coexist alongside States and international organisations by virtue of their inherent characteristics (more flexibility, efficiency, productiveness) can further stimulate the global expansion of the renewable energy sector.

# IV. Conclusions

Renewable energy generation is key for the attainment of sustainable development and climate stabilisation. Empowering the world through the use of renewable resources certainly stands amongst the biggest challenges facing the international community. Nevertheless, States are not always keen to embrace a global basis for renewables as demonstrated by many soft law instruments. More significantly, renewable energy developments are not supported by any legally binding norm, let alone any *ad hoc* agreement, entailing a detailed discipline on renewable energy generation. On the contrary, as it has been discussed, international binding norms negotiated for different purposes and in different *fora* can incidentally limit the policy space of States willing to pursue renewable energy goals.

As suggested by the outcome of the cases chosen here for their either direct or indirect relevance to the production of energy from renewable sources, such activity, although *per se* desirable, must be carried out consistently with State obligations in the human rights area and must guarantee an effective exercise of environmental procedural rights from the public. Furthermore, in the absence of internationally binding instruments setting a positive discipline for renewable energy generation, the pursuit of renewable energy goals through national policies cannot alone justify the departure from binding international trade rules. Any international legal development fostering renewable energy generation should integrate these concerns to the greatest extent possible.

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[177] TuNur Ltd. is a joint-venture formed by NurEnergie, a multi-technology solar power plant developer and Tunisian investors. It has been developing the TuNur Project, an export initiative between Europe and Tunisia.

[178] More information about the TuNur Project can be found at <tunur.tn> (accessed 19 February 2014).

However, international cooperation in the renewable energy sector shows positive trends of development. The past reluctance to address clean energy needs, as observed in the Kyoto Protocol-related negotiations, brought certain difficulties in the deployment of the renewable energy projects under the CDM. Given the falling costs of clean technologies and an ever-growing interest in preventing negative effects from climate change, any new climate change agreement should be framed to give priority to renewable energy investments. Meanwhile IRENA has been established and developed its initial practice, making its way through a network of existing international organisations operating in the field of renewables. Today IRENA has a solid strategic base allowing the Agency to carry out its programs and activities in a transparent and independent manner, due also to the various partnerships it has built. IRENA has positioned itself as a remarkable platform for international cooperation in renewables but further analysis will be required to see how the Agency succeeds in reaching its objectives. Nonetheless, cooperation is not confined to States' initiatives, characterised by slowness and difficulty in finding compromise between multiple interests. Indeed, more flexible private transnational cooperation may also prompt further development of renewable energy amongst State and international organisations.

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# Balancing Energy Development and Environmental Rights: From Foreign Litigation to International Insurance?

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**Keywords**
ENVIRONMENTAL INSURANCE; FOREIGN DIRECT LIABILITY; CORPORATE ACCOUNTABILITY; ENERGY SECURITY; HUMAN RIGHTS; OIL POLLUTION; MULTINATIONALS; SHELL PETROLEUM; MIGA.

**Abstract**
This article examines the use of foreign direct liability suits, including the ones currently in the Dutch court system by Nigerian plaintiffs against Shell Petroleum, to protect environmental and economic interests in oil-producing communities. The paper suggests that while these suits are a valuable tool in advancing the cause of a clean environment, they fall short in accomplishing the goal. Additional tools, such as an international insurance scheme, may need to be introduced to create a more effective framework.

## I. Introduction

Over the years, victims of human rights and environmental abuse emanating from the operations of multinational corporations in developing countries have sought remedies in the domestic courts of the United States and, more recently, some European countries. They have relied on the Alien Tort Statute (ATS) and traditional tort theories such as negligence, strict liability, trespass and nuisance. These efforts have met with minimal success. Worse still, the doors seem to be closing fast in the case of using the United States as an avenue for redress, in light of the Supreme Court decision in *Kiobel v. Royal Dutch Shell*.[1] Nevertheless, tort claims are likely to continue in Europe and the United States, with the venue of litigation in the latter possibly shifting more toward state courts,

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1 *Kiobel v. Royal Dutch Petroleum Co.,* 133 S. Ct. 1659, 185 L. Ed. 2d 671, 2013. For useful commentary on the decision, see Meyer, J. A., "Extraterritorial Common Law: Does The Common Law Apply Abroad?", *Georgetown Law Journal*, vol. 102, 2014, 301-350, 305. ('In the meantime, the Supreme Court has recently ruled in *Kiobel v. Royal Dutch Petroleum Co*. to apply the statutory presumption against extraterritoriality to severely curtail the extraterritorial application of the Alien Tort Statute (ATS)--a federal statute that to date has served as the primary vehicle for scores of lawsuits in the U.S. courts arising from human rights violations in foreign countries.') (citation omitted); Slawotsky, J., "ATS Liability For Rogue Banking In A Post-Kiobel World", *Hastings International and Comparative Law Review*, vol. 37, 2014, 121-158, 122. 'In *Kiobel v. Royal Dutch Petroleum Co.*, [**FN1**] the Supreme Court dramatically limited the viability of utilising the Alien Tort Statute ("ATS") to enforce international law norms. In *Kiobel*, a five-justice majority of the Supreme Court held that a presumption exists against extraterritorial application of the ATS. However, the majority opinion ruled the presumption can be rebutted if the international law violation 'touches and concerns' the United States with 'sufficient force' (citations omitted).

as opposed to federal courts under the ATS.[2] This paper introduces compulsory international insurance as another tool for preventing significant environmental harm and human rights abuse, protecting local communities hosting major energy projects and generally ensuring the wellbeing of the residents of these communities.

The importance of tort liability as a tool for seeking legal redress and regulating behaviour cannot be over-emphasised. Nevertheless, to accomplish some of the goals of tort liability, including financial redress for victims and prevention of damaging behaviour through the deterrence effect of financial liability, it is important to complement this tool with other tools. One proven tool that can serve this purpose is liability insurance that provides a guaranteed source of compensation to victims and enables them to bring direct action against the insurers. In that regard, one can draw lessons from pollution of international and territorial waters through oil spills from ships and related vessels. For many years, victims of ship-source oil pollution relied on tort remedies by bringing claims based on negligence, nuisance, trespass and strict liability.[3] However, following the *Torrey Canyon* disaster of 1967, the international community formulated rules and established structures for compensating environmental pollution victims while deterring environmentally damaging behaviour by oil companies and ship owners.[4] A similar system, *mutatis mutandis*, should be contemplated for catastrophic oil spills not involving ships or structures covered under the existing international conventions.[5]

To put this issue in the proper context, victims of the Deep Water Horizon incident of 2010 in the United States, which ranks as the largest oil spill in the history of the world,[6] may not be able to rely on these conventions to seek redress.[7] Similarly, victims of business-associated human rights violations and massive oil spills that have devastated the environment in the Niger Delta area of Nigeria are not afforded meaningful remedies under international law. As the United Nations, in particular the Human Rights Council, considers ways of regulating corporate behaviour, it should include as part of the regulatory kit, the imposition of compulsory insurance for risks faced by host communities from business-related human rights abuses and environmental devastation.

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2 Whytock, C. A. *et al.*, "Foreword: After Kiobel: International Human Rights Litigation in State Courts and Under State Law", *UC Irvine Law Review*, vol. 3, ed. 1, 2013, 1-8, 5, stating that, after Kiobel, 'plaintiffs alleging human rights violations are increasingly likely to consider pursuing their claims in state courts or under state law'.

3 Billah, M. M., "The Role of Insurance in Providing Adequate Compensation and in Reducing Pollution Incidents: the Case of the International Oil Pollution Liability Regime", *Pace Environmental Law Review*, vol. 29, 2011, 42-78, 45.

4 Nordtvedt Reeve, L. L., "Of Whales and Ships: Impacts on the Great Whales of Underwater Noise Pollution From Commercial Shipping and Proposals for Regulation Under International Law", *Ocean and Coastal Law Journal*, vol. 18, 2012, 127-166, 141: '[t]he need for regulation became alarmingly clear when, on March 18, 1967, the supertanker Torrey Canyon ran aground in the waters of the U.K. and began to discharge oil into the sea off the Cornish coast.' (citation omitted).

5 The international oil pollution compensation regime is comprised of two international conventions: (1) International Convention on Civil Liability for Oil Pollution Damage, 1969, 973 UNTS 3; and (2) International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971, 1110 UNTS 57 and amendments thereto.

6 Smith, M., "The Deepwater Horizon Disaster: An Examination of the Spill's Impact on the Gap in International Regulation of Oil Pollution from Fixed Platforms", *Emory International Law Review*, vol. 25. 2011, 1477-1516, 1477.

7 *Id.*, 1488, 1505.

The insurance regime would include a provision that ensures that victims of the human rights abuse and environmental damage have access to the insurance proceeds by enabling them to bring direct action against the insurers. An anticipated secondary consequence of the proposal is improvement of corporate-community-government relations that affords the social license that corporations need for successful operations in the host areas.[8] Ultimately, this approach is consistent with the notion of sustainable development in its classic formulation that seeks to balance economic growth with environmental protection.[9]

The article is organised into five parts. Part I focuses on the concept of foreign direct liability ("FDL"), paying particular attention to its rationale. FDL suits are premised on the notion that the companies that benefit from foreign direct investment should also bear the burden of compensating for the negative consequences of their business operations, whether such results occur directly through their acts or omissions or as a result of the action or inaction of their subsidiaries.[10] In other words, FDL proponents view foreign direct liability as the flip side of foreign direct investment.[11] Part II discusses recent international cases on foreign direct liability, namely the cases in the Dutch court system by Nigerian plaintiffs against the international oil company, Shell. Part III considers the value of using insurance as a tool for redressing environmental damage and argues for the inclusion of a mandatory insurance provision in a proposed international human rights treaty that aims to impose obligations on corporations. Part IV examines some potential objections to the insurance proposal. Part V is the conclusion.

# II. Foreign Direct Investment Versus Foreign Direct Liability

## II.1 Foreign Direct Investment

There are two primary sources of foreign investment into any country, namely foreign portfolio investment ("FPI") and foreign direct investment ("FDI"). Portfolio investment refers to the kind of investment that does not involve building a business and the accompanying infrastructure; instead it takes the form of investing through the stock market.[12] Foreign direct investment, usually involves establishing of a physical presence

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[8] For a development of the social license argument in international operations, see Duruigbo, E., "Community Equity Participation in African Petroleum Ventures: Path to Economic Growth?" *North Carolina Central Law Review*, vol. 35, 2013, 111.

[9] UN World Commission on Environment and Development, Bruntland, G., REPORT: *Our Common Future: Report of the World Commission on Environment and Development,* UN Doc. A/42/427, 1987, Switzerland, defining sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

[10] It is an inveterate principle that those who reap the burden should bear the burden, and vice versa, as encapsulated in the maxim *qui sentit commodum sentire debet et onus et contra*. For a sample of cases applying the principle, see *Tillman v. Commercial Credit Loans, Inc.,* 362 N.C. 93, 115; 655 S.E.2d 362, 2008; *Norfleet v. Cromwell*, 70 N.C. 510, 516, 70 N.C. 634, 641, 1874.

[11] See *infra* Part I.

[12] Buzzle, Sukumar, S., *Difference Between Foreign Direct Investment and Foreign Portfolio Investment,* 8 November 2011, available online at <www.buzzle.com/articles/difference-between-foreign-direct-investment-and-foreign-portfolio-investment.html> (accessed 26 February 2014), defining foreign portfolio investment as 'a type of investment in financial securities such as bonds, debentures, stocks, warrants, options, domestic mutual funds, etc., with an intent to get financial gain.'.

in the country.[13] Put in clearer terms, 'FDI is a direct investment in buildings, technologies, equipment and machinery belonging to the firm of a host country (foreign firm), while FPI is an indirect investment in the foreign firm by simply buying the stocks of the company and not getting involved in any major activities of the firm.'[14] Accordingly, FDI also tends to involve a longer investment horizon "wherein the investor reflects a long-lasting and controlling interest in the firm, while FPI is a short-term process" with the portfolio investor evincing little or no interest in managing or controlling the firm, considering that such investor has a short-term investment plan.[15]

The past few decades have witnessed a tremendous growth in foreign direct investment, leading to the presence in the global economic stage today of tens of thousands of multinational corporations and their subsidiaries with operations in various corners of the world.[16] Support for increased FDI partly stems from the belief that FDI flows are beneficial to the recipient or host country, although critics note that the benefits are insufficient to justify the costs to these countries.[17] Some scholars capture the conflicting sentiments by noting that corporations that invest in other countries afford benefits to the host countries in the form of the tax revenues they generate, jobs they create, skills and technologies they transfer and the contribution they make toward raising the standard of living in those countries.[18]

On the negative side of the ledger of contributions by foreign direct investors are the facts that these investors may orchestrate or be directly implicated in human rights abuse. In their quest for development through foreign investment and the attendant competition for investors, host countries may also lower their environmental and labor standards or adopt a lackadaisical attitude towards such issues, instead of enforcing existing rules,

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[13] According to the International Monetary Fund, FDI is 'an investment that is made to acquire a lasting interest in an enterprise operating in an economy other than that of the investor, the investor's purpose being to have an effective voice in the management of the enterprise' See Buzzle, Sukumar, S., *Difference Between Foreign Direct Investment and Foreign Portfolio Investment,* 8 November 2011, available online at <www.buzzle.com/articles/difference-between-foreign-direct-investment-and-foreign-portfolio-investment.html> (accessed 26 February 2014).

[14] *Ibid*.

[15] *Ibid*.

[16] UN GA, John Ruggie, REPORT: *Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises* 9 April 2010, UN Doc. A/HRC/14/27, stating that there are more than eighty thousand multinational corporations operating in the world with about ten times the number of subsidiaries.

[17] See Cragg, B. T., "Home is Where the Halt is: Mandating Corporate Social Responsibility Through Home State Regulation and Social Disclosure", *Emory International Law Review*, vol. 24, 2010, 735-775, 752-53; Anderson, R. J., "Toward Global Corporate Citizenship: Reframing Foreign Direct Investment Law", *Michigan State Journal of International*, vol. 18, 2009, 1-31, 3, stating that foreign direct investment has not always lived up to the expectation of providing such benefits as technology transfer, increased tax revenue and overall economic prosperity.

[18] Wouters, J. and Chanet, L., "Corporate Human Rights Responsibility: A European Perspective", *Northwestern Journal of International Human Rights*, vol. 6, 2008, 262-303, 262; Bunn, I. D., "Global Advocacy for Corporate Accountability: Transatlantic Perspectives from the NGO Community", *American University International Law Review*, vol. 19, 2004, 1265-1306, 1269: '[a]lthough some NGOs have a distinctly "anti-corporate" stance, most readily acknowledge the potential benefits of corporate investment, including creating of jobs, improvement of infrastructure, and transfer of knowledge. The problem arises when corporate activities impinge on the realization of human rights, exploit workers, harm the environment, marginalize vulnerable populations, or produce other negative social consequences.' (citations omitted).

raising the bar and pushing for improvements.[19] Thus, foreign investors are able to take advantage of these states of affairs, thereby unduly burdening these countries and further consigning them to the lower rungs of quality living. In order to avoid and redress the negative consequences of the involvement of multinational corporations, especially in developing countries, the phenomenon of foreign direct liability has emerged as the flip side of foreign direct investment.[20]

## II.2 Foreign Direct Liability

Foreign direct liability refers to the concept of utilising claims brought by plaintiffs from developing countries seeking to hold the parents in a multinational corporate family, civilly liable in countries where the parents are headquartered, or in alternative jurisdictions, for their negligent decisions, actions or omissions that caused harm to the plaintiffs.[21] In a useful description provided in the early 2000s, which has since become a little outmoded, Halina Ward views the term as denoting '[a] new wave of legal actions in the UK, US, Canada and Australia [that] aims to hold parent companies legally accountable in developed country courts for negative environmental, health and safety, labour or human rights impacts associated with the operations of members of their corporate family in developing countries.'[22] Ward further notes that these foreign direct liability suits seek to promote accountability 'by testing the boundaries of existing legal principles, rather than by calling for new regulation.'[23] Thus, in bringing these suits, a typical plaintiff relies on existing legal theories of negligence, nuisance and trespass, among others.[24] Foreign direct liability 'defies the general principle that the jurisdiction of

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[19] Wouters, J., *supra* nt. 18, 262.

[20] Ward, H., "Securing Transnational Corporate Accountability Through National Courts: Implications and Policy Options", *Hastings International and Comparative Law Review*, vol. 24, 2001, 451-474, 454. (stating that foreign direct liability cases 'represent the flip side of foreign direct investment. . . .'); Afrin, Z., "Foreign Direct Investments and Sustainable Development in the Least-Developed Countries", *Annual Survey of International and Comparative Law*, vol. 10, 2004, 215-232, 231. ('The idea is to propose the flipside of foreign direct investment – foreign direct liability.'); Banakas, S., "A Global Concept of Justice – Dream or Nightmare? Looking at Different Concepts of Justice or Righteousness Competing in Today's World", *Los Angeles Law Review*, vol. 67, 2007, 1021-1042, 1038, quoting a statement by a senior executive of Google that global liability is following the footsteps of global commerce.

[21] Thompson, R. C. *et al.*, Translating Unocal: The Expanding Web of Liability for Business Entities Implicated in International Crimes, *George Washington International Law Review*, vol. 40, ed. 4, 2009, 841, 874: '[t]he concept of foreign direct liability has been applied in the context of civil lawsuits, where the parent itself, not the subsidiary, is alleged to have made decisions that have caused the harm.'; Enneking, L. F. H., "Crossing the Atlantic? The Political and Legal Feasibility of European Foreign Direct Liability Cases", *George Washington International Law Review*, vol. 40, ed. 4, 2009, 903, 904, referring to foreign direct liability cases as those cases 'in which plaintiffs file civil-liability claims against parent companies of multinational corporations in the courts of developed countries for damage caused by subsidiaries in developing countries…'.

[22] Ward, H., "Governing Multinationals: The Role of Foreign Direct Liability", *Royal Institute of International Affairs*, vol. 18, ed. 1, 2001, available online at <chathamhouse.org/publications/papers/view/107528≥ (accessed 10 April 2014. Obviously, with the entrance or possible entrance of other countries, such as the Netherlands, a definition that is limited to a few enumerated countries may be considered incomplete or inaccurate.

[23] *Ibid*.

[24] Ramasastry, A., "Corporate Complicity: From Nuremberg to Rangoon: An Examination of Forced Labor Cases and Their Impact on the Liability of Multinational Corporations", *Berkeley Journal of International Law,* vol. 20, ed. 1, 2002, 91, 158, stating that foreign direct liability claims are based on 'a

national courts is limited to national borders. It allows courts in one country to apply international laws or its own national laws "extraterritorially" to the operations of a corporate entity in another country.'[25] Indeed, scholars have identified different bases of parent company liability.[26] These explanatory bases sometimes overlap or complement one another.[27]

Until recently, the United States has dominated the arena of foreign direct liability claims through litigation pursued under the Alien Tort Statute.[28] Recent developments suggest that Europe may be emerging as the new theatre for seeking corporate liability and accountability for foreign infractions affecting the environment or human rights, or corporate actions that are simply characterised as torts against persons or property.[29]

Foreign direct liability litigation is premised on the notion that the nature and structure of the multinational corporations, with their global reach and influence, and the limitations of national jurisdiction over them, warrant the imposition of extraterritorial jurisdiction.[30] Supported by the corporate law doctrines of separate legal personality and limited liability, with the attendant reluctance by the courts to pierce the corporate veil, parent companies are able to shield themselves from liability for the negative actions of their subsidiaries.[31] The central objective of foreign direct liability suits, therefore, is to

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tort theory of a parent corporation's breach of duty through its investments overseas that may also create civil liability in the United States and potentially other jurisdictions.'; Enneking, L. F. H., *supra* nt. 21, 923, stating that 'foreign direct liability claims based on ordinary tort law are likely to involve complaints of negligent behavior by the multinational corporation's parent company, alleging that it owed individuals or communities in the host country a duty of care which it did not observe, resulting in personal, material, or environmental damage in that country.' (citation omitted).

25 Palmer, A., Community Redress and Multinational Enterprises, at 10 (Nov. 2003) available online at <www.business-humanrights.org/Links/Repository/648189> (accessed 6 May 2014).

26 Mushkat, R., Corporate Social Responsibility, International Law, and Business Economics: Convergences and Divergences, Oregon Review of International Law, vol.12, ed. 1, 2010, 55, 64, discussing the various competing theories of parent company liability, including primary liability, vicarious liability, secondary liability and enterprise liability.

27 *Id*., 64.

28 Enneking, L. F. H., *supra* nt. 21, 904, noting that compared to the United States, foreign direct liability suits have been introduced more slowly in Europe; Banakas, *supra* nt. 20, 1038, quoting an observation that the U.S. tort litigation system was spreading to Europe. Cases brought under the Alien Tort Statute have also been described as a form of foreign direct liability litigation.

29 Kirshner, J. A., "Why is the U.S. Abdicating the Policing of Multinational Corporations to Europe?: Extraterritoriality, Sovereignty, and the Alien Tort Statute, *Berkeley Journal of International Law"*, vol. 30, ed. 2, 2012, 259, 259-260: '[f]or several decades, the United States has acted as the global leader in imposing accountability on multinational corporations in the area of human rights. Recently, however, U.S. courts have declined jurisdiction to police their extraterritorial abuses[…].The retraction in willingness of U.S. courts to exercise extraterritorial jurisdiction over multinationals is occurring just as the courts of many European member states are becoming more open to it.'

30 *Id*., 264-268; Bunn, I. D., *supra* nt. 18, 1270: '[c]orporate structure and activities that transcend international boundaries are difficult to regulate.' (citation omitted).

31 Kirshner, J. A., *supra* nt. 29, 264–265; Muchlinski, P., "The Changing Face of Transnational Business Governance: Private Corporate Law Liability and Accountability of Transnational Groups in a Post-Financial Crisis World", *Indiana Journal of Global Legal Studies*, vol.18, ed. 2, 2011, 665, 685; Thompson, R. C., *et al.*, *supra* nt. 21, 873-874: Laws that provide for 'piercing the corporate veil' so as to hold parents civilly or criminally accountable for the acts of a subsidiary, are found in multiple jurisdictions. Even so, there also appears to be a deeply rooted respect for corporate forms, and courts apply the doctrine reluctantly. Some countries do not even recognise the doctrine too apply the doctrine in cases of crimes or torts. Where the doctrine applies, it generally requires that the parent must be proven to be

seek to hold the parent companies to account in their home (or third) countries for activities that took place in host countries where the national political and judicial systems are unwilling or unable to do so for a variety of reasons.[32] These lawsuits aim to impose pressure on 'parent companies of multinational corporate groups to ensure that their behavior as direct investors in other countries matches the standard of care in the home country.'[33] Foreign direct liability is further justified by the fact that the host country's courts would often not have jurisdiction over the parent company.[34] To the extent that the parent company's activities are legally sanctionable anywhere, not allowing such suits is tantamount to endorsing corporate impunity.[35] Plaintiffs are also enamoured of foreign direct liability litigation because they expect larger verdicts than would be the case in their native countries.[36] Foreign direct liability suits are further propelled by the presence of public interest lawyers that 'are employed by charitable organizations that receive support for their work from major foundations and see their work as part of broader efforts to strengthen the accountability of multinational corporate groups' and the existence of lawyers in for-profit law firms that undertake these cases on *pro bono* or contingency fee bases, thereby removing the financial burden on the plaintiffs.[37]

The future of foreign direct liability may be inexorably intertwined with an ability to carefully strike a balance between access to justice, which the exercise of extraterritorial jurisdiction affords, and the legitimate charges it generates about interference with the internal affairs of the host country and the need to avoid frictions in foreign relations.[38]

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the 'effective manager' of the subsidiary, or has 'imposed its own decisions,' that the corporate form is a 'mere façade,' or that 'the corporate identity was used to perpetrate a fraud.' *Id*. (citations omitted).

32 Kirshner, J. A., *supra* nt. 29, 266-267; Palmer, *supra* note 25, 10: '[p]eople and communities resorting to bringing claims in home-country courts are likely to have experienced obstacles to redress in the host jurisdiction.' For extensive discussions of reasons for seeking corporate accountability outside the host country of the multinational corporation, see Duruigbo, E., "Corporate Accountability and Liability for International Human Rights Abuses: Recent Changes and Recurring Challenges", *Northwestern University Journal of International Human Rights*, vol. 6, ed. 2, 2008, 222.

33 Bunn, I. D., *supra* nt. 18, 1293 (citation omitted); Ward, H., *supra* nt. 20, 456, stating that foreign direct liability suits share a close relationship with calls by NGOs for the alignment of behaviour of parent companies of multinational corporate groups as direct investors in other countries with applicable standards of care at home.

34 McLoughlin, A. M., "International Trend of Multinational Corporate Accountability for Human Rights Abuses and the Role of the United States", *Ohio Northern University Law Review*, vol. 33, ed. 1, 2007, 153, 158.

35 It bears noting that concern for lack of accountability of multinational corporations operating in developing countries has become a major point of reference in the negotiation of civil liability treaties. See Sachs, N., "Beyond the Liability Wall: Strengthening Tort Remedies in International Environmental Law", *UCLA Law Review*, vol. 55, ed. 4, 2008, 837, 868.

36 See Ward, H., *supra* nt. 20, 462 – 464.

37 *Ibid*.

38 See generally: Duruigbo, E., "Exhaustion of Local Remedies in Alien Tort Litigation: Implications for International Human Rights Protection", *Fordham International Law Journal*, vol. 29, ed. 6, 2006, 1245; Duruigbo, E., "The Economic Cost of Alien Tort Litigation: A Response to the Awakening Monster: The Alien Tort Statute of 1789", *Minnesota Journal of Global Trade*, vol. 14, ed. 1, 2004, 1.; Kirshner, J. A., *supra* nt. 29, 268; Ward, H., *supra* nt. 20, 459, stating that a 'major point of controversy is that because courts are public rather than private actors, foreign direct liability can generate foreign policy tensions.' Nevertheless, a persuasive case can be made for extraterritorial regulation or jurisdiction. See Broecker, C. "Better the Devil you Know: Home State Approaches to Transnational Corporate Accountability", *New York University Journal of International Law and Policy*, vol. 41, ed. 1, 2008, 159,

The new wave of foreign direct liability suits in Europe seem to be successfully navigating the murky waters through an innovative approach that seeks to avoid the obstacles occasioned by an application of the entity theory, which views the various units within the multinational corporate family as separate entities.[39] Instead, plaintiffs emphasise the enterprise theory that characterises the units as members of one corporate family, and on that basis seek to hold the parents liable for their omissions in preventing the commission of the tort or perpetration of the environmental or human rights abuse.[40] In other words, parent companies' actions are reviewed under the rules of the countries in which they reside, thus obviating or mellowing the objections to extraterritorial jurisdiction.[41] It was apparently on the basis of this understanding that the Nigerian plaintiffs opted for litigation in the Netherlands against Royal Dutch Shell (RDS) and Shell Petroleum Development Company, Nigeria (SPDC). The following part provides a factual background of the Nigerian lawsuits.

# III. Recent Nigerian Cases in the Netherlands

It is now well known that oil and gas production in Nigeria has had devastating consequences for the well-being of communities hosting the petroleum operations.[42] These cases highlight the human and environmental toll that accompanies oil extraction and distribution in the resource-rich Niger Delta region of Nigeria.

## III.1 Factual Background

The three cases focused on oil spills in the Nigerian states of Akwa Ibom,[43] Rivers[44] and Bayelsa,[45] affecting the lands used for farming and fishing by the plaintiffs. The facts of the Goi oil spills in Rivers State are presented here for the purposes of illustration and illumination. On 27 April 2009, Mr. Barizaa Manson Tete Dooh, a resident of Goi in Rivers State of Nigeria in collaboration with Vereniging Milieudefensie (Friends of the Earth Netherlands), brought the lawsuit against Royal Dutch Shell and Shell Petroleum Development Company (SPDC), Nigeria.[46]

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185-187, rationalising extraterritorial regulation on the grounds that it is current practice in some areas, host states are frequently unable or unwilling to protect human rights, and inability of actors besides States to thoroughly address short or medium-term violations of human rights by corporations.

39 McLoughlin, A. M., *supra* nt. 34, 170, outlining the distinction between the entity theory and enterprise theory approaches to corporate liability; see generally, Blumberg, P. I., "Accountability of MNCs: The Barriers Presented by Concepts of the Corporate Juridical Entity", *Hastings International and Comparative Law Review*, vol. 24, ed. 2, 2001, 297.

40 Kirshner, J. A., *supra* nt. 29, 279-281; Muchlinski, P., *supra* nt. 31, 685-86.

41 *Ibid*.

42 For extensive accounts, see e.g. Duruigbo, E., "Managing Oil Revenues for Socio-Economic Development in Nigeria: The Case for Community-Based Trust Funds", *North Carolina Journal of International Law and Commercial Regulation*, vol. 30, .2004-2005, 121-196;); Emeseh, E., *et al.*, "Corporations, CSR and Self Regulation: What Lessons from the Global Financial Crisis?", *German Law Journal,* vol. 11, 2010, .230-259, 243-244 .

43 District Court of the Hague, 30 January 2013, *Akpan v. Shell,* C/09/337050 / HA ZA 09-1580.

44 District Court of the Hague, 30 January 2013, *Dooh v. Shell*, C/09/337058 / HA ZA 09-1581.

45 District Court of the Hague, 30 January 2013, *Oguru v. Shell*, C/09/330891/ HA ZA 09-0579.

46 Writ of Summons in *Dooh v. Shell*.

The plaintiffs averred that on or around 23 August 2003, an oil spill occurred at a manifold - a set of high-pressure valves and associated piping that diverts oil or gas for a variety of purposes, such as disposal or storage, or to a production line - with the oil spilling into the Goi creek. Following the spill, the adjacent farmland and fish ponds owned or possessed by plaintiff Dooh were completely covered with oil. Two days later, plaintiff Dooh wrote a letter to SPDC, the operator of the manifold, notifying it of the spill and requesting an examination of the affected area and termination of the effects of the spill. SPDC did not respond to the letter or to a second letter sent shortly afterwards. Another spill occurred a year later, in October 2004, this time from the 24-inch Bomu-Bonny Trans Niger oil pipeline (operated by SPDC) near Goi. The oil flowed into a creek next to the pipeline and spread across the first plaintiff's farmland and spilled into his fish ponds. SPDC responded two days after the discovery of the spill and embarked on efforts to clean up the contaminated site. However, the plaintiffs alleged that SPDC 'failed to adequately clean up both plaintiff Dooh's oil-contaminated possessions and the environment near Goi' and that at the time of instituting the suit, '[t]he oil has still not been fully cleaned up.' The plaintiffs attributed both spills to defective maintenance and failure by SPDC to replace its pipelines in a timely manner.[47]

The plaintiffs linked the particular facts of their case, the factual background in which it occurred and their legal claims by asserting that '[t]he oil spills that inflicted damage on plaintiff Dooh and the environment were not incidents; rather they were part of a pattern of oil spills as a result of Shell's oil production in the Niger Delta.'[48] Noting that the defendants were aware of the incidence of these spills and based on the pattern of oil spills in the Niger Delta, the plaintiffs contended that the defendants were under a stringent duty to act with due care to avoid the spills that are the subject of the instant litigation.[49]

## III.2 Expert and Judicial Opinions

Interestingly, Netherlands is conspicuous for its absence in Halina Ward's often-quoted definition of foreign direct liability in the early part of this past decade.[50] That these important cases were entertained and adjudicated upon in the Netherlands is an eloquent testimony to the expanding influence of foreign direct liability litigation and the emerging significance of the Netherlands as a key player in this odyssey.[51] This article emphasises the core issues that the court focused on in disposing of the cases. The court addressed key procedural and substantive issues, namely standing and parent and subsidiary corporations' duty to prevent sabotage of oil installations. In reaching its decisions, the court relied in part on the opinions of a number of legal experts, including the present author, on aspects of Nigerian law. As relevant, references will be made periodically to portions of the opinions that are germane to this article.

Relying on the opinion of its expert, Professor Fidelis Oditah, QC, SAN, Shell argued that the plaintiffs lacked standing to commence or maintain the lawsuits because they did

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47 *Id.*, paras. 25 – 34.
48 *Id.*, para. 38.
49 *Ibid.*
50 *Supra* nt. 22.
51 See Enneking, L. F. H., 2009, *supra* nt. 2121, 905, noting that the Dutch litigation against Shell 'raise[s] the prospects of translating foreign direct liability cases into the European context'.

not have ownership or possession of the lands and fish ponds affected by the oil spill. Shell also argued that the plaintiffs could bring the action on behalf of their families or communities, whom Shell noted were the owners of the land, but in so doing the plaintiffs could not seek personal compensation but could only pursue collective recovery, which they were not doing. Moreover, there was no indication that they were authorised by the families or communities to bring the suits in a representative capacity. I concur with the view that either ownership or possession is a prerequisite for obtaining compensation for the spills under Nigerian law. I disagreed, however, that the plaintiffs had not shown that they were in possession.[52] The court decided to focus only on the question of possession, since Shell had also conceded that proof of possession alone was sufficient to establish standing, contrary to its earlier insistence on both ownership and possession.[53] The court found that the plaintiffs had established that they were in possession and thus entitled to bring the claims for compensation.[54]

The major substantive issue that demanded resolution was the plaintiffs' assertion that both the parent company and the Nigerian subsidiary owed a duty to prevent foreseeable sabotage of oil installations. Where such duty is not discharged and a third party vandalises oil facilities owned or controlled by a defendant, resulting in damage to a plaintiff, the plaintiff can maintain a claim in law against that defendant. The court held that a duty to prevent foreseeable sabotage exists under Nigerian law. Applying the rule to the facts, the court held that SPDC failed to discharge this duty in one of the cases (*Akpan v. Shell*) but not in the other two cases, as the facts of the latter did not provide a sufficient basis for SPDC's liability.[55] In an unprecedented decision, the court held that 'SPDC had a specific duty of care in respect of the people living in the vicinity of the IBIBIO-I well and especially fishermen and farmers like Akpan, to take security measures against sabotage that can be reasonably demanded.'[56]

In all three cases, the parent company was found not liable. In so holding, the Dutch court declined to apply the decision in the British case of *Chandler v. Cape*, in which the Court of Appeal in England held in 2012 that a parent company may be liable for the torts of its subsidiary abroad that caused harm to employees in the foreign country.[57] The critical issue was that *Chandler* involved injury to employees, which is a smaller and more easily ascertainable class than the multitudes that could be affected by environmental misdeeds. Nevertheless, the Court was open to entertaining such cases where the victims of the environmental torts constitute a small group that has suffered an infraction of their property rights. The cases are currently on appeal and full analyses will await complete disposition and final determination on the issues. Yet, it is evident that litigation of this nature alone may not satisfy the quest for justice by many victims of environmental pollution from oil spills in countries with weak legal protections. The next part argues that mandatory insurance may provide an additional arsenal in confronting environmental problems that arise from energy development in developing countries.

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[52] I also argued that Shell's arguments against the plaintiff's ownership were flawed because they were based on inapplicable principles, such as *quicquid plantatur solo, solo cedit*.

[53] *Akpan v. Shell*, *supra* nt. 43.

[54] *Ibid*.

[55] See *Dooh v. Shell*, *supra* nt. 44 and *Oguru v. Shell*, *supra* nt. 45.

[56] *Akpan v. Shell*, *supra* nt. 43.

[57] Court of Appeal, 25 April 2012, *Chandler v. Cape*, [2012] EWCA Civ. 525.

# IV. Regulating Corporate Behavior through Liability Insurance

Liability insurance exists in various areas of socio-economic activity, including vehicular accidents, workplace injuries, medical malpractice, legal malpractice, and director and officer responsibility. Insuring against damage to the environment is another important area in which insurance and insurance-like instruments have been utilized to address a major problem.

## IV.1 Preliminary Commentary

The argument for insurance is premised on the notion that international tort litigation faces limitations as a tool for addressing environmental and human rights problems arising from operations of multinational corporations. These limitations include the length of time that resolving these disputes entails, the cost of litigation and procedural bottlenecks. Furthermore, foreign litigation options are only available to a small group of plaintiffs who are fortunate to find international non-governmental organizations that would embrace and finance their cause. An insurance scheme mandated by international law can help fill the gap. It is well known that under the international legal system there is little room for interference in the internal affairs of a country, with respect for a State's territorial integrity given preeminence.[58] However, the progress made in the human rights area suggests an exception. International human rights and humanitarian law imposes responsibilities on States to guarantee certain rights or afford some level of protection to their citizens, when States are parties to the applicable treaties or when the obligations have become a part of customary international law.[59] Protection from gross environmental abuse falls within the parameters of international human rights law.

There is an ongoing debate on whether to formulate a binding multilateral treaty through the United Nations Human Rights Council that holds corporations accountable for human rights violations.[60] Any corporate human rights treaty agreed upon and adopted by the States should contain a provision that requires corporations to maintain a liability insurance policy that covers cases of catastrophic oil spills that cause massive environmental degradation in host communities. At present, such insurance policies are optional, at least among operators in Nigeria.[61] The insurance proposal may also be extended to non-environmental areas, such as cases of torture involving corporate complicity. The benefits of a mandatory insurance provision, which make the legal and economic case for insurance, are discussed below.

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[58] The principle of non-intervention exists both in customary international law and under the United Nations Charter Article 2, para. 4; Kohen M., "The Principle of Non - Intervention 25 Years After the Nicaragua Judgment", *Leiden Journal of International Law*, vol. 25, ed. 01, 2012, 157.

[59] See generally Hathaway O. A., *et al.*, "Consent-Based Humanitarian Intervention: Giving Sovereign Responsibility Back to the Sovereign", *Cornell International Law Journal,* vol. 46, 2013, 499.

[60] See e.g., Invitation from The Permanent Mission of Ecuador in Geneva to a workshop on Business and Human Rights on 11 and 12 of March, on file with author, 2014.

[61] Email correspondence between the author's research assistant and an official of a state oil agency in Nigeria, on file with the author, 2013.

## IV.2 The Legal and Economic Case for Insurance

Liability insurance is a veritable instrument for preventing harmful conduct and ensuring adequate compensation to the victims of dangerous activities within the scope of coverage. These two principal functions and other benefits of insurance are discussed below.

### IV.2.1. Preventing Harm

Liability insurance aims to prevent a dangerous activity by imposing costs on the actors potentially responsible for the harmful acts. To contain the cost of insurance, the actors are expected to undertake their operations in a manner that would avoid liability and attendant payouts by the insurers.[62] Moreover, the insurance companies have an incentive to avoid the occurrence of the insured event, as such savings redound to their financial benefit. Tom Baker and Rick Swedloff capture these points poignantly as follows:

> Our focus, however, is at a step antecedent to litigation. Once insurers accept the financial responsibility for civil liability, they not only have an incentive to manage the defense and settlement of liability claims, but they also have an incentive to reduce the likelihood that those claims arise in the first place. This should make sense. Just as the fear of liability is supposed to incentivize potential wrongdoers to take appropriate precautions, fear of liability should incentivize an insurer to encourage its insured to take precautions. Once an insurer underwrites a risk, the insurer has every reason to try to reduce its payouts by encouraging insureds to prevent the potential loss from materializing. That can, and sometimes does, lead insurers to attempt to regulate loss-producing activities.[63]

This deterrence effect is evident in ship-source oil pollution, where novel and effective insurance arrangements in the oil pollution liability regime have had the incidental benefit of engendering deterrence with the overall result being a noticeable reduction of oil pollution incidents.[64] There is empirical evidence that demonstrates that accidental oil spill incidents from tankers are experiencing a steady decline.[65]

### IV.2.2. Regulatory Function

Insurers' desire to prevent potential losses from manifesting leads them to take measures toward regulating the loss-producing activities.[66] Viewed from this perspective, insurance provides a regulatory function. In societies with weak regulatory apparatuses, the importance of an additional, effective regulatory tool cannot be overemphasised. Indeed,

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[62] See Yin, H., *et al.*, "Risk-Based Pricing and Risk-Reducing Effort: Does the Private Insurance Market Reduce Environmental Accidents?", *Journal of Law and Economics*, vol. 54, 325, 326 2011, 325-326, stating that private insurance contracts can employ a system that rewards insured firms with premium discounts if they undertake risk-reducing activities.

[63] Baker, T., and Swedloff, R., "Regulation by Liability Insurance: From Auto to Lawyers Professional Liability", *UCLA Law Review*, vol. 60, 2013, 1412, 1415, Citation omitted.

[64] Billah, M. M., *supra* nt. 3, 73.

[65] *Id.*, 72-73.

[66] Baker, T., and Swedloff, R., *supra* nt. 63, 1415.

as mentioned earlier, the foreign direct liability suits are instituted in foreign jurisdictions primarily because the domestic legal systems in the countries where the incidents took place do not provide effective remedies to the victims. Moreover, because insurance could avoid litigation, if every person involved plays their proper role, it also saves costs to the victims and provides a remedy to those victims of corporate tort liability that do not have the resources to litigate a claim domestically or in foreign jurisdictions.

#### IV.2.3. Redressing Injury

Insurance provides a guaranteed source of compensation for victims of the risky activity. Victims of pollution can bring tort claims against the oil companies responsible for the pollution. However, full recovery is not always assured, especially if the company has successfully kept its assets artificially low by dispersing them among different corporate entities scattered around the globe.[67] The aim of compulsory insurance, therefore, is to make sure that adequate compensation is provided when certain unforeseeable accidents occur.[68] To further ensure the effectiveness of this remedy, a mandatory insurance policy may incorporate a direct action component that entitles the victims to bring suit directly against the insurer.[69]

A direct action provision is valuable for a number of reasons. In some cases, pollution victims may be confronted with the unsavoury reality that the company responsible for the pollution is insolvent.[70] With compulsory insurance, the victim may find comfort in the fact that the pollution is covered by the insurance policy maintained by the polluting company. Unfortunately, the insurance company would refuse to entertain the victims' claim for compensation under the insurance policy or deny any liability judgment obtained in court, asserting the absence of privity of contract between the insurer and the liability claimant.[71] Additionally, the insurer may defeat the victims' claim by pleading available policy defences or exceptions, such as non-payment of premium, against the insured, which in turn affects the victim claiming through the insured.[72] Providing for direct action eliminates these possibilities, as has been the case since its introduction under the ship-source oil pollution liability regime.[73] Increased exposure to payouts to victims as a result of direct action propels insurers to charge higher premiums on negligent ship-owners, which in turn induces the insured ship-owners to improve their standard of care to minimize the insurer's exposure to oil pollution claims.[74] Indeed, because of direct action, insurers are further motivated to keep a watchful eye on the

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67 Billah, M. M., *supra* nt. 3, 52-53.

68 *Id*. 52.

69 *Id*. 57: '[t]he object of ensuring adequate compensation to oil pollution victims is further strengthened by the provision of direct action against the insurer of a liable ship-owner. This is a major departure from traditional insurance policy under which a third party may not bring an action against the insurer because insurance is a contract between the insurer and the insured ship-owner. Therefore, there is no privity of contract between the insurer and a third party victim. This is especially the case in indemnity insurance as opposed to mere liability insurance.' (Citations omitted).

70 *Id*., 74.

71 *Ibid*.

72 *Ibid*.

73 *Ibid*.

74 *Id*., 74-75.

insured, resulting in heightened pressure on the insured to take optimal care in the conduct of its operations.[75]

Discussing maritime liability, one commentator makes a point that is germane to our discussion here by noting that 'adequate compensation through compulsory insurance and direct action may enhance the deterrence purpose of liability law. Without compulsory insurance and direct action, there is the possibility that a ship-owner may escape its liability, which may in turn lead the ship-owner to reduce its level of care.'[76] As already noted, victims' rights are also strengthened by excluding from the insurance regime, the ability of the insurer to use some defences that it could use against the insured, such as a failure to pay premiums.[77]

#### IV.2.4. Monitoring Function

Monitoring helps to discourage misconduct and encourage good behaviour. It is perhaps an incontrovertible fact that multinational corporate behaviour would be vastly improved with the presence of an effective monitoring system. Unfortunately, such a system hardly exists. Companies seem to favour internal monitoring and sometimes, under pressure, may resort to external monitoring by consultants that they select and compensate. Pure independent monitoring, while favoured by activists, is not readily embraced by business groups. Even in the case of independent monitoring, the independent monitor, which may be a non-governmental organization (NGO), may lack the commercial motivation to get to the root of the problem and ensure that it is adequately addressed.[78] Insurance companies are in a unique position to fill these gaps. As commercial monitors, they can be catalysts of desired change and because their actions have financial implications for them and their shareholders, insurance companies have an incentive to act as effective monitors.[79] When coupled with the direct action component discussed above, an insurer would be hard-pressed not to take this assignment seriously. Examples from the shipping industry provide an interesting basis for some measure of optimism.[80]

#### IV.2.5. Cascading Effect

Insurance arrangements not only affect the behaviour of insurance companies and the insured persons paying the premiums. Changes in action could additionally spill over to those indirectly involved in terms of financial responsibility, but who nevertheless play an active role in the generation of the harmful incidents. This chain of actions and reactions would lead to better outcomes for potential victims. For instance, in the oil shipping area,

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75 *Id.*, 75.

76 *Id.*, 58 (Citation omitted).

77 *Ibid.*

78 An independent monitor could also be a court-appointed expert or required by a government agency as part of a settlement with a corporation under investigation. See Social Science Research Network, Root, V., "The Monitor-'Client' Relationship", January 15 2014, available online at <papers.ssrn.com/sol3/papers.cfm?abstract_id=2309498> (accessed April 14, 2014), providing a number of reasons for the retention of monitors to promote corporate compliance and the acceptance of the practice by corporations that are subject to enforcement actions; Warin, J. F., Diamant, M. S. and Root, V., "Somebody's Watching Me: FCPA Monitorships and How They Can Work Better", *University of Pennsylvania Journal of Business Law*, vol. 13, ed. 2, 2011, 321-381, 381: '[i]n situations that may call for an independent compliance monitor, all participants should seek to maximize the value of the monitorship and minimize inefficiency.'

79 In essence, they will be motivated by the fact that they have skin in the game.

80 See Billah, M. M., *supra* nt. 3, 74-75.

where some of the compensation funds are funded by the oil industry and not by ship-owners, oil companies have sought ways to protect their own interests by improving the behaviour of the shipping companies.[81] One scholar describes the changes with the following words:

> [E]ven though the second and third tier of insurance through the [Compensation Funds] are mainly designed for adequate compensation and are funded by the oil industry and not by ship-owners, these arrangements indirectly put pressure on ship-owners to be more diligent in the operation of their ships. This is because oil companies, who are the main contributors to both funds, are also the main, if not sole, customers of the oil-carrying ships (tankers). Given that the operation of these ships has a direct effect on the ultimate contributions that oil companies make to the Funds, oil companies as a group are naturally opposed to and united against substandard shipping. This opposition translates into various initiatives to motivate ship-owners toward optimal care. One such initiative is a database maintained by the oil industry on substandard ships, known as the Ship Inspection Report (SIRE) Program. The database contains inspection reports on many oil-carrying ships.[82]

In the case of human rights and environmental abuse, a regime of compulsory insurance could galvanise insurers and the insured to seek behaviour modification amongst government security agents and public policy makers that could lead to the introduction and implementation of policies and initiatives that protect both human rights and the environment.

# V. Potential Objections to Proposal

A number of challenges threaten this proposal, posing as obstacles to its adoption or effective implementation. While these challenges are formidable, they are not insurmountable and should not be allowed to serve as permanent or perpetual impediments to the actualization of the desired objectives.

## V.1 Corporate Apathy

One likely objection is that companies would most likely drop their environmental standards with the knowledge that somebody else would be responsible for paying the claims in the event of environmental mishaps. In essence, the proposal would protect bad behaviour and encourage the same vice that it is seeking to curtail.[83] This moral hazard argument from the corporate standpoint has attracted the attention of experts in the

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[81] *Id*. 75-76.

[82] *Ibid*. (citation omitted).

[83] A similar criticism has been levelled against a proposal for corruption and consumer risk insurance. *See* Okaru-Bisant, V., "Overcoming Challenges in The Multilateral Investment Guarantee Agency's Risk Insurance Coverage to Private Water Investors: Corruption and Consumer Risks", *South Dakota Law Review*, vol. 57, ed. 2, 2012, 277- 314, 291, stating that 'opponents of the corruption risk insurance propose a weak argument that providing corruption risk insurance coverage to private investors will encourage the vice and sanction bad behavior' (citation omitted).

field.[84] A valid counter-argument is that environmental liability insurance would promote the goal of environmental protection, as it would provide an incentive for insurers to only insure companies that are environmentally responsible.[85] Companies that have been lax in implementing environmental reforms would also be motivated to raise their standards in order not to lose their insurability status and the negative implications of their ability to access the credit markets, among other possible consequences.

## V.2 Community Moral Hazard

Another point of objection is the problem of a moral hazard on the part of the host community. It is not unheard of for an insurance beneficiary to orchestrate a turn of events that accelerate their opportunity for compensation under the insurance policy. Community members could create environmental disasters then turn in claims in order to be compensated. This is akin to a beneficiary of a life insurance policy who arranges for the death of the policy-holder so that they can get paid what the policy stipulates. Just as the beneficiary may suffer directly or indirectly for the death of the policy holder (e.g. emotionally) and yet is not deterred from carrying such act, some community members that would face the peril of environmental catastrophes may be similarly undeterred from such conduct by imagining the other benefits. This criticism should not, however, sound the death knell for the proposal. Insurers are expected to have strong underwriting and compensation standards that would help detect fraudulent conduct and claims tainted by fraud would obviously be excluded. Assuming that evidence indicating fraud is only uncovered after claims have been paid, the recipient community would be subject to harsh penalties. For instance, the insurers could cancel the policy upon discovery of the unacceptable behaviour, although the cancellation may be subject to arbitration. Another form of penalty may be to blacklist the communities that are involved and to additionally block companies investing in the blacklisted communities from having the requirements to maintain an insurance policy.

## V.3 Failure to Monitor

The expectation that insurance companies would play the role of monitors effectively may be exaggerated or misplaced. For instance, some commentators note that in the case of "Director and Officer" insurance policies procured by companies for their managers, the insurance companies fail to monitor those insured adequately and may not even engage in any monitoring activity.[86] However, this problem is unlikely to surface in the instance of the proposed insurance arrangement. Catastrophic oil spills present public relations problems that insurers would prefer to avoid, and effective monitoring both reduces the likelihood of occurrence and takes away a potential basis for blame by watchdog groups. The magnitude of the expected compensation in the case of catastrophic oil spills or gross human rights abuses makes it unlikely that any responsible

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[84] Baker, T., and Swedloff, R., *supra* nt. 63, 1417-18 .

[85] See Okaru-Bisant, V., *supra* nt. 83, 291, making a similar argument in relation to corruption risk insurance.

[86] See Baer, M. H., "Book Review: Some Thoughts on the Porous Boundary between Ordinary and Extraordinary Corporate Fraud", *University of Pennsylvania Journal of Business Law,* vol. 14, ed. 4, 2012, 927-955, 929, discussing some authors' conclusions along those lines.

insurance company would close its eyes to danger signals, as may be the case with smaller payouts for other types of insured activities. Additionally, with the direct action component, as the oil shipping sector has shown, insurance companies are likely to take their monitoring role seriously.[87]

## V.4 Unavailability of Insurance

Unfortunately, even in advanced economies, insurance companies have not shown a huge appetite for environmental liability insurance. One prominent insurance law scholar addresses this point in the following words: 'Despite the demand for insurance coverage of pollution liability, however, such insurance is not generally offered […]. In short, there is a mismatch between the losses resulting from oil spills, the insurance available to the victims of spills, the liability of the parties responsible for losses caused by spills, and the insurance available to the parties who face such liability.'[88] Insurers' reluctance to insure against pollution is traceable to a number of reasons.[89] They include factual disputes engendered by the fact that some environmental injuries have a long latency period,[90] leading to uncertainties about the policy years responsible for coverage,[91] and the enormous cost of cleaning up pollution and remediating the affected areas.[92] There is also the issue of the legal obstacles encountered in seeking to eliminate the moral hazard that would accompany insuring against gradually occurring pollution as opposed to sudden and accidental pollution. In the case of gradually occurring pollution, the insured companies can take steps to detect the pollution almost at inception and be in a position to mitigate the damage once they detect the pollution.[93] With insurance, however, they would likely abandon this responsibility. Accordingly, to avoid the moral hazard, insurance companies have been willing to insure only sudden and accidental pollution, although judicial interpretation stymied this effort.[94]

In view of the limited availability of private environmental insurance, an alternative course should be explored. As is often the case where private options are not available, public options become desirable. One arrangement that offers a valuable template is insurance against political risks faced by companies doing business in some inclement commercial environments. Through the Multilateral Investment Guarantee Agency (MIGA), companies are able to protect themselves against losses, thereby making it possible to venture into some unfavourable climes.[95]

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87 See Billah, M. M., *supra* nt. 3, 75-76.

88 Abraham, K. S., "Catastrophic Oil Spills and the Problem of Insurance", *Vanderbilt Law Review*, vol. 64, ed. 6, 2011, 1769–1791, 1769 – 1771.

89 *Id*. 1784–1786.

90 *Id.* 1771 nt. 5.

91 *Id.* 1785–1786.

92 *Id.* 1786.

93 *Id.* 1784.

94 *Id*. 1784–1785.

95 Puig, S., "Emergence & Dynamism in International Organizations: ICSID, Investor-State Arbitration & International Investment Law", *Georgetown Journal of International Law*, vol. 44, 2013, 531 -- 560; Shihata, I. F. "The Settlement of Disputes Regarding Foreign Investment: The Role of the World Bank, with Particular Reference to ICSID and MIGA", *American University Journal of International Law & Policy,* vol. 1, 1986, 97- 108.

MIGA, a part of the World Bank group, was established in the 1980s.[96] The Convention Establishing the Multilateral Investment Guaranty Agency[97] was concluded in 1985 and entered into force in 1988.[98] Its stated mission is to 'promote foreign direct investment (FDI) into developing countries to help support economic growth, reduce poverty, and improve people's lives.' [99] MIGA concentrates on insuring investments in the areas where it believes it can make significant difference, notably in the world's poorest countries. For example these are countries that fall under the lending purview of the International Development Association, conflict-affected environments, complex deals in infrastructure and extractive industries; particularly those involving project finance and environmental and social considerations, and South-South investments (investments from one developing country to another).[100]

Foreign investors and host countries appreciate that the facilitation of foreign direct investment and the realization of its attendant benefits require a form of insurance against risk of loss.[101] While investors may resort to the private insurance markets to protect themselves against commercial risks, they tend to look beyond their own abilities to address non-commercial risks, such as insecurity and abrupt political changes.[102] Examining the role and growth of insurance for FDI, one writer observes: 'With respect to security, insurance instruments quickly adapted to the specific needs of countries and projects, to the point that insurance is now almost a prerequisite for investing in certain regions. The MIGA, an entity member of the World Bank offering insurance to foreign investors against losses caused by "non-commercial risks", is involved in virtually all big

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[96] The World Bank Group consists of five separate but related entities, namely the International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA), International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), and International Centre for Settlement of Investment Disputes (ICSID). See Puig, S., "Recasting ICSID's Legitimacy Debate: Towards a Goal-Based Empirical Agenda", *Fordham International Law Journal,* vol. 36, 2013, 465-466 nt.1 and 489.

[97] MIGA was created by the Convention Establishing the Multilateral Investment Guarantee Agency, opened for signature 11 October 1985, 24 I.L.M. 1598 (entered into force 12 April 1988); Convention Establishing the Multilateral Investment Guaranty Agency (MIGA), 1988, 1508 UNTS 99.) (Apr. 12, 1988), available online at <www.miga.org/documents/miga_convention_november_2010.pdf> (accessed 24 April 2014).

[98] Rowat, M. D., "Multilateral Approaches to Improving the Investment Climate of Developing Countries: The Cases of ICSID and MIGA", *Harvard International Law Journal,* vol. 33, 1992, 103, 105 and nt.9, 126.

[99] Multilateral Investment Guarantee Agency, *Overview*, available online at <www.miga.org/whoweare/index.cfm> (accessed 3 September 2013).

[100] *Ibid.*

[101] For a useful definition of risk and identification of several commercial and non-commercial risks, see Hoyos, J. C., "The Role of Bilateral Investment Treaties in Mitigating Project Finance's Risks: The Case of Colombia", *Syracuse Journal of International Law and Commerce,* vol. 40, 2013, 285-289; Comeaux, P. E. and Kinsella, N. S., "Reducing Political Risk in Developing Countries: Bilateral Investment Treaties, Stabilization Clauses, and MIGA & OPIC Investment Insurance", *New York Law School Journal of International and Comparative Law*, vol. 15, 1994, 1–4. .

[102] It should be noted that a private market for political risk insurance exists, although duration is usually shorter and the coverage limits smaller than those offered by public-based political risk insurance providers, such as the Overseas Private Investment Corporation (OPIC) and MIGA. See Van Detta, J. A, "Some Legal Considerations For E.U.-Based MNEs Contemplating High-Risk Foreign Direct Investments in the Energy Sector After Kiobel v. Royal Dutch Petroleum And Chevron Corporation v. Naranjo", *South Carolina Journal of International Law and Business*, vol. 9, 2013, 161.

investment projects worldwide and has more than 170 member States . . . .'[103] Other commentators have further noted that an investor can minimize political risk by purchasing political risk insurance available from a number of sources, including nationally-sponsored insurance agencies, private insurers, and the World Bank's MIGA. This insurance typically provides coverage against risks such as currency inconvertibility, expropriation and similar measures, war and civil disturbance and breach of contract loss.[104] An investor may purchase coverage for one of these risks or a combination thereof.[105]

MIGA exists to complement government-sponsored and private investment guarantee programs.[106] Yet, in reality, MIGA is the preferred or sole option for some investors who may not qualify for national insurance programs because of their country of origin and who may lack the resources to pursue private insurance options with their limitations.[107] Since inception, MIGA has insured about 600 projects, totalling billions of dollars in guarantees.[108] MIGA appears to favour an approach that prevents claims filings by negotiating a resolution of disputes relating to its guaranteed investments.[109] Accordingly, MIGA has only paid out for three claims over the years.[110]

A similar approach, in essence a MIGA-in-reverse, is needed to protect host communities from risks posed by the operations of the big companies that are within the purview of MIGA. The reverse-MIGA approach requires further elaboration in a separate work. Suffice it to say at this point, however, that while the potential merits of the approach are worth considering, such an approach is not without its limitations. For instance, it may be that MIGA is not properly equipped in terms of human and financial resources to undertake this task. It is believed that in the discharge of its current responsibilities, MIGA relies on the investors it is insuring to provide information about potential risk.[111] A MIGA official reportedly attributes the agency's inability to visit local communities to conduct rigorous risk assessment to a lack of resources.[112] One solution may be to create an entirely new agency, outside of, or as an adjunct to, any of the existing major international institutions, such as the United Nations.

# VI. Conclusion

The topic of the social, economic and environmental costs of foreign investment is one that continues to deserve national and international attention. Lawsuits have been filed

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[103] Pereira, A., "Legal Stability Contracts in Colombia: An Appropriate Incentive for Investments? Historical Causes and Impact Analysis of Law 963 of 2005", *Richmond Journal of Global Law and Business*, vol. 12, 2013, 237-251.

[104] *Supra* nt. 101, 32; MIGA Convention, Art. 11.

[105] See generally, *supra* nt. 99.

[106] *Supra* nt. 101, 40.

[107] *Id.* 40; *Supra* nt. 98, 126.

[108] Halabi, S. F., "Efficient Contracting Between Foreign Investors and Host States: Evidence from Stabilization Clauses"*, Northwestern Journal International Law and Business,* vol. 31, 2011, 261 - 275.

[109] *Id*. 276. See also *supra* nt. 95, 115.

[110] S*upra* nt. 108, 275 – 276.

[111] *Supra* nt. 111, 292, proposing a system that ensure that MIGA would 'reduce its main reliance on the information that it receives from its private guarantee holders prior to issuing risk insurance coverage to them'.

[112] *Id.*, 291, nt. 76.

against international companies seeking to develop the vast energy resources in some developing countries. The latest iteration of this litigation battles is being played out in European courts, including cases brought by three sets of Nigerian plaintiffs against Shell Petroleum. This article has analyzed the relevance of these lawsuits in getting redress for private victims of energy development as well as in promoting the general cause of environmental protection. It argues that litigation, while valuable, is only a limited tool whose effectiveness can be strengthened by deploying other tools. One such tool proposed in this article is a regime of compulsory international insurance for catastrophic oil spills or other massive environmental harms, occurring within the territory of countries hosting the energy development activities. Insurance will, among other things, provide redress for victims and deter unpalatable conduct on the part of the energy companies.

Ultimately, the enduring solution is for international corporations to do the right thing, which includes eliminating double standards by conducting operations the way they would in their home countries.[113] Corporations can move in that direction without the backing or mandate of legislation. Without question, virtually any corporation would proceed with any reasonable measures it calculates would enhance its primary purpose of generating profit. Perhaps, the society could facilitate the desired change by properly rewarding companies that take the plunge.

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[113] *Supra* nt. 42, 244.

# Using Private Contracts for Climate Change Mitigation

Kateřina Peterková Mitkidis*

**Keywords**
CLIMATE CHANGE REGULATION; INTERNATIONAL SUPPLY CHAIN CONTRACTS; CARBON EMISSIONS; PRIVATE REGULATION

**Abstract**
Regulation of climate change is caught up in a stalemate. Differences between developed and developing countries prevent reaching an international agreement. Transnational private regulation has unclear legitimacy, effectiveness and enforcement. National efforts are valuable, but their limited geographical reach creates incentives for companies to outsource environmentally heavy activities to countries with weaker regimes, the so-called "carbon leakage" effect. As a result the carbon emissions among international supply chains amount to multiple yearly emissions of some developed countries. This gap needs to be closed if we aim for effective global solutions to climate change. The majority of scholars agree that no single regulatory tool alone can remedy the situation, but that a combination of public and private, mandatory and voluntary regimes is necessary. The author proposes that supply chain contracts are the missing piece in the international climate change regulatory matrix. The article discusses why, despite their potential, supply chain contracts have hitherto experienced only little attention and why they can be successful where other regulation fails. It concludes that the potential of private contracting should be triggered by adequate regulation.

## I. Introduction

The aim of this article is to bring attention to an often overlooked regulatory instrument for climate change mitigation - supply chain contracts. Despite intensive efforts to reach an international agreement on carbon emissions' reduction,[1] the increasing number of national regulations, social pressure on companies to limit their environmentally harmful activities and raising public awareness, global society is not successful in mitigating the negative effects of climate change. Unequal development and the related clashing social and economic interests of developed and developing countries lie in the middle of the climate change conundrum. While most of the developed countries are prepared to commit to carbon emissions' reduction, developing countries are experiencing an economic and industrial boom and are not eager to give it up in order to mitigate a

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1 Carbon emissions are for the purpose of this article understood as emissions of the six leading greenhouse gases (GHG), namely carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF6).

problem that is mainly caused by the historical activity of the developed part of the world. The result is that although national governments in developed countries adopt various laws and policies to limit carbon emissions of subjects under their jurisdiction, they indirectly create incentives for these subjects to outsource their environmentally heavy activities to countries with weaker environmental laws. This regulatory gap allowing companies to avoid responsibility for their carbon emissions abroad needs to be closed if we aim for effective global solutions to the climate change issue. Supply chain contracts may be the missing piece of the solution we are looking for. Having the form of a binding and enforceable legal instrument, contracts offer actual leverage over the parties' behaviour. And this is especially true when we speak about relationships between multinational companies and their suppliers from developing countries. If a multinational company imposes a concrete goal for carbon reduction on its suppliers through contracts, it may yield positive change without the necessity of reaching an international agreement through a costly and lengthy legislative process. As a consequence of such a contractual practice a new public local regulation may arise, creating law from bottom up rather than from top down.

However, why would companies, benefitting from the regulatory gap, voluntarily impose limits on their suppliers' carbon emissions? Since the latest negotiations have been to a large extent failing, an increasing number of private and public-private entities enter the regulatory area and create pressure on companies to adopt environmentally friendly regulations and behaviour. These entities include consumers, investors, NGOs, industrial associations and companies themselves. The pressure of private entities translates into various types of private regulation, such as transnational public-private initiatives, industrial and corporate codes of conduct, or reporting, monitoring and auditing schemes. Companies that do not comply with these legally non-binding regulations run reputational damage risks that can lead to public shaming in the media, drop in demand for their products, outflow of financing from environmentally responsible investors and losing competitive advantage against their peers. Therefore, in order to protect themselves and to manage related risks, an increasing number of companies implement environmental requirements in their supply chain management processes. Contractual provisions are one of the means able to influence suppliers' behaviour. However, since such requirements are often rather vague, sketching only the broadest line of good environmental behaviour, the enforcement of these requirements is an obvious concern. Nevertheless, facing the criticism of the low transparency of the supply chain control and the generally inadequate efforts invested into climate change mitigation and realising the possible advantages of environmentally thoughtful behaviour, more and more companies try to raise the expectations of their suppliers by implementing quantifiable and measurable objectives in relation to environmental issues.

The question remains whether such contractual requirements can have a significant effect in the global climate change mitigation effort. Although precise computations of potential carbon reduction in international supply chains are only scant, available estimates suggest that the capacity of supply chain contracting to reduce global carbon emissions is high.[2] Therefore, successful use of its full potential can be a crucial component in an effective transnational climate change regulatory system.

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[2] See Section III below.

In light of the foregoing, it is surprising that sustainable supply chain contracts do not attract as much attention as other private governance regimes. A reason may be that business contracts are generally bilateral arrangements, and therefore, their out-of-contractual effects are not obvious or are unknown, not to mention their inability to be measured and verified. This article aims to remedy the lack of recognition of supply chain contracts' importance and discuss their potential in relation to carbon emissions reduction efforts.

The article starts with an overview of climate change regulation in Section II. Section III provides an overview of the development of scope 1, 2 and 3 emissions.[3] Section IV follows with an analysis of supply chain contracts as a regulation type; namely, the questions of why supply chain contracts have been until now overlooked and why they may be successful where other regulation fails are discussed. Section V opens discussion on the quantifying of potential for emissions' reduction through contracts. Finally, the article closes with a conclusion in Section VI.

# II. Climate Change Regulation

Although extensively discussed and increasingly regulated, climate change remains one of the most urgent issues of current society. To date, no single regulatory framework has provided satisfactory results and it is a common understanding that a combination of regulatory efforts is necessary to tackle this global problem. Scholars have suggested that a successful matrix for climate change mitigation will have to include various regulatory techniques, ranging from a binding international agreement, through national command and control regimes to global private regulation and voluntary corporate initiatives.[4] The author proposes that the design of such a regulatory matrix should pay special attention to supply chain contracts, since they have significant potential for reduction of carbon emissions and may serve as a necessary link between public and private regulation and as a force for its enforcement. This section briefly describes the public and private realms in climate change mitigation that form the regulatory context of supply chain contracting.

## II.1. Public Regulation

The international community of states recognises the environmental challenges and their negative effects on global health, economy, politics and social order, but it fails to reach an agreement on the commitments for reduction of carbon emissions that would effectively prevent further negative development. The 2009 United Nations Climate Change Conference in Copenhagen was a clear example of the stalemate we experience nowadays: being aware of the urgent need for international cooperation to tackle the

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[3] Scope 1 emissions: emissions that are directly produced by sources owned or controlled by the regulated entities; scope 2 emissions: emissions that are produced indirectly from generation of electricity purchased by the entities; scope 3 emissions: emissions that are consequences of the regulated entities' activities, but produced by sources outside of the entities' ownership or control, see Carbon Disclosure Project, *Technical Note: Glossary of terms*, available online at <www.cdproject.net/Documents/Guidance/2012/Technical/glossary-of-terms.pdf> (accessed 1 November 2013).

[4] Vandenbergh, M. P. and Cohen, M. A., "Climate Change Governance: Boundaries and Leakage", *New York University Environmental Law Journal*, vol. 18, ed. 2, 2010, 221-292, 223.

global climate change issue, but unable to find the means, and many times also the will, to do so. The failure to agree on new national reduction targets of carbon emissions that would be a continuance of the Kyoto Protocol[5] showed the persisting political and economic sensitivity of the climate change discussions and put any hopes for a timely and effective international solution on hold. Even though the Kyoto Protocol has been extended at the last minute for a second commitment period until 2020,[6] its effectiveness is doubtful provided that major global emitters are not among the Protocol signatories, nor does it set specific reduction targets. From the twenty highest emitting countries in the world, only six bound themselves to reach specific targets for carbon emissions' reduction under the Kyoto Protocol for the period between 2013 and 2020. That is a very low number, since the remaining fourteen countries, including China, USA, India and Russia, representing about 70 % of all global emissions, alongside all lower emitters, are not captured by the binding agreement.[7] In fact, the extended Kyoto Protocol legally binds countries representing less than 15 % of global emissions.[8] Thus, our expectations regarding future international negotiations on the climate change issue should not be high, since the gap between the interests of developed and developing countries in this respect is not only not closing but rather is extending over time.

One of the strongest (and hardest to fight) arguments of the developing countries is the claim that the current levels of GHG emissions in the atmosphere are the product of past activities of the developed countries, which should take responsibility for the current situation. The developing world points out the unfairness of the situation when it is expected to socially, politically and economically develop under the adverse state of the current climate and concurrently participate in climate change mitigation, although its contribution to the current situation was substantially lower than the contribution of the developed countries.[9] Developing countries call for the same space and rights to growth and wealth as developed countries had during their economic and industrial boom. Even

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5 Kyoto Protocol to the United Nations Framework Convention on Climate Change, 10 December 1997; 37 ILM 22 (1998), available online at <unfccc.int/key_documents/kyoto_protocol/items/6445.php> (accessed 31 October 2013).

6 United Nations, Draft decision proposed by the President, Amendment to the Kyoto Protocol pursuant to its Article 3, paragraph 9, 8 December 2012, FCCC/KP/CMP/2012/L.9, available online at <unfccc.int/resource/docs/2012/cmp8/eng/l09.pdf> (accessed 31 October 2013).

7 According to the U.S. Energy Information Administration the world total carbon dioxide emissions from energy consumption in 2011 amounted to 32,578.645 million metric tons. The largest twenty emitters were identified as follows (in million metric tons): China (8,715.307), USA (5,490.631), Russia (1,788.136), India (1,725.762), Japan (1,180.615), Germany (748.486), Iran (624.855), South Korea (610.954), Canada (552.557), Saudi Arabia (513.527), UK (496.799), Brazil (475.409), Mexico (462.293), South Africa (461.565), Indonesia (426.790), Italy (400.939), Australia (392.286), France (374.327), Spain (318.644), Poland (307.911). U.S. Energy Information Administration, International Energy Statistics, available online at <www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=90&pid=44&aid=8&cid=regions&syid=1980&eyid=2010&unit=MTCDPP> (accessed 8 April 2014).

8 Climate Policy Initiative, Rom-Povolo, E., *Policy Watch: UN climate talks wrap up, Indonesia approves landmark forest protection deal, and Africa's largest solar plant close to breaking ground*, December 2012, at <climatepolicyinitiative.org/2012/12/11/policy-watch-un-climate-talks-wrap-up-indonesia-approves-landmark-forest-protection-deal-and-africas-largest-solar-plant-close-to-breaking-ground/> (accessed 31 October 2013).

9 For detailed argumentation see Third World Network, *Developing countries call for historical responsibility as basis for Copenhagen Outcome*, TWN Bonn News Update No. 9, 5 June 2009.

though the developed countries acknowledge substantiation of this claim,[10] it is evident that the condition of the climate will not improve or maybe better said stop deteriorating without the active involvement of all the big emitters regardless of the stage of their development.[11] It is important to say that even if we had a binding international agreement under which all countries committed to specific goals, national governments would need to translate this commitment into adequate laws and policies to secure the actual compliance of subjects under their jurisdiction. This proved to be a highly demanding task under the Kyoto Protocol, where for example the inability to reach the stipulated goals forced Canada to withdraw from the agreement.[12]

The situation looks brighter at the national level. A number of countries adopt national plans and regulation for climate change mitigation regardless of their commitment on the international level. For example, the EU is obliged to integrate environmental considerations into all its policies and decisions.[13] Under this imperative, it has not only committed to reduce emissions under the second Kyoto Protocol period, but also implemented the EU Emissions Trading System, building an international carbon market,[14] and has adopted or is working on adopting a number of policies and regulations, such as the Environmental Action Plan,[15] the Energy Efficiency directive,[16] or the Product Environmental Footprint (PEF) Guide.[17] We can also see a difference in the attitude of some of the less developed countries. For example, Brazil has adopted the National Climate Change policy, which sets emissions reduction targets although Brazil has no such obligation under the Kyoto Protocol.[18]

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[10] See Preamble to the United Nations Framework Agreement on Climate Change, 1992, 1771 UNTS 107: 'Noting that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and economic development'.

[11] *Supra* nt. 9, 2. Mr. Martin Khor, Director of the South Centre noted that: '[d]eveloped countries would need to reduce their emissions by 213 % by 2050, for developing countries to maintain their current per capita emissions level'; see also *supra* nt. 4, 222.

[12] CBC News, Politics, *Canada pulls out of Kyoto Protocol*, 12 December 2011, at <www.cbc.ca/news/politics/story/2011/12/12/pol-kent-kyoto-pullout.html> (accessed 11 February 2014).

[13] Consolidated Version of the Treaty on the Functioning of the European Union, 2010 O. J. C 83/47, article 11: 'Environmental protection requirements must be integrated into the definition and implementation of the Union policies and activities, in particular with a view to promoting sustainable development'.

[14] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, 2003 O. J. L 275/32.

[15] European Commission, Proposal for a Decision of the European Parliament and of the Council on a General Union Environment Action Programme to 2020, *Living well, within the limits of our planet*, Brussels, 29 November 2012, COM(2012) 710 final.

[16] Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, 2012 O. J. L 315/1.

[17] European Commissions, Joint research centre, *Product Environmental Footprint (PEF) Guide*, Ref. Ares (2012) 873782, 17 July 2012.

[18] The Brazilian National Climate Change Policy was adopted through law no. 12.187 of 29 December 2009, available online at <www.planalto.gov.br/ccivil_03/_Ato2007-2010/2009/Lei/L12187.htm> (accessed 31 October 2013).

## II.2. Carbon Leakage As A Product of Unequal National Regulations

Nevertheless, however important national policies are in combating climate change, they alone are not sufficient and, in some cases, may even have negative effects. Climate change is a global issue. Unequal regulation in different countries creates incentives for companies to outsource their environmentally harmful activities from countries with strict policies to countries with weaker regimes.[19] Hence, we stand at an impasse; having (or developing) rather effective regulation of corporate environmental behaviour on the national level, but allowing companies to avoid their responsibility by moving their activities abroad. Outsourcing to developing countries means not only increased emissions during the manufacturing process due to lower technological development, but also causes an increase in the carbon footprint of the products due to the need for transportation of the finished goods to the buyer and consumers. This phenomenon, called "carbon leakage", is an important concern, questioning the very nature of national regulatory efforts and their effectiveness.

It is not easy or even possible to prove a causal link between the steep increase of carbon emissions in developing countries and national environmental laws and policies in developed countries. However, it is a fact that a large fraction of carbon emissions in developing countries can be attributed to goods exported to consumers in developed countries.[20] For instance, Herrmann and Hauschild calculated that due to imports from China, the UK avoided circa sixteen million tons of CO2 emissions in 2004; this is approximately six times more than in 1992.[21] Moreover, the products exported from China to the UK in 2004 carried almost 130 million tonnes of embedded CO2. The ratio between the carbon efficiency of UK and Chinese production methods in 2004 furthermore shows that three times more CO2 is emitted during production in China than it would be in the production of the same product in the UK.[22] These calculations do not offer evidence that the outsourcing trend is caused by environmental regulation in developed countries. However, they point towards the focus of developed countries on the environmental impacts from power production, carbon taxes and generally stricter environmental regimes as one of the driving forces for geographical shift of manufacturing activities.[23]

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[19] European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Analysis of options to move beyond 20% greenhouse gas emission reductions and assessing the risk of carbon leakage*, Brussels, 26.5.2010, COM(2010) 265 final, section 4; *supra* nt. 4, 262 *et seq*.

[20] See e.g. Guan, D., Peters, Glen P., Weber, C. L. and Hubacek, K., "Journey to world top emitter: An analysis of the driving forces of China's recent CO2 emissions surge", *Geophysical Research Letters*, vol. 36, ed. 4, 2009, 1-5 (Concluding that 'developed countries are responsible for over half of the growth in Chinese exported carbon emissions from 2002 to 2005'); Wang, T., Watson, J., *Who Owns China's Carbon Emissions?,* Tyndall Centre for Climate Change Research, Tyndall Briefing Note No. 23, October 2007 (noting that 'consumption in OECD countries that import goods from the developing world does not only generate emissions within those countries – but also contributes to growing emissions in the developing world').

[21] Herrmann, I. T., Hauschild, M.Z., "Effects of globalization on carbon footprints of products", *CIRP Annals – Manufacturing Technology*, vol. 58, ed. 1, 2009, 13-16, 14.

[22] *Id.*, 14-15.

[23] *Id.*, 16.

Irrespective of the actual cause, two major concerns are usually associated with the carbon leakage problem: firstly, creation of carbon havens, i.e. countries intentionally attracting carbon-heavy industries and, thus, undermining global emissions reduction efforts; and secondly, massive relocation of jobs into the countries with weak environmental regulation.[24] Although we have not experienced either of these to a massive extent yet, the future matrix of climate change regulation must be designed in such a way that it will prevent these consequences.

Until now, at least three ways were suggested to address the carbon leakage problem. The first and most straightforward solution is the approximation of climate change mitigation efforts between countries with various levels of environmental regulation. As discussed earlier, a global agreement appears to be a too demanding and long-term task. However, countries could cooperate on bilateral or industry levels, where reaching a consensus could be easier.[25] Nevertheless, this solution will always be only partial and will not tackle the global character of the climate change problem.

Secondly, countries with a stricter carbon emission regime could impose higher costs for imports from locations with weaker regulation. However, such a system would have to be scrutinised under the WTO requirements to ensure that it does not constitute a barrier to international trade.[26] Moreover, the practicalities of implementation could pose a problem, especially in relation to controlling compliance of manufacturers in countries where monitoring and reporting systems are not well developed.

Finally, an indirect way through regulation of corporate reporting that would demand disclosure of emissions from all supply chain members was proposed as one of the possible solutions.[27] Some countries have imposed on companies the obligation to regularly report the amount of greenhouse gas emissions produced. For example, under the US Clean Air Act,[28] this obligation applies to facilities[29] that produce more than 25,000 metric tons of carbon dioxide equivalent (CO2eq) per year. However, the obligation concerns only direct emissions of the facilities, excluding emissions of the production chain. If the regulator included supply chains' emissions in the legal reporting obligation, companies would lose the incentive to relocate their environmentally damaging activities to other countries, since they would be forced by law to disclose their suppliers' emissions and, therefore, be accountable for them anyway. However, such a requirement would impose extensive administrative and financial burdens on the companies.

Whichever solution to the carbon leakage problem we choose, a crucial question is how to change the production processes and behaviour of the suppliers from developing countries in such a way that outsourcing would remain profitable while their carbon

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[24] United Nations Environment Programme and the World Trade Organization, REPORT: *Trade and Climate Change*, 2009, 99.

[25] *Supra* nt. 19, 12.

[26] For the discussion on applicability of the WTO rules see *supra* nt. 24 at 103 *et seq*. See also Cohen, M. A. and Vandenbergh, M. P., "The potential role of carbon labeling in a green economy", *Energy Economics*, vol. 34, sup.S1, 2012, S53–S63, S59-S60 (discussing the trade related challenges of carbon labelling; pointing out that private voluntary standards would more easily be accepted by the international trade rules than public mandatory requirements).

[27] *Supra* nt. 4.

[28] Clean Air Act, 42 U.S.C. §7401 *et seq.*,1970.

[29] The law works on the facility level. Therefore, companies may possibly avoid the reporting obligation by portioning their production.

emission levels would drop. Supply chain contracts may be one of the solutions we are looking for.

## II.3. Private Regulation

Public regulation of scope 3 carbon emissions is in its infancy. International law, having troubles in the scope 1 and 2 emissions, is missing completely in relation to scope 3 emissions. National governments discuss possible regulatory means and their consequences and compatibility with other regulation on the national and international level, but up-to-date laws affect scope 3 emissions only indirectly. Therefore, in the current situation, private regulation prevails in the area. Private regulation may be defined as regulation developed by non-state actors whose 'legitimacy, governance, and implementation is not rooted in public authority'.[30] It can have various forms, ranging from transnationally agreed standards, such as the ISO standards,[31] through industrial initiatives,[32] to corporate codes of conduct.[33] However, private regulation suffers from several deficiencies regarding its legitimacy, effectiveness and monitoring and enforcement. The legitimacy of private regulation is not derived from sovereign states and their institutions (as in case of national and international law). Private regulators are not democratic representatives of global citizens. Therefore, the authority and binding power of private regulation is often questioned and criticised by legal theory and political science.[34]

Effectiveness is another drawback of private regulation. It is challenged not only by unclear legitimacy, but also by the lack of verifiable reporting and monitoring systems.[35]

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[30] Vogel, D., "The private regulation of global corporate conduct", *Business & Society*, vol. 49, ed. 1, 2010, 68-87, 69.

[31] ISO, "Greenhouse gases--Quantification and reporting of greenhouse gas emissions for organizations--Guidance for the application of ISO 14064-1", *ISO/TR 14069:2013* Greenhouse. ISO, "Greenhouse gases--Carbon footprint of products--Requirements and guidelines for quantification and communication", *ISO/TS 14067:2013*. ISO "Guidance on Social Responsibility", *ISO 26000:2010,* section five and note especially section 6.5.5.2.1, which states that: "To mitigate climate change impacts related to its activities an organization should: - identify the sources of direct and *indirect* accumulated GHG emissions and define the boundaries (scope) of its responsibility; - measure, record and report on its significant GHG emissions, preferably using methods well defined in internationally agreed standards (see also Annex A for examples of initiatives and tools addressing GHG emissions); - implement optimized measures to progressively reduce and *minimize the direct and indirect GHG emissions within its control and encourage similar actions within its sphere of influence*;…". (emphasis added) Annex A includes CDP initiative).

[32] For example the Electronic Industry Citizenship Coalition has developed the EICC Carbon Reporting System, which allows companies to measure and share emissions data with their customers in a standardised template, Electronic Industry Citizenship Coalition, *Environmental Sustainability*, 20 November 2012, available online at <eicc.info/ESWG.shtml> (accessed 1 November 2013).

[33] For example Coca Cola Comp. suggests to its suppliers as a good practice to measure 'emissions, water and energy usage and sets goals to minimize environmental impact overtime', see Coca Cola Company, *Supplier Guiding Principles, Global Workplace Rights Workplace Rights Implementation Guide 2011*, 48, available online at <assets.coca-colacompany.com/d7/e9/5ea51d374870bbd1409c3a584807/SupplierSGPImplementationGuideENGLISH.pdf> (accessed 1 November 2013).

[34] Lambooy, T.E., *Corporate Social Responsibility. Legal and semi-legal frameworks supporting CSR*, Kluwer, Deventer, 2010, 256 *et seq*.

[35] Jonge de, A., "Transnational corporations and international law: Bringing TNCs out of the accountability vacuum", *Critical Perspectives on International Business*, vol. 7, ed.1, 2011, 66-89, 72.

Compliance is most often controlled via suppliers' self-reporting and audits conducted by companies themselves or by third party auditors, without any connection to public authorities or formal legal enforcement processes. This leads to doubts about the quality and effectiveness of CSR audits.[36] The unconvincing compliance-monitoring then undermines enforceability. Legally non-binding private regulation is not subject to judicial review. However, courts or tribunals may invoke it indirectly, using other legal instruments, such as advertising law, labour law or contract law.[37]

Nevertheless, private regulation plays an important role in regulation of transnational companies although it is based on voluntary participation. It has the ability to affect companies' behaviour to a considerable extent, since it is driven by their interest in reputation-building among their peers, investors and public; in other words by the objective of risk management, maintenance of the social license to operate and long-term profitability. Good reputation is an important asset, especially for branded and multinational companies. Reputational damage can have far-reaching business and economic consequences, such as decrease in sales, losing business partners or competitive advantage. In the current society of environmentally conscious consumers and investors, companies' transparency about their carbon emission levels, as well as the ones of their supply chains, are crucial in the reputational risk management. But the risk connected to the engagement of companies into climate change mitigation efforts is not limited to reputation only. Legal risk management is also an important concern. As discussed above, national governments adopt a growing number of legislation aiming at the reduction of carbon emissions that affect the way business is done. And more regulation is expected to come.[38] Companies most often express their concern in relation to future regulation of carbon tax, emissions reporting obligations, fuel and energy taxes and cap and trade schemes.[39] Proactive attitude towards risk of future regulation helps companies to be prepared for the upcoming obligations, gain competitive advantage against their peers, who do not take preventive measures, and boost their reputation as environmentally conscious companies.[40]

Maintaining a good reputation is also inseparably connected to the social licence to operate. Social licence to operate can be understood as the expectations of a company's

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[36] For a critical view on social audits see Swift, T. A. *et al.*, "The new social audits: Accountability, managerial capture or the agenda of social champions?", *European Accounting Review*, vol. 9, ed. 1, 2000, 81-98.

[37] See e.g. Kenny, K. E., "Code or Conduct: Whether Wal-Mart's Code of Conduct Creates a Contractual Obligation between Wal-Mart and the Employees of Its Foreign Suppliers", *Northwestern Journal of International Law & Business*, vol. 27, ed. 2, 2007, 453-474; or Sobzak, A., "Are Codes of Conduct in Global Supply Chains really Voluntary? From Soft Law Regulation of Labour Relations to Consumer Law", *Business Ethics Quarterly*, vol. 16, ed. 2, 2006, 167-184.

[38] For example, the Danish Financial Statement Act was recently updated, so that companies are now obliged to report on the measures they take in relation to climate change and the implementation and results of those measures. CSRgov.dk, *Proposal for an Act amending the Danish Financial Statements Act. (Report on social responsibility for large businesses),* December 2008, available online at <csrgov.dk/file/319999/proposal_report_on_social_resp_december_2008.pdf> (accessed 1 November 2013).

[39] Concerns regarding future regulation are a standardised part of the CDP reports. The reports are accessible through Carbon Disclosure Project database, available online at <cdproject.net/en-US/Results/Pages/responses.aspx> (accessed 1 November 2013).

[40] Haapio, H., ed., *A Proactive Approach to Contracting and Law*, Turku University of Applied Science, Course material 38, Turku, 2008.

stakeholders in relation to the manner in which the company conducts business.[41] Living up to the stakeholders' basic expectations proved to be crucial for continuance of a business and protecting investments.[42,43] From its definition, legal compliance is an inherent part of the social licence to operate. However, stakeholders' expectations go often far beyond legal requirements. The content of social licence to operate will typically include respect for human rights, environmental protection, business integrity and local communities. As the awareness of the climate change challenges spreads through all levels of society, the demand for carbon reduction becomes an important issue. Raising awareness is facilitated by activities of both state and non-state actors. The non-profit organization Carbon Disclosure Project (CDP)[44] is an example of the latter, making the disclosure of corporate carbon emissions' levels a business norm and the expectation of transparency a part of the social licence to operate. As far as the former, possible future implementation of regulation on carbon footprint of commercial products in the EU is likely to increase demand for products with low level of embedded carbon emissions.[45] Therefore, in order to avoid negative effects of the new regulation on their social licence to operate, companies should commence the process of calculating the life-cycle carbon emissions of their products.

In the climate change area, the CDP's system for corporate reporting of greenhouse gases that uses the Greenhouse Gas Protocol (GHG Protocol) as an accounting tool is the most known private regulation. In 2011, the GHG Protocol issued the Corporate Value Chain (Scope 3) Accounting and Reporting Standard (GHG Scope 3 Standard) containing guidance for scope 3 emissions' detection and reporting and CDP launched its CDP Supply Chain Program.[46] The number of companies participating voluntarily in CDP is constantly increasing, and in 2012 fifty-four of the world's biggest companies and almost 2,500 of their suppliers took part in the CDP Supply Chain Program, reporting on their own carbon emissions and on carbon emissions of their supply chains.[47] Even

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41 Gunningham, N., Kagan, R. A. and Thornton, D., "Social License and Environmental Protection: Why Businesses Go Beyond Compliance", *Law & Social Inquiry*, vol. 29, ed. 2, 2004, 307-341, 308.

42 An example where losing a social licence to operate led to closing of a business was the activity of Coca Cola in Kerala, India. Coca Cola, who needed large quantities of water for production activities, caused severe shortages of water in the locality. Inhabitants of nearby villages had since 2002 protested repeatedly against the overuse of local water resources. After long court proceedings, Coca Cola closed the facility in 2007. For more information, see The Rights to Water and Sanitation, *Case against Coca-Cola Kerala State: India*, 20 August 2010, available online at <righttowater.info/?s=coca+cola+kerala+state+india> (accessed 1 November 2013).

43 Wilburn, K. M. and Wilburn, R., "Achieving Social License to Operate Using Stakeholder Theory", *Journal of International Business Ethics*, vol., 4, ed. 2, 2012, 3-16, 4; Nelsen, J. L., "Social license to operate", *International Journal of Mining, Reclamation and Environment*, vol. 20, ed. 3, 2006, 161-162, 161.

44 Carbon Disclosure Project, available online at <www.cdp.net/en-US/Pages/HomePage.aspx> (accessed 8 April 2014).

45 For more information on the CO2 labelling plans in the EU see EurActiv, Neslen, A., *EU Wants Carbon Labels to do What They Say on the Tin*, 4 July 2012, available online at <euractiv.com/specialreport-prods-green-planet/eu-wants-carbon-labels-tin-news-513629> (accessed 4 March 2014).

46 Greenhouse Gas Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, available online at <ghgprotocol.org/standards/scope-3-standard> (accessed 1 November 2013); Carbon Disclosure Project, *Supply Chain Program*, available online at <cdproject.net/en-US/Programmes/Pages/CDP-Supply-Chain.aspx> (accessed 1 November 2013).

47 Carbon Disclosure Project, *Reducing Risk And Driving Business Value: CDP Supply Chain Report 2012-13*, 6, available online at <cdproject.net/CDPResults/CDP-Supply-Chain-Report-2013.pdf> (accessed 1 November 2013).

though this is a good achievement, we have to bear in mind the limits of private regulations. Voluntary reporting schemes are an essential part of the climate change regulatory matrix providing for necessary transparency and thus public control of companies', and their suppliers', emissions. However, standing alone these schemes do not guarantee the enforcement of positive shifts in companies' behaviour in respect to the environment.

## III. The Relations Between Scope 1, 2 and 3 Emissions

Observing the development of national emissions in the last decade, one has to notice the divide between major developed and major developing countries. While the CO2 emissions of the EU countries, USA or Canada dropped in 2010 by some per cent, in comparison to the results from 2000 (e.g. Germany -7%, UK -5%, Italy -7%, USA -4%, Canada -4%),[48] the emissions of booming economies of developing countries has grown rapidly by tens and hundreds per cent with China leading the group with almost tripled emissions since 2000 (e.g. China 191%, Vietnam 145%, Bangladesh 93%, Thailand 72%, India 69%).[49]

Some may consider the comparison of absolute numbers unfair, since it does not account for the population size. The emissions per capita show us at first a completely different picture, with the USA and Australia being amongst the top emitters with circa 18 metric tons per person, compared to 1.4 tons per person in India. However, observing the decreasing/increasing tendencies, we find that the numbers do not differ much from the tendencies of overall national emissions. Emissions per capita have risen significantly in developing countries during the last decade (China 177%, Vietnam, 116%, Bangladesh 64%, Thailand 60%, India 45%), while at the same time they decreased slightly in the developed countries (USA -13%, Germany -7%, Canada -12%, UK – 10%, Italy – 7%).[50] Chinese per capita emissions reached the level of European countries in 2011, and more countries may quickly follow.[51] The tendencies can be attributed to different stages of development combined with different energy and fuels policies. Whereas developed countries focus in recent years on using cleaner energy and limiting the use of fossil fuels, developing countries multiplied the use of fossil fuels due to the intensive industrialisation.

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[48] U.S. Energy Information Administration, *supra* nt. 7. Although the results seem positive, the EU will have to intensify its efforts in order to reach the -20% target of the second commitment period of the Kyoto Protocol. The USA progressed well after the emission peek in 2007; however, experienced a slight relapse in 2010. Therefore, the challenge lies in stabilisation of the decreasing tendency. Canada's emissions have been constantly decreasing over the last four years, nevertheless, Canada decided to withdraw from the Kyoto Protocol at the end of 2011 in order to avoid large penalties due to the inability to reach the commitment of 6% drop by 2012 compared to the 1990 base year.

[49] U.S. Energy Information Administration, *supra* nt. 7.

[50] For more information on developments of emissions see International Energy Agency, *CO2 Emissions from Fuel Combustion, Highlights*, 2012, at <iea.org/publications/freepublications/publication/name,32870,en.html> (accessed 1 November 2013).

[51] European Commission, Joint Research Centre, *Per capita CO2 emissions in China reach EU levels*, 18 July 2012, available online at <ec.europa.eu/dgs/jrc/index.cfm?id=1410&dt_code=NWS&obj_id=15150&ori=RSS> (accessed 1 November 2013), informing that Chinese per capita emissions in 2011 reached 7.2 tonnes, which is comparable to 7.5 tonnes per capita emission of the EU.

However, as the numbers look fairly nice for developed countries and miserable for countries developing, a critical piece of information is missing from the reported and published data: the emissions embedded in imported products. According to Peters et al., in 2011 the CO2 emissions embedded in products intended for export accounted for 26% of the global CO2 emissions.[52] China, as a major exporter and major emitter, has been the subject of most calculations regarding emissions embedded in exported products. For instance, Wei *et al*. stated that carbon emissions generated during production for export amounted in 2007 to 35% of total Chinese emissions.[53] However, let us consider the situation from the other side, i.e. from the perspective of a developed country. While the UK's national CO2 emissions from the consumption of energy have raised only slightly from 577,03 million metric tonnes in 1992 to 583,42 in 2004,[54] which equals to a 1% increase, the emissions imported with the products from China increased from 26 to 128 million metric tonnes.[55] If we add the emissions embedded in import to the total national emissions number, we find that the overall emissions have actually increased by 23%.

This problem is not unknown.[56] The obligation of states to disclose the embedded emissions of imported products has been suggested as a possible solution to achieve a more transparent picture of global distribution of carbon emissions.[57] As transparency on the national level is certainly important in this respect, the actual change of attitude to the environmental aspects of businesses in both developed and developing countries is crucial, because as discussed above, the international solution is nowhere to be seen. Therefore, the challenge of upcoming years will be to use all available tools, develop new ones and combine them in order to achieve a reduction of carbon emissions in production in developing countries without the need for a top-down international public regulation.

## IV. Contracts As Regulatory Tools

In the light of the foregoing, we are in a situation where governments know about the problem of the increasing amounts of carbon emissions being transported from developing to developed countries, whether this is caused by climate change policies of the developed countries (carbon leakage) or not, but are not able to secure improvement

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52 Peters, G. P. *et al.*, "Growth in Emission Transfers via International Trade from 1990 to 2008", *PNAS*, vol. 108, ed. 21, 2011, 8903-8908, 8903. The authors build an estimation model of the net transfers of CO2 emissions via international trade, where '[t]he net emission transfers represents the CO2 emissions in each country to produce exported goods and services minus the emissions in other countries to produce imported goods and services'.

53 Wei, B., Fang, X. and Wang, Y., "The Effects of International Trade on Chinese Carbon Emissions", *Journal of Geographical Sciences*, vol. 21, ed. 2, 2011, 301-316, 307.

54 U.S. Energy Information Administration, *supra* nt. 7.

55 Herrmann and Hauschild, *supra* nt. 21, 14.

56 The topic appeared several times in the media (see e.g. BBC News, Harrabin, R., *Openness Urged on UK's Emissions*, 3 September 2010, available online at <bbc.co.uk/news/science-environment-11172239> (accessed 1 November 2013); or BBC News, Harrabin, R., *Carbon emissions 'hidden' in imported goods revealed*, 25 April 2011, available online at <bbc.co.uk/news/science-environment-13187156> (accessed 1 November 2013) and is a subject of a range of research projects and publications (for literature review see e.g. Peters *et al.*, *supra* nt. 52, 3903, or Guo, J., Zhang, Z. and Meng, L., "China's provincial CO2 emissions embodied in international and interprovincial trade", *Energy Policy*, vol. 42(C), 2012, 486-497, 489).

57 Herrmann and Hauschild, *supra* nt. 21, 16.

of the situation due to the lack of international consensus and necessity to respect the international trade rules. Companies are, however, not bound by the same ties as governments are,[58] while concurrently they have a growing political and regulatory influence.[59] With their strong economic power and transnational reach,[60] companies have the means to affect political and legislative processes (most obviously by lobbying,[61] sponsoring political campaigns[62] and signing bilateral investment agreements with national governments[63]), as well as the life conditions of individuals (through environmental effects of their operation or employment conditions[64]), and other business entities worldwide, and especially members in their supply chains. From being the governed they are becoming governing entities, however without being subjected to the obligations under international law.[65]

Given the foregoing, we may assume that multinational western-based companies can influence not only their national climate change policies, but that they also have the ability to change and control activities of their business partners in respect to the environment. This is relevant especially in relation to business partners from developing countries that are often economically dependent on the demand from foreign multinationals. Both private and public regulators are aware of this possibility and create pressure on companies to use the control power in their sphere of influence.[66] Contracts

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58 Vogel, *supra* nt. 30, 75, noting that in contrast to states, who are restricted by WTO rules, companies may demand adherence to their codes of conducts and CSR standards as a precondition for doing a business.

59 Institute for Policy Studies, Anderson, S. and Cavanagh, J., REPORT: *Top 200: The Rise of Corporate Global Power*, 4 December 2000, updated version 2006, Washington, 3: '[o]f the 100 largest economies in the world, 51 are corporations; only 49 are countries (based on a comparison of corporate sales and country GDPs)'.

60 United Nations Conference on Trade and Development (UNCTAD), REPORT: *World Investment Report 2009, vol. 1, Transnational Corporations, Agricultural production and Development*, 2009, New York and Geneva, 17, showing that in 2009 there were approximately 82,000 transnational corporations worldwide and the largest one hundred of them accounted for about 4% of world GDP.

61 Anderson and Cavanagh, *supra* nt. 59: '[t]he exact amount spent on these activities (lobbying) is not known, but of the Top 200 firms, ninety four maintain 'government relations' offices located on or within a few blocks of the lobbying capital of the world Washington, DC's K Street Corridor.'; for the discussion on lobbying in the EU, see Bernhagen, P. and Mitchell, N. J., "The Determinants of Direct Corporate Lobbying in the European Union", *European Union Politics*, vol. 10, ed. 2, 2009, 155-176, 163, citing Greenwood, J., *Interest Representation in the European Union*, 2nd ed., Palgrave Macmillan, London, 2007, stating that '…around 85% of all EU-level groups are 'located within a 2 1/2 hour train ride from Brussels'.

62 Anderson and Cavanagh, *supra* nt. 59.

63 Pace University School of Law, Institute of International Commercial Law and International Association for Contract and Commercial Management, REPORT: *The Triple Bottom Line: The Use of Sustainability and Stabilization Clauses in International Contracts*, 2011, New York, 30-36, empirical investigation of the use of so-called "stabilization clauses" by companies across the world; Jonge de, *supra* nt. 35, 69.

64 The scope of influence may be represented by the number of people employed by transnational corporations. This number has increased up to about seventy seven million in 2008, i.e. approximately four times more than in 1982; see UNCTAD, *supra* nt. 60.

65 See Jonge de, A., *Transnational Corporations and International Law: Accountability in the Global Business Environment*, Edward Elgar Publishing, Northampton, 2011; de Jonge, *supra* nt. 35.

66 The term "sphere of influence" is used by several regulations, such as the UN Global Compact (Introductory text) or ISO 26000 (par. 2.19). The interpretation of the term has caused many discussions. The ISO 26000 standard provides the following definition: 'range/extent of political,

then come as natural tools for executing such a control. For instance, ISO 26000 states that: 'To promote social responsibility in its value chain, an organization should: integrate ethical, social, environmental and gender equality criteria, and health and safety, in its purchasing, distribution and contracting …'.[67] Further, it lists 'setting of contractual provisions or incentives' as the first example of exercising influence over companies' business partners.[68] While acknowledging that the ability to influence companies' suppliers depends on various factors, such as the number of suppliers (i.e. level of dependence on a specific supplier) or the complexity of the supply chain, the OECD Guidelines for Multinational Enterprises provide that 'enterprises can also influence suppliers through contractual arrangements'.[69] More specifically regarding the CO2 emissions, the GHG Protocol relies on contractual arrangement between the reporting company and its suppliers as leverage to acquire the data on suppliers' emissions.[70]

## IV.1. Why Are Contracts Overlooked in the Climate Change Regulation Matrix?

From the above we can conclude that companies, and especially multinational companies, have the power as well as the tools – contracts – to influence their suppliers' behaviour. So why has contractual governance not been discussed and developed more in relation to the climate change efforts?

Firstly, supply chain contracts were traditionally drafted with the sole purpose to regulate behaviour regarding the exchange of goods and money between two parties. However, they have gradually included an increasing number of provisions whose aim is to protect third parties' interests rather than economic interests of the contracting parties. These provisions do not directly relate to the subject matter of a contract, which in the case of supply chain contracts means the tangible quality of the delivered products.[71] Requirements for CO2 monitoring and reduction in suppliers' production and other processes and activities are a typical example of these provisions. For example, BT group

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*contractual*, economic or other relationships through which an organization (2.12) has the ability to affect the decisions or activities of individuals or organizations' (emphasis added). See UN Global Compact and International Standard ISO 26000 Guidance on Social Responsibility, *An Introduction to Linkages between UN Global Compact Principles and ISO 26000 Core Subjects*, 4 March 2014, available online at <unglobalcompact.org/docs/news_events/8.1/UNGC_ISO_Final.pdf> (accessed 4 March 2014). For further discussion on the term see e.g. Woods, S., "Four varieties of social responsibility: Making sense of the 'Sphere of influence' and 'Leverage' debate via the case ISO 26000", *Osgoode CLPE Research Paper,* no. 14/2011; or UN Human Rights Council, *Clarifying the concepts of 'sphere of influence' and 'complicity', A/HRC/8/16*, 2008, available online at <refworld.org/docid/484d1fe12.html> (accessed 4 March 2014).

67 ISO 26000, par. 6.6.6.2.

68 ISO 26000, par. 7.3.3.2.

69 The OECD Guidelines for Multinational Enterprises, Commentary on General Policies, par. 21, available online at <www.oecd.org/corporate/mne/> (accessed 8 April 2014).

70 Corporate Value Chain (Scope 3) Accounting and Reporting Standard, section 7.4 ('Tier 1 suppliers have contractual obligations with the reporting company, providing the leverage needed to request GHG inventory data'). Information on contractual provisions is also a voluntary part of the GHG public report (section 11.2).

71 Lin, L. W., "Legal transplants through private contracting: codes of vendor conduct in global supply chains as an example", *American Journal of Comparative Law*, vol. 57, ed. 3, 2009, 711-744, 717.

Plc. (BT) imposes the following three minimum expectations upon its contracted suppliers:

- that the supplier has a policy to address the challenge of climate change
- that the supplier is actively measuring and reporting carbon and other green house gas emissions
- that the supplier has set challenging targets to cut emissions and is reporting on progress.[72]

If BT's supplier does not set any carbon reduction targets, it evidently breaches a contract; nevertheless, the delivered goods may still be perfectly compliant with the contract specifications.[73] The CO2 reduction targets have thus no direct connection to the main subject of the supply chain contract. Therefore, by the inclusions of CO2 reduction goals, private contracts are balancing on the line between bilateral arrangement and general regulation. This proves to be one of the reasons why it is difficult for scholars and regulators to approach, conceptualize and operationalise them.[74] This is reflected in, for example, the system of sanctions. If we consider BT's supply agreement as a business contract for delivery of goods, in the case of breach, the main aim of any sanction would be to put the aggrieved party in the position it would have been in had the breach not occurred. The focus would thus be to prevent economic costs to the aggrieved party. If we approach the agreement as a regulation, sanctions will aim to restore the regulatory process, in order to re-establish compliance.[75]

Secondly, supply chain contracts are bilateral instruments. They are private documents, whose confidentiality is often protected by a non-disclosure provision.[76] Thus, although hundreds of contracts are concluded every day, it may be impossible for an external party to register their existence, monitor their compliance, and eventually enforce the CO2 reduction requirements therein. Such an external party may not only be a public entity, who wishes to control companies' environmental attitude, but also a third party, who is the actual beneficiary under a contractual provision.[77] If the third party should have a possibility to defend its rights, knowing about the existence of the

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[72] BT Plc., Generic Standard 20 Climate Change Procurement Standard, Version 2.0, January 2012, available online at <www.selling2bt.bt.com/Downloads/GS20v2.pdf> (accessed 28 February 2014).

[73] This would not be the case if the supplier knows that a product will bear a carbon footprint label and thus the carbon emissions within the manufacturing process should comply with specific maximum levels. In such a case, the emissions level would be a part of the product quality specification and therefore directly connected to the subject matter of the contract.

[74] Vandenbergh, M. P., "The private life of public law", *Columbia Law Review,* vol. 105, ed. 7, 2005, 2029–2096, 2041-2042, noting that second order agreements (purely private contracts used for achieving public goals) had been overlooked 'because they do not fall neatly into the domain of public or private law scholars'.

[75] Cafaggi, F., "The regulatory functions of transnational commercial contracts, New architectures", EUI Working papers series, 2012, 1–32, available online at <papers.ssrn.com/sol3/papers.cfm?abstract_id=2153096> (accessed 28 February 2014).

[76] Lin, *supra* nt. 71, 743.

[77] With regard to environmental protection, the third party beneficiaries will most often mean inhabitants of the locality the pollution takes place in. However, identifying the beneficiary of contractual provision requiring specific targets for CO2 emissions is more complicated, since climate change is a global problem. Carbon emitted at one place may affect a remote part of the world and thus, it is very difficult to find a causal relationship between the polluting activity and its effects.

agreement is a necessary precondition (*nemo iudex sine actore*). This becomes even more problematic in complex international supply chains, where the focal company has a direct contractual relation only with its first tier suppliers and, thus, has no legal rights to monitor its sub-suppliers' behaviour. The difficult accessibility of contractual texts also hinders any empirical research of this issue.[78]

Finally, the climate change mitigation efforts have been focused for a long time on capturing and regulating scope 1 and 2 emissions. These two emissions types have no connection to supply chain contracting and, therefore, contractual governance was not at first considered as a suitable way of regulation. Scope 3 emissions - those that are consequences of the regulated entities' activities, but produced by sources outside of the entities' ownership or control - came into the picture only later. Logically, those emissions would be covered as scope 1 and 2 emissions of the entities which actually produce them. However, due to the misbalance of regulatory activity in various regions, as described above, emissions embedded in imported products (and thus scope 3 emissions associated to purchased goods and services) became the real concern for climate change mitigation. Due to this, supply contracts are gaining more attention.

## IV.2. Why Can Contracts Be Successful Where Other Regulations Fail?

As discussed above, on the one hand, climate change regulation suffers from the non-existence of binding international law. On the other hand, it is dominated by private regulation with questionable democratic foundation and control, without standardised effective enforcement. Therefore, overall climate change regulation is in an acute need of new regulatory tools and regimes. The author believes that supply chain contracts can be one of the 'old-new' tools that can have surprisingly big positive effects. Old, since contracts are one of the oldest legal instruments, new, since they are increasingly used for new, public purposes. This section describes why supply chain contracting may be more successful than any regulation so far.

### IV.2.1. Sustainability Contractual Clauses - Best Practice

Sustainability clauses are contractual provisions that prescribe minimum social and/or environmental standards to be upheld by contractual parties when performing their business activities. Frequently, these clauses will integrate corporate codes of conduct in order to give the codes the form of binding commitments.[79] Only a few empirical studies have been conducted to investigate the usage of supply chain contracting for

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[78] Researchers have to rely on publicly available documents and information provided by companies themselves. Some authors have used data from public databases of corporate documents, such as the U.S. Securities and Exchange Commission (SEC) database. However, the database includes only "material" contracts and supply chain agreements often fall outside of the materiality test. Therefore, the sample may not be representative and thus, it is difficult to make any generalisation. See, e.g. Lin, *supra* nt. 71; Geis, G. S., "An Empirical Examination of Business Outsourcing Transactions", *Virginia Law Review*, vol. 96, ed. 2, 2010, 241-300.

[79] Vytopil, L., "Contractual Control and Labour-Related CSR Norms in the Supply Chain: Dutch Best practice", *Utrecht Law Review*, vol. 8, ed. 1, 2012, 155-169, 168 (noting that within their supply chains, companies do not use codes of conduct in the sense of the term, but that they rather intend to gain contractual control); McBarnet, D., Voiculescu, A. and Campbell, T., eds., *The new corporate accountability: Corporate social responsibility and the law*, Cambridge University Press, Cambridge, 2007, 42.

sustainability purposes, but all of them agree that contractual control in relation to the social and environmental expectations of multinational companies from their suppliers from developing countries is applied in the majority of business contracts concluded nowadays. Vandenbergh studied contractual practices in relation to environmental issues of companies from eight retail and industrial sectors and found that over 50% of companies include some type of environmental requirements into their business contracts. These companies mostly include the strongest ones in the specific industry representing about 80% of the total sales in the given sectors.[80] A later study conducted by the Pace University and Institute of International Commercial Law showed a rapid increase of these contractual practices, when almost 80% of the sample companies stated that they had imposed sustainability related requirements upon their business partners and approximately 70% of them considered including sustainability clauses in their contracts as highly or very important.[81] Although environmental issues are the prevailing topic in these clauses and managing greenhouse gases appears often,[82] requirements for specific quantified reduction of carbon emissions are only slowly entering the area.[83]

The term 'sustainability contractual clauses' covers a broad spectrum of provisions. Sustainability contractual clauses appear in different forms, as an expressed contractual provision[84] or a reference to another document,[85] such as standard terms and conditions,

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[80] Vandenbergh, M. P., "The New Wal-Mart Effect: The Role of Private Contracting in Global Governance", *UCLA Law Review*, vol.54, ed. 4, 2007, 913-970. The results are based on an analysis of contractual texts publicly available from the database of the U.S. Securities and Exchange Commission.

[81] Pace University School of Law & IACCM, *supra* nt. 63, 26. The results are based on a survey conducted with companies representing various industries from North America, Middle East, Africa, Europe, Asia and Pacific.

[82] Carbon Disclosure Project, Accenture, REPORT: *Supply Chain Report 2012, A New Era: Supplier Management in the Low-Carbon Economy*, 2012, available online at <www.cdproject.net/CDPResults/CDP-Supply-Chain-Report-2012.pdf> (accessed 28 February 2014), 4, stating that half of the responding companies include in their supply chain contracts obligations for suppliers to manage greenhouse gas emissions; however, the number should be interpreted in the context, meaning that the responding companies do not represent an average business behaviour, since they are voluntarily participating in the CDP Supply Chain Program; McBarnet, D., Voiculescu, A. and Campbell, T., *supra* nt. 79, 65, naming environment to be the "vanguard issue in CSR".

[83] E.g. BT recommends to include contractual provision in its purchase agreements that could have the following wording: 'suppliers are expected to have targets to reduce GHGs/carbon emissions by at least 10% over 3 years or to demonstrate that they have already achieved this and are working to more challenging targets'; see BT Plc., *supra* nt. 72, article 2.

[84] For instance, Mondelez International (former Kraft Food) includes a provision titled Corporate Responsibility Expectations into all contracts with its direct suppliers. In relation to environment it states that '…Supplier will work to continuously improve its environmental performance by setting and then working toward quantifiable goals that reduce the environmental impact of its activities'. The full wording of the provisions is available through Mondelez International, *Corporate Responsibility Expectations for Direct Suppliers*, available online at <global.mondelezinternational.com/deliciousworld/compliance-integrity/corporate_responsibility_expectations.aspx > (accessed 28 February 2014).

[85] A two-step reference system often appears, meaning that a contract for example refers to standard terms and conditions, which then refer to a code of conduct. An example can be found in article 13 of General Terms & Conditions of Purchase of Goods of Unilever Supply Chain Company AG ("Conditions"), filed at the Handelsregister in Schaffhausen, Switzerland under number 249.4.001.616-4, available online at <www.unilever.com/aboutus/supplier/termsandconditions/> (accessed 28 February 2014): 'Each Supplier and the Lead Supplier acknowledges that it has reviewed Unilever's Supplier Code (the 'Code') and agrees that all of their activities shall be conducted in accordance with the Code…'.

a code of conduct,[86] another internal policy,[87] a global CSR initiative,[88] or a separate agreement.[89] They also have different content, most often related to environmental standards, employment conditions, health and safety standards, human rights and business ethics issues.[90] Their scope of applicability varies to a great extent; many of them extend beyond a bilateral agreement and impose or drive the obligations to further members of the supply chain.[91] The provisions are also accompanied by different monitoring and enforcing mechanisms, ranging from soft relational tools to hard contractual sanctions.[92]

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[86] For example, Bayer Group states in relation to Suppliers' Code of Conduct the following: 'It is a fixed element of our supplier selection and evaluation process, and is integrated as binding into our electronic ordering systems and contracts throughout the Group through a special clause', see Bayer Group, *Sustainability Development Report 2011*, available online at <www.sustainability2011.bayer.com/en/homepage.aspx> (accessed 28 February 2014), 31.

[87] *Supra* nt. 72: '[i]f this Generic Standard ('GS20') is referenced in any contract you have with BT ('Contract'), you, as the Supplier, agree to…'.

[88] For example, Pressalit Group requires from its suppliers that 'with the design of the products and with the choice of materials, production methods, employees and sub-contractors, the seller must ensure that buyer's environmental policy is complied with. Furthermore compliance with UN's Global Compact should be observed', see Pressalit Group A/S, General Purchasing Terms, available online at <www.pressalit.com/NR/rdonlyres/0FFF18D6-6FE7-4A07-A67F-E21EDE90C31A/0/Indkøbsbetingelser_ENG.pdf> (accessed 28 February 2014).

[89] For example, Hewlett Packard, HP's Supplier Social & Environmental Responsibility Agreement, 22 October 2008, available online at <www.hp.com/hpinfo/globalcitizenship/environment/pdf/supagree.pdf> (accessed 28 February 2014).

[90] Pace University School of Law and IACCM, *supra* nt. 63, 29. 82.4% of the responding companies include environmental standards into their SCCs, followed by 80.4% including health and safety standards, 76.5% employment laws and 51% human rights. Other issues were included by less than 32% of responding companies.

[91] Companies differ in the level to which they pass the responsibility for sustainable supply chain on its suppliers. On the one side of the spectrum, EADS demands its suppliers to ensure compliance of the whole supply chain (see Airbus Group, EADS Corporate Social Responsibility in Sourcing – EADS CSR Sourcing Provisions, 1 October 2010, available online at <www.eads.com/eads/int/en/our-company/Our-suppliers.html> (accessed 28 February 2014), art. 7: 'The Supplier ensures that the EADS CSR Sourcing provisions defined herein are also observed by all their subcontractors and suppliers. EADS relies on the Supplier to communicate and promote actively EADS CSR Sourcing provisions through their entire supply chain.'). On the other side of the spectrum, Vodafone only "encourages" dissemination of its code throughout the supply chain (see Vodafone, Vodafone Procurement Company S.à r.l., Supplier Policy - A2, Code of Ethical Purchasing, version 3.0, 6 September 2013, available online at <www.vodafone.com/content/index/about/about-us/suppliers/our_policies_processes_and_tools.html> (accessed 28 February 2014), art. 2.3: 'Supplier is encouraged to take all reasonable endeavours to promote this Code to its suppliers and subcontractors.'). Heineken stands in the middle, expecting its suppliers to enforce compliance only from their own suppliers, i.e. second tier suppliers (see Heineken, Supplier Code, 8 July 2010, available online at <www.theheinekencompany.com/sustainability/governance/our-policies> (accessed 28 February 2014): '…they (suppliers) shall take all appropriate steps to ensure that their own suppliers live by the key elements of the Supplier Code…').

[92] For example, Telecom Italia Group implements a full range of monitoring and enforcement tools during both pre-contractual and contractual phase. These tools include, inclusion of CSR criteria into suppliers' selection process, suppliers' self-assessments, on-site audits (both internal and external), corrective plans, and contractual sanctions (penalties, reduction of supply volumes and eventually termination), see Telecom Italia Group, Suppliers Policy in the Purchasing Process of the Telecom Italia Group, available online at <www.telecomitalia.com/content/dam/telecomitalia/documents/Sostenibilita/en/Policies_ENG/Suppliers_EN_22.12.09.pdf> (accessed 28 February 2014).

All these features influence provisions' binding power and, thus, enforceability. However, the fact that they exist and that their use is widespread, suggests that a certain best practice regarding their use has developed among companies. The best practice will generally include presenting clear expectations to suppliers, implementing these expectations throughout the whole relationship with suppliers from their selection, contract negotiation and compliance control during the contract term, continuous or regular communication on suppliers' progress, relational attitude towards enforcement with focus on mutual transparency and support and leverage in the form of the possibility to terminate the business relationship in case of on-going non-compliance.[93] There is no obstacle for extending the best practice to the new carbon emissions related provisions. The up-to-date experience with sustainability contractual clauses provides companies with negotiation and implementing processes and monitoring and enforcement tools for making the best out of the contractual control. Through contractual control, they may trigger changes in suppliers' behaviour without losing the economic benefits of outsourcing the specific part of their business activities. Therefore, inclusion of one more topic or a specific goal into the provisions can easily be done without additional negotiation or administration costs. Suppliers are used to these types of obligations and, thus, it may be expected that they will not oppose an inclusion of another one. Moreover, they are often not in the economic position to oppose such requirements. Finally, compliance with carbon emissions' reduction requirements may bring economic benefits to suppliers.[94] Of course, the monitoring and enforcement costs may rise due to the necessity of having specialised processes to count the carbon emissions. But also this obstacle does not seem to be problematic since several guidelines exist on calculating and assessing corporate scope 3 emissions, with the already mentioned GHG Scope 3 Standard being probably the most detailed one.[95]

To summarise the above, businesses are nowadays used to implementing various sustainability requirements into their supply chains. Companies and other public and private entities have developed best practices based on their practical experience in this area, meaning that there is a body of literature dealing with the best ways to align supply chain members with companies' ethical, social and environmental standards. The best practice deals with a broad scope of requirements and it can easily be utilised to manage new requirements such as those for carbon emissions' reduction.

### IV.2.2. Enforceability through contract law

Companies include requirements for the reduction of carbon emissions into supply chain contracts, as is similar in the case of other sustainability related obligations, in order to gain a legal leverage over their suppliers' behaviour. In fact, most suppliers from

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[93] Network for Business Sustainability, Brammer, S., Hoejmose, S., Millington, A. and NBS, *Managing sustainable global supply chains, Framework and Best Practices*, 2011, Ontario, Canada, available online at <nbs.net/wp-content/uploads/NBS-Executive-Report-Supply-Chains.pdf> (accessed 28 February 2014); UN Global Compact Office and Business for Social Responsibility, *Supply Chain Sustainability, A Practical Guide for Continuous Improvement*, June 2010, available online at <www.unglobalcompact.org/docs/issues_doc/supply_chain/SupplyChainRep_spread.pdf> (accessed 28 February 2014); Pace University School of Law & IACCM, *supra* nt. 63, 28-29.

[94] In 2012, 73 % of the CDP Supply Chain Program members reported monetary savings (in comparison to 39 % in 2011), suppliers could expect to reach comparable results; see CDP, *supra* nt. 47, 14.

[95] Other guidelines were developed e.g. by U.S. Environmental Protection Agency or by private company Carbon Trust.

developing countries have no legal obligation from public regulation in relation to carbon emissions. Therefore, if buyers from developed countries wish to change suppliers' behaviour, they have to exert enough pressure to effectively compensate for the absent binding regulation. In order to do so, companies combine several types of leverage: economical, relational and legal. They are all closely interrelated and reinforce each other.

The economic leverage stems from the fact that suppliers from developing countries are highly dependent on a multinational buyer.[96] The enormous economic power asymmetry gives the buyer the possibility to basically unilaterally dictate conditions of the business relationship.[97] Therefore, the supplier strains to comply (or at least appear to do so), because such a business relationship may be the determining point of his existence.

The relational leverage is exercised through long-term business relationships, where a buyer invests resources in educating and developing its suppliers, and in return expects the suppliers to be loyal and follow the buyer's requirements. This type of cooperation, where both parties invest into the relationship and therefore develop certain social norms of cooperation between them,[98] was described in the relational contract theory of Ian R. Macneil.[99] The failure of such a relationship is detrimental to both parties, regardless of the economic misbalance.

The legal leverage is facilitated through the possibility of enforcing agreed terms of cooperation before courts. The economic and relational pressure is usually effective. However, buyers having at stake not only their money but also their good name, wish to ensure that suppliers will be aware of the costs of non-compliance. In case of court proceedings, these may raise to a significantly higher amount than the actual damage caused by non-compliance. In case of carbon emissions reduction requirements, the actual damage is hardly ever possible to be proven. Typically this is due to a missing or blurred causal link.[100] Nevertheless, in a court proceeding, the buyer may claim compensation for both suffered and future reputational damage, loss of profit and the costs of proceedings.[101] Therefore, the contractual form is used to frame the requirements

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[96] However, such economic inequality is not so frequently the case in regards to domestic suppliers or suppliers of a highly specialised components or goods where no alternative source is available.

[97] McBarnet *et al.*, 2007, *supra* nt. 79, 86-88, noting how few negotiation power suppliers from developing countries have when dealing with strong buyers from developed countries; Kessler, F., "Contracts of Adhesion – Some Thoughts About Freedom of Contract", *Columbia Law Review*, vol. 43 ed. 5, 1943, 629-642, comparing the unilateral imposition of contractual conditions to legislative activity.

[98] Gudel, P. J., "Relational Contract Theory and the Concept of Exchange", *Buffalo Law Review*, vol. 46, ed.3, 1998, 763-798, 786, referring to norms of relational contract developed by Macneil, i.e. role integrity, reciprocity, implementation of planning, effectuation of consent, flexibility, contractual solidarity, protection of restitution, reliance and expectation interests, creation and restraint of power, propriety of means and harmonisation with social matrix; Gudel, 782, sees these norms as 'generated by the contractual relation itself and related to the relation in a functional way…'.

[99] Macneil, I. R., *The new social contract: an inquiry into modern contractual relations*, Yale University Press, New Haven, 1980. Next to Macneil, Stewart Macaulay has contributed extensively to development of the theory.

[100] An actual damage could be proven in case that the delivered product is to be labelled with a low-carbon label that the supplier knew about and the delivered goods is not compliant with the label's conditions.

[101] Schwenzer, I., Leisinger, B., "Ethical Values and International Sales Contracts", *in*: Cranston, R., Ramberg, J. and Ziegel, J., eds., *Commercial Law Challenges in the 21st Century: Jan Hellner in memoriam*, Stockholm Centre for Commercial Law, Juridiska Institutionem, Stockholm, 2007, 268-270, discussing

for reduction of carbon emissions as a binding obligation. Although sustainability clauses are not generally enforced through courts,[102] the option itself has an impact on the perception of the obligation by suppliers and enhances their compliance.[103] This is an expression of Olivecrona's understanding of the binding force of law as being only '…an idea in human minds'.[104] Nevertheless, the idea is supported by the underlying legal framework.

Even though many differences between individual jurisdictions exist, the main principles of contract law are similar around the globe; these include the principle of contractual freedom, the underlying moral imperative *pacta sunt servanda* and the enforceability of contracts through public legal institutions. The legal system for contractual enforcement copes rather well with the growing number of inter- and transnational private transactions. In most cases, where parties do not choose applicable law, international default law will apply.[105] Despite some inherent flaws of the international law of contracts,[106] the system is rather clear, accessible to private parties and tailored for international business relations. Therefore, provided that a contractual provision does not prescribe anything illegal or impossible, it should theoretically be enforceable under the international law of contracts.[107,108]

In sum, the international contract law system serves to create legal leverage over suppliers' behaviour and concurrently a safety net for buyers in the case that the economic and relational leverage fail. It should be noted here that each type of pressure, and especially the economic pressure, can be used both for good and bad purposes.[109] In this paper, the author works with the idea to use the pressure for achieving positive

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the possibility to claim damages in case of breach of a contractual clause banning child labour in the production process.

[102] McBarnet *et al*. 2007, *supra* nt. 79, 79; Cafaggi, F., "The Architecture of Transnational Private Regulation", EUI Working Paper, LAW 2011/12, European University Institute, 2011, 9; Lin, *supra* nt. 71, 725.

[103] Peterkova, K., Sustainability Clauses in International Business Contracts, PhD thesis, Aarhus University, Denmark, forthcoming 2014 (discussing legal and psychological processes that are triggered by the fact that a contractual provision is perceived as binding).

[104] Ratnapala, S., *Jurisprudence*, Cambridge University Press, Melbourne, 2009, 113 (Describing perception of binding force of law by a representative of Scandinavian legal realism Karl Olivecrona.)

[105] Most often, the United Nations Convention on Contracts for the International Sale of Goods, 1980, 1489 UNTS 3.

[106] Unified interpretation and application is one of the most problematic issues.

[107] See Schwenzer and Leisinger, *supra* nt. 101.

[108] The enforceability could be questioned based on the specificity level of a given provision. It would certainly make a difference, if a provision states that 'Supplier is obliged to reduce carbon emissions produced during manufacturing process of the product by 5% compared to carbon emissions level in 2011 and document the reduction by detailed documentation" and "Supplier shall make the best effort to monitor and reduce its carbon emissions'. In the second case, a court could refuse the claim based on the argument that the provision does not prescribe any actual obligation. This discussion is not new and does not pertain only to provisions related to environment, human rights, or ethical standards. A whole scholarship on similar issue exists in relation to e.g. recitals in contracts; see Fontaine, M. and De Ly, F., *Drafting Commercial Contracts: An Analysis of Contract Clauses*, Martinus Nijhoff Publishers, Leiden, Boston, 2009. However, this discussion reaches outside the scope of this article.

[109] McBarnet *et al*., *supra* nt. 79, 88, noting that the buyers sometimes require the suppliers on the one hand to adhere to CSR standards and on the other press on low price and tight delivery deadlines, so that they basically force the suppliers to breach the CSR standards.

results in the climate change area. In order to eliminate the possibility of using it in a negative way, national legal regulation should give companies the right incentives.

### IV.2.3. Overcoming deficiencies of private regulation

As described above, the climate change area is dominated by private regulation that suffers from several deficiencies with regard to its legitimacy, effectiveness, and monitoring and enforcement. Giving an obligation a form of contractual provision may help to cope with these deficiencies.

Firstly, the question of unclear legitimacy typical of transnational private regulation does not emerge in a contractual relation. Contracts are products of negotiation and agreement between contractual parties that set the rules for their mutual relation on the background of the legal order. It is the legislator, the creator of contract law that vests in the parties the right to govern their business relationship. This is theoretically true, albeit practice may appear different, since a majority of contracts concluded within international supply chains may not be products of negotiation but rather unilaterally imposed rules by economically stronger parties.[110] Moreover, requirements for carbon emissions reduction do not affect only the contractual parties but directly influence the life of third parties; global citizens.[111] Thus, we could discuss whether contractual parties have the authority to govern climate change issues. I tend to argue that this should not be an issue, because unlike private regulatory regimes, contracts impose obligations only on the parties who agree to them. They cannot oblige external subjects to adhere to a bilateral arrangement; these subjects may only benefit from the results. However, this is only a valid opinion in the case where contracts are not the only regulation in the area, when states do not entirely pass the regulation on private parties. Contractual clauses and their enforcement are vulnerable and can easily be influenced by the economic interests of the contractual parties, and therefore although they contribute to positive changes in the environment, they should be rooted in a broader regulatory system.

The second problematic aspect of private regulation, effectiveness, is in the case of contracts supported by system of contractual monitoring and sanctions. Compliance control is, similarly to private regulation, ensured by companies themselves. This leaves space for doubts, although the system of sanctions based on both contractual text and background law suggests a higher possibility of reaching the intended effects. The fact that all three types of pressure – economic, relational and legal – are applied at once, promises a higher responsiveness on the suppliers' side. This issue is closely connected to that of enforceability as a third area challenging private regulation, which was already discussed in the previous sub-section.

Even though contractual form does not solve all the disputable features of private regulation, it scores better in all of them. This is also the reason why private regulation is frequently implemented through contracts, as contractual form strengthens the pressure on compliance.

### IV.2.4. Lower Adoption Costs

Supply chain contracts represent a unique regulatory technique that does not employ high adoption costs. There is no need for lengthy negotiations and legislative processes,

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[110] See *supra* nt. 97.

[111] Lin, *supra* nt. 71, 742-742, discussing the accountability problems in legal transplants via private contracts that affect third parties.

as in the case of international and national legislation. While the business community has the possibility to lobby against the adoption of new strict regulation in the climate change area, it does voluntarily enter into private contracts with the same or similar requirements. The reason is that the content of private contracts can be adjusted to each specific company's needs and interests. Furthermore it depends on each company whether it enforces the contract or not, while in the case of public legislation enforcement is carried out by public authorities. Adoption of carbon reduction requirements into contracts can thus be also seen as a strategy to lull governments and the public into a false sense of security that the problem has been dealt with and no further regulation is needed.[112]

#### IV.2.5. Interaction with other regulation

Finally, contracts have a special position within other regulations, both public and private. On the one hand, they can give soft private regulation a hard law edge if implemented in contract by reference. For example, if a buyer requests its suppliers to report on carbon emissions according to the CDP guidelines, the CDP guidelines gain binding character and can be enforced through contractual sanctions.[113] On the other hand, contractual practice can be influenced easily by public regulation. If a national law requests companies to report on their supply chain emissions, they will have to use available tools for gaining the data of their suppliers. As already discussed, contracts are probably the best means to use. Therefore, contracts may serve as a bridge between the public and private law, and between soft and hard law.

## V. Quantifying Potential For Emissions' Reduction Through Contracts

Considering the above, it seems that contracts are overall better equipped to achieve reduction of carbon emissions of suppliers in developing countries than many existing public laws or private regulations. The question is whether the possible emission reductions are significant enough to justify devoting more attention to contractual governance. To answer this question is not easy. As it was already outlined in Section III. above, scope 3 emissions contribute significantly to global emissions. Though how much emissions are we actually talking about, and how much of these can be cut through contractual control?

In order to assess how much carbon emission could be cut through requirements in supply chain contracts, we must first know the overall volume of carbon emissions that supply chains are responsible for. This proves to be a much more complicated calculation than it could seem at first sight for several reasons. First and foremost, international supply chains are often extremely complex, including numerous companies from various jurisdictions. It is not unusual that a buyer does not know which subjects are members of

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[112] Reich, R. B., "The Case Against Corporate Social Responsibility", *Goldman School of Public Policy Working Paper* No. GSPP08-003, 2008, showing the involvement of enterprises in lobbying against adoption of new regulation within the CSR area.

[113] See practical example from Pressalit's policies giving contractual form to the UN Global Compact, *supra* nt. 88.

its supply chain.[114] Moreover, one company can have different supply chains for each product. Multinational companies thus have thousands of suppliers. A supplier then does not manufacture products or components for one buyer only at one time. Therefore, it can be extremely difficult or even impossible to allocate emissions among various buyers.[115] Even if companies know all supply chain members, they face the practical obstacle of having contractual relationships only with first tier suppliers; other tiers are connected only indirectly and thus the focal company cannot request information from them, and sometimes must rely on secondary data.[116]

Although difficult, assessing supply chain emissions is not impossible.[117] Researchers, companies and regulators have provided several estimates of the scope 3 emissions volume. Even though they differ in absolute numbers, they generally agree that scope 3 emissions comprise a majority of total corporate emissions. Matthews et al. found that scope 1 and 2 amounts in average to 26% of all emissions, leaving 74 % to emissions from supply chains.[118] According to CDP, supply chains accounts for 50 – 70 % of companies' total emissions.[119] Trucost's data show that supply chains are responsible for at least 75 % of total emissions.[120] Companies sometimes propose even higher numbers. For instance, BASF Group reported approximately 85 % of its emissions originate in the supply chain[121] and Mondelez International (previously Kraft Foods Inc.) estimated that scope 3 represents over 90 % of its overall emissions.[122]

However, not all scope 3 emissions can be assigned to suppliers or influenced by supply chain contracting. The CDP Scope 3 Standard distinguishes between upstream and downstream scope 3 emissions and overall introduces fifteen categories: upstream supply chain's emissions include purchased goods and services, capital goods, fuel and energy related activities, transportation and distribution, waste generated in operation,

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[114] Walmart describes the problematic of unknown members in its supply chain in the 2012 Global Responsibility Report: Beyond 50 years: Building a sustainable future, 41: "Undisclosed subcontracting is defined as factories in our supply chain that produce merchandise or component items for Walmart in a facility that is improperly disclosed and/or unknown to Walmart. There are signs that this practice may be on the rise in countries including, but not limited to, Indonesia, China and Pakistan. The potential impact of undisclosed subcontracting is that illegal and unethical practices can be more easily hidden".

[115] GHG Scope 3 Standard, section 8.

[116] *Id.,* section 7.3.

[117] Nevertheless, some companies prefer to not engage in scope 3 emissions calculations. For example, IBM states on its website that the assumptions necessary to be made for estimation of scope 3 emissions do not allow for an estimate that would be adequately credible and have necessary quality; see IBM, *Position on Scope 3 GHG emissions*, available online at <ibm.com/ibm/environment/climate/scope3.shtml> (accessed 4 November 2013).

[118] Matthews, H. S., Hendrickson, C. T. and Weber, C. L., "The Importance of Carbon Footprint Estimation Boundaries", *Environmental Science & Technology*, vol. 42, ed. 16, 2008, 5839-5842, 5840.

[119] Carbon Disclosure Project, *supra* nt. 47, 9, referring to US Environmental Protection Agency, REPORT: *Managing Supply Chain Greenhouse Gas Emissions*, December 2010.

[120] Trucost, Supply chain carbon briefing, *GHG Protocol Scope 3 Standard, Measuring indirect carbon emissions to build more sustainable business models and brands*, available online at <trucost.com/_uploads/publishedResearch/Supply_chain_carbon_briefing_060312_D.pdf> (accessed 4 November 2013).

[121] BASF Group, *Greenhouse gas emissions - balanced along the value chain in line with the Greenhouse Gas Protocol*, available online at <basf.com/group/corporate/en/sustainability/environment/climate-protection/bilanzierung-treibhausgasemissionen> (accessed 4 November 2013).

[122] Carbon Disclosure Project, *supra* nt. 82, 8.

business travel, employee commuting and leased assets and downstream supply chain's emissions include transportation and distribution, processing of sold products, use of sold products, end-of-life treatment of sold products, leased assets, franchises and investments.[123] Some of these categories are easier to measure (e.g. business travels and employee commuting), but some request a more complex approach and data from other subjects (e.g. purchased goods and services). According to the data of the Environmental Investment Organisation, only one company (BASF Group) reported in 2010 on all fifteen categories of scope 3 emissions.[124] Most companies started to report on the easier ones and slowly extended the practice across more categories.

Supply chain contracting can generally influence the first four categories. The most important category for this article is the first category – purchased goods and services. Although the distribution of scope 3 emissions among the different categories depends greatly on the product (or industry) in question,[125] purchased goods and services commonly represent the largest portion of scope 3 emissions. In 2011, BASF Group reported that purchased goods and services accounted for 61.700.000 tons of CO2e, which represents 41 % of all scope 3 emissions and almost two and half times more than corporate scope 1 and 2 emissions together.[126] Mondelez International (previously Kraft Foods Inc.) reported that purchased goods and services are responsible for ca. 70 % of its scope 3 emissions, which represents six times its scope 1 and 2 emissions.[127]

The example of BASF Group shows that calculating scope 3 emissions in detail in relation to each single category (including purchased goods and services) is viable. Most categories can be calculated using mainly primary, company-specific data.[128] But that seems almost impossible in relation to purchased goods and services. Firstly, calculation of emissions embedded in purchased goods and services depends to a large extent on obtaining data from suppliers. Secondly, due to the complexity of international value chains and the necessity of allocating each supplier's emissions among multiple buyers, the estimate must use some type of mathematical model, and work with certain assumptions. Therefore, although we see that companies increase their efforts to get to know, report and reduce their upstream supply chain emissions, only few of them actually conducted a detailed carbon inventory in respect of purchased goods and services. It is a lengthy and costly process. Thus, at this moment we can find only scarce information on carbon emissions embedded in purchased goods and services in absolute numbers. Nevertheless, we know that these emissions constitute a more urgent problem than scope 1 and 2 emissions of internationally operating companies. The question is

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[123] GHG Scope 3 Standard, *supra nt.* 29, section 5.3 (overview) and 5.4 (description).

[124] Environmental Investment Organisation, ET Global 800, 2011, available online at <eio.org.uk/etindex.php?page=overview1&ranking=Global_800≥ (accessed 4 November 2013).

[125] For example, chemical products emit substantially more emissions during their use by end users than for example food products. The distribution of emissions along the life cycle of each product is unique. Nevertheless, we may generalise to certain point on the industry level.

[126] The numbers have improved rapidly in 2012, when purchased goods and services amounted only to 46.670.000 tons CO2e representing 36 % of the scope 3 emissions, see BASF Scope 3 GHG Inventory Report, available online at <basf.com/group/corporate/en/function/conversions:/publishdownload/content/sustainability/environment/climate-protection/images/BASF_Scope3Report.pdf> (accessed 4 November 2013).

[127] Carbon Disclosure Project, *supra* nt. 82, 8.

[128] Secondary data include e.g. industry statistics, inventory data or input-output models.

how this problem can be tackled. What can be done without exact knowledge of full scope 3 emissions?

Here the contractual governance comes into focus. Some companies start by giving their suppliers qualitative rather than quantitative requirements, for example to monitor and report on their carbon emissions.[129] This is certainly an important first step. However, it does not ensure that suppliers will actually reduce their emissions. One step further is when companies inform their suppliers that compliance with emissions related requirements (either qualitative or quantitative) will be a criterion for awarding a contract.[130] But only using quantitative requirements can make a more significant change. One good thing is that companies do not necessarily need to know the emissions rate of each single member of their supply chain to introduce a contractual demand for a five percent reduction of carbon emissions over a specified period of time. Furthermore, this should not be complicated for suppliers, who need to calculate merely their scope 1 and 2 emissions, which they can rather easily document, and pass the demand further among their own suppliers. Not being able to document requested reductions then means that a supplier may not enter into a contract with the specific buyer at all or that it may lose already existing business if the buyer terminates the contract due to non-compliance in line with the best practice in the sustainability area. Such a request, provided that it is closely controlled, may actually offer much quicker solutions without the necessity to master the complex supply chain data first. Of course, companies must have some type of overview of their activities and reduction capacities of their suppliers at the outset to choose adequate and feasible goals; however, they may rely in many instances on industry based data.

# VI. Conclusion

The article has discussed the possibility to use supply chain contracts as a regulatory means to lower global carbon emissions. As Section II-IV show, contracts are better equipped to tackle the global emissions problem than many of existing private and public regulations. Section V then provided a brief insight into the amount of carbon emissions we are speaking about in relation to international supply chains. Overall, contractual requirements for reduction of companies' direct suppliers' emissions by a few per cent seems more feasible than requesting suppliers to provide an accurate carbon inventory of all their supply chains. However, several questions remain to be answered.

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[129] T&T, Sustainability report 2011, available online at <att.com/gen/landing-pages?pid=22872≥ (accessed 4 November 2013), 46: 'We are aware of the publication of the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) standard and are exploring how to apply it to our business. To that end, we are working with the Carbon Disclosure Project (CDP) Supply Chain Initiative to measure the emissions from our top suppliers. Each year we send the survey to suppliers who represent approximately 80 percent of our total spend. We know that as of year-end 2011, 60 percent of our spending was with suppliers who track GHG emissions or had plans to do so by 2012. We've set a goal that by the end of 2015, the majority of our spending with strategic suppliers will be with those who track GHG emissions and have specific GHG goals. Read more about our efforts to engage our supply chain.'

[130] Jira, C. F. and Toffel, M. W., "Engaging Supply Chains in Climate Change", Working Papers 12-026, Harvard Business School, 2012, forthcoming in Manufacturing & Service Operations Management. The authors found that suppliers are more willing to share information on their climate change performance if buyers convey a commitment to use these information in their purchasing decisions.

Firstly, how this contracting practice can be triggered? The current practice shows that companies feel an external pressure to engage in carbon reduction in their supply chains. However, the practice is in its infancy. It is not standardised and is dependent on decisions of each specific company, and therefore develops rather slowly. For scaling up the effects of supply chain contracting, a stronger or maybe better, more urgent incentive should be given to companies to accelerate the diffusion of the contractual practice. The incentive can most probably be given by a public regulation on national level that will indirectly demand increased contractual control in international supply chains. Such regulation can include transparency requirements through demanding of scope 3 emissions disclosure or mandatory carbon labelling, which would also make the legal enforcement of the contractual requirements easier. It may however be more direct to include supply chains emissions into cap and trade schemes, or implement carbon pricing relevant to embedded emissions in imported products. If the business community opposes these policies, then positive incentives, for instance lower value added tax on products with low embedded carbon levels or provision of guidelines and assistance with drafting contractual requirements, could be favoured.

The second question is how the contracts should be drafted, monitored and enforced to ensure the best possible result? Contractual provisions requesting reduction of carbon emission in a supplier's manufacturing process or its business conduct generally are different from other obligations prescribing contractual clauses. As mentioned earlier, they differ in the type of protected interests as well as in their enforceability. Although it has been suggested that relational contracting can achieve the best effects, the possibility of contract termination still plays an important role. However, we need more research to be done in examining which types of contracts (complete or incomplete, discreet or relational) and provisions (expressed, reference to other document) suppliers respond the best. This will most probably include research into behavioural aspects of contracting and, thus, other research areas than law.

Finally, we should ask if the same attention should be given to all sectors, or if specific sectors should be prioritised? Is it more feasible to target one industry at a time? Or shouldn't we build upon already established industrial initiatives? Once again, this issue needs a more research to be done.

To conclude, the article has shown how the climate change regulatory matrix may benefit from more attention devoted to supply chain contracts. They may serve as the missing piece in the puzzle, and bridge between public and private regulation. It is a feasible solution without the necessity to reach complicated international agreements, without increasing public regulatory costs, and increasing corporate costs only slightly. They can also be implemented immediately without waiting for complementing complex carbon inventories, since nowadays each company can count its scope 1 and 2 emissions rather easily and document achieved cuts. The quantified estimates of scope 3 emissions suggest that a large potential for carbon emissions reduction exist in international supply chains. Therefore, we should focus on how this great latent potential can be triggered through private contracting.

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# International Energy Investments: Tracking the Legal Concept

Ozge Varis*

**Keywords**
INTERNATIONAL INVESTMENT LAW; ENERGY LAW; ENERGY INVESTMENTS

**Abstract**
International investment flows are rising firmly and rapidly on a daily basis throughout the world. In international investment flow energy plays a valuable role. The common point of international investment law regime and international energy law regime is, they remain many issues still to define and clarify in international investment law and energy law. In these undeveloped legal areas, the clarification of these basic issues has an essential role, as legal systems are established on the basis of clear terminology. While the significance of energy and energy-related issues in international investment law is mentioned above, there are still many blurred lines as to when "energy investments" in particular become relevant. In these situations, the limits of what may be considered an "energy investment" must be clarified. In order to explicitly explain references to "energy investments", this article will firstly discuss the definition of international investments; secondly, the definition of energy will be analysed and then what is described as "an energy investment" will be thoroughly scrutinised. During these discussions, examples from other sectors' investment disputes and other legal areas will also be examined and compared to provide more explicit answers as to the limits of the term.[1]

## I. Introduction

International investments law and its importance for international capital flows and globalisation cannot be denied. The system appears complicated because of the huge numbers of bilateral investment treaties (BITs), multilateral investment agreements (MIAs), regional trade and investment treaties, national regulations, national and international judicial awards.

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[1] The first and foremost, I would like to thank my first supervisor Professor Peter D. Cameron for his great effort to supervise my works. He supervises my research with valuable guidance and advice. I also would like to thank my second supervisor Professor Pieter Bekker for his support. His willingness motivates me to proceed my research. Besides, I would like to thank my friends Ms. Yasemin Atalay and Mr. R. Caner Sayan for giving me courage to complete my work. Without helps of the particular mentioned above, I could not have overcome the challenges I encountered.

Despite this complex system involving different kinds of treaties and legal documents, international investments were not as complicated in the past. The *t*reatification[2] process of international investments was instigated a long time ago, but the system developed slowly over the centuries. Hence international investment law is still developing; it is in the adolescent years of its development.[3] This significant characteristic of international investment law is a result of the introduction of the international investment treaty, which consists of modern investment provisions that may be traced from the time of World War I (WWI).

This slow development process accelerated after World War II (WWII). As a result of rapid developments, the system became complex and now appears to be in deep crisis.[4] In reality, the system proceeds to apply and help to solve investment disputes: international investment law involves issues and challenges, which may be observed in every new legal area or rule.

Despite on-going discussions about international investment law, according to the ICSID 176 disputes were solved under the ICSID Convention, and 275 investment disputes have been solved under the ICSID Convention up to today.[5] In total, 451 international investment disputes have been solved under ICSID. If other international investments dispute resolution institutions, *ad hoc* arbitrations and alternative dispute resolution methods are counted, it gives a picture of the dimensions of international investment. Besides investment disputes, today, almost 2600 BITs and around 300 regional trade and investment treaties are applicable.[6] This means that although modern international investment law is young, its significance cannot be ignored. It is a large and promising, new legal area which may able to achieve more than other legal regimes.

The energy sector plays an important role in international investment. Although the amount of energy sector investments cannot be accurately foreseeable, statistics on energy needs indicate its importance.[7] Those statistics contain significant indicators, for example the charts that show showing possible rises in the demand and consumption of energy can be interpreted as having two elements.[8] The first is that energy consumption

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[2] The word "treatification" is used by Jeswald W. Salacuse in reference to the process of development ranging from customary law to treaties; Salacuse, J. W., *The Law of Investment Treaties*, Oxford University Press, New York, 2010, 78.

[3] Alvarez, J. E., "The Once and Future Foreign Investment Regime", *in:* Arsanjani, M. H. *et al.*, eds., *Looking to the Future: Essays on International Law in Honour of W Michael Reisman*, Koninklijke Brill N.V, Leiden, 2010, 607-608.

[4] In the doctrine, many scholars prefer to describe it as a "legitimacy crisis"*;* however, a legitimacy crisis is a strong word choice in order to describe problems of international investment law. This discussion is opted out from this article; however, for further discussion please check: Browers, C. Schill, S., "Is Arbitration a Treat or a Boon to the Legitimacy of International Investment Law", *Chicago Journal of International Law,* vol. 9, 2009,471.

[5] International Center for Settlement of Investment Disputes, *About ICSID*, 2014, available online at <icsid.worldbank.org/ICSID/Index.jsp> (accessed 15 November 2013).

[6] Vandevelde, K.J., "A Brief History of International Investment Agreements", *UC Davis Journal of International Law & Policy*, vol. 12, ed. 1 , 2005, 1-2.

[7] BP Global, *Statistical Review of World Energy 2013*, available online at <www.bp.com/en/global/corporate/about-bp/energy-economics/statistical-review-of-world-energy-2013.html> (accessed 30 January 2014).

[8] For further details and relevant statistics please check International Energy Agency, *Key World Energy Statistics 2013*, 46-47, available online at <www.iea.org/publications/freepublications/publication/KeyWorld2013.pdf> (accessed 28 January 2014).

and demand will increase every year. The second, which is related to this article, is that this increase in consumption and demand will cause a rise in energy investments. Therefore, importance of the energy in international energy flow cannot be underestimated.

The essence of this paper is to determine what may be considered an "energy investment", with critical approach towards the general content of all components of energy investments or investments in the energy sector.

Therefore, in this paper, international investment and its context will first be discussed. Subsequently, in order to understand the concept of international energy investments, the definition of 'energy' will be given. Finally, international energy investment and its scope will be analysed.

## II. The Context of International Investment and International Investment Law

The international investment law regime is a part of international economic law. However, it has its own characteristics. A reason for this distinction is related to its historical roots and the reasons for its existence. Traces of international investment and international investment law can be found in early legal foundations.

For instance, the early beginnings of international investments go back to AD 1296, in an agreement between King Erik of Norway and merchants in Hamburg. The king provided privileges to Hamburg merchants for *'meliorandum terram nastram cum mercaturis'* (for the amelioration of our territories through trade).[9]

However, international investment law, according to modern needs, started to appear in the 18th century. The United States of America (USA) began to secure its commercial and investment activities outside the USA's territory, through the Treaty on Friendship, Commerce and Navigation in 1796, concluded with many other countries. The main idea behind those Friendship Treaties – both the USA treaties and the European treaties - was to improve trade more rather than investments. Another similarity between these treaties was the sources and the norms used to secure investments.[10]

In 1868, the famous *Calvo Doctrine* was published by Carlos Calvo, the Argentine jurist. He claimed that the host state must have full sovereignty over the interpretation and application of applicable international rules and norms.[11] After the *Calvo Doctrine* and the Russian Revolution in 1917, the security of investments and foreign investors' rights became difficult to ensure. During WWI and World War II (WWII), the international investment regime suffered due to poor international financial and economic development.

After WWII, the importance of an international investment regime for domestic and international economic development was acknowledged. States started to seek a form of protection for their investors and investments outside of their territories. As a result of

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9 *Supra* nt. 2, 80.

10 *Supra* nt. 2, 158-159.

11 Dolzer, R., and Schreuer, C., *Principles of International Investment Law,* Oxford University Press, Oxford, 2012, 1.

this Germany signed the first BIT with Pakistan in 1959. The Germany-Pakistan BIT started a new trend for investment protection and. international investment law.[12]

After the first BIT between Germany and Pakistan, international investment law and the international investment regime rapidly grew. However, in terms of the international investment regime and its fundamental institutions, the signing of the ICSID is the most significant role in current international investment law regime.

The ICSID Convention opened for signatures on 18th March 1965, and entered into force on 14 October 1966.13 Before the ICSID Convention, similar attempts, such as the Havana Charter (1948), the International Chamber of Commerce's International Code of Fair Treatment of Foreign Investment (1949), the International Convention for the Mutual Protection of Private Property Rights in Foreign Countries (1957), had not been successful. After the ICSID, the OECD Draft Convention on the Protection of Foreign Property (1967) was also unsuccessful.

The ICSID Convention and the ICSID itself were a revolutionary development in international investment law history and for the international investment regime. The ICSID Convention offers a practical approach and institutional support for the enforcement of BITs and international investment law. More explicitly, investors and the host states achieved effective compensations and remedies for the first time in the history of international investment law.[14]

After the establishment of the ICSID and the ICSID Convention, other multilateral treaties involving investment provisions, such as the Energy Charter Treaty (ECT) and the North American Free Trade Agreement (NAFTA), were signed.

Today, the international investment regime is governed by a high number of BITs and multilateral treaties that involve investment provisions, international dispute settlement institutions and *ad hoc* tribunals.[15]

In spite of this history of international investment relations, the international investment regime is still developing and is still young, compared with other international economic law regimes.

All of the aforementioned explanations resulted in a remarkable outcome for the international investment regime. International investment law and its principles are the result of the strong need to sustain globalisation and international economic development. Today, international investment law is a separate field of international law and the international economic law regime, and therefore having has its own rules and principles. Nevertheless, this does not mean that fundamental norms and principles of international law are not applicable in to international investment law.

As previously summarised, the international investment law regime developed separately from other international economic law regimes, including international trade law. In addition, its nature is different because the needs and roles of relevant actors are different. Actors involved in the international investment regime have various roles and positions in comparison to other international law regimes. For example, in international trade law, all regimes are governed by states via international institutions and international organisations. In international trade law, the international trade regime and

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[12] *Supra* nt. 2, 88-89.

[13] *Supra* nt. 3.

[14] Waters, M., *Globalization,* Routhledge, London , 2001, 1.

[15] Governing elements international investment law regime will be referred to as "institutions of international investment regime".

related treaties – especially The General Agreement on Tariffs and Trade (GATT) and The General Agreement on Trade in Services (GATS) - are governed by the World Trade Organization (WTO). Moreover, disputes are claimed and solved between states.

In international investment law, the regime is governed by home states, host states, investors and other institutions, and international investment regime's norms and principles are established with international treaties, customary international law, and arbitral awards. States may be in a position of being the host state or home state because BITs are not one-sided treaties. In other words, all rules and principles within BITs bind both parties. Also. Additionally, both states are obliged to provide a secure investment environment for the investors.

The first distinguishing characteristic of the international investment regime is the kind actors involved in the regime. In most international law regimes, the relevant actors are mainly sovereign states and international organisations. However, the actors within the international investment regimes are sovereign states, foreign investors and dispute settlement institutions. Foreign investors are natural persons or legal persons who are subject to private law regimes. Dispute settlement institutions may be established as being either *ad hoc* or institutional.

These actors and their roles in the international investment law regime have shaped its development. More explicitly, the regime is regulated by international investment treaties that are signed by two sovereign states. When disputes arise, these are resolved between the investor and the host state by an international investment dispute resolution institution.

The most significant and distinct characteristic of international investment law related to dispute resolution. Differently from other international law regimes, disputes are resolved between host states and investors under international investment law. This means that the international investment law dispute resolution mechanism allows a person or legal person who is a foreigner to bring a claim against a sovereign state in front of an international dispute resolutions body.

Actors and their roles in the international investment regime led to another important feature of international investment law. International law regimes are divided into two frameworks based on actors and disputes: public international law and private international law. Public international law mostly governs relationships between states and international legal persons (as well as individuals), while private international law generally governs issues related to conflict of laws or applicable rules of jurisdiction.

Based on this division, international law regimes belong to one of these frameworks, but international investment law and its *sui generis* nature make it difficult to categorise into one of these frameworks.[16] International investment regime actors and their relationships with one other are particularly different, and the regime is governed by complex bilateral international treaties. As a result of the *sui generis* features of the regime, categorising international investment law as either strictly public international law or private international law is beyond the bounds of possibility.

Another distinct feature of the international investment regime is its development process. The development processes of international law and international legal regimes are mostly cyclical. They generally start with a legal relationship between two states. They then develop to involve contributions of more than two states, and then the circle

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[16] Van Harten, G., *Investment Treaty Arbitration and Public Law,* Oxford University Press,Oxford, 2007, 8.

proceed with regional international legal regimes. Therefore, in general, relations begin bilaterally and then become multilateral and finally regional.[17] If necessary, this cycle may start again from the beginning.[18]

This cycle is an applicable approach to understanding many international legal regimes; however, international investment law does not fit this cyclical pattern. In the history of international investment law, there have been many attempts to create successful multilateral investment treaties. For instance, the Multilateral Agreement on Investment (MAI) is one example of the failed attempts to create a multilateral environment in international investment law. The MAI was initiated by the Organisation for Economic Co-operation and Development (OECD) in 1998. The agreement failed because it sought to regulate international investment environment with a binding international instrument. On the one hand, the MAI was understood as an opposite impact towards globalisation and a liberal international economic order by capital exporting countries. On the other hand, the MAI was seen as a binding international legal instrument that introduced investment protection rules without accommodating environmental, human rights concerns.[19]

This aspect of the MAI is lacking an international instrument, which regulates general principles and norms of international investment. This can be seemed as the cyclical nature of international law which does not apply within international investment law. However, the existence of the ICSID and its enforceable nature brings an idea of the cyclical nature of international law partially exists in international investment law. In other words, the ICSID convention is the first step to establishing a multilateral framework for the consensus of dispute resolution of the international investment regime.[20]

In short, in order to describe foreign investment, or international investment, the nature of international investment law should be explained.

The development process of international law is different from other international law regimes. The nature of international law is fragmented and cyclical, as previously mentioned. This fragmentation is reflected in the complex and high number of BITs and different dispute resolution institutions of international investment law. The cyclical nature of international law is, however, partially true in the case of international investment law. Despite the international investment regime being governed via bilateral relations, the ICSID Convention and the high demand of the dispute resolution system of ICSID are proof that the multilateral part of cyclical nature should be interpreted in different way.

Actors in the international investment regime and their roles are different from those of other international law system. Disputes arise between host-states and foreign investors and they are solved via international arbitral tribunals based on BITs. As a result of this role division between the actors, it is not easy to categorise international investment law under this international law framework. Whereas most of the

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[17] For further explanation about "cyclical nature of international law" please see: Leal-Arcas , R., *International Trade and Investment Law: Multilateral, Regional and Bilateral Governance,* Edward Elgar Publishing Limited, Cheltenham, 2011, 1-8.

[18] *Ibidem*.

[19] Sornarajah, M., *The International Law on Foreign Investment,* Cambridge University Press, Cambridge, 2010, 27.

[20] *Supra* nt. 14, 32-35.

international law regimes are categorised as either public international law or private international law, international investment law does not manifest the distinctions between these frameworks.

With regard to the explanations above, it would not be wrong to say that international investment law has a *sui generis* nature. This does not mean that defining the investment is as complicated as understanding the international investment regime.

International investment treaties define investments as broadly as possible to provide as much protection as possible.[21] In the most general terms, international investments include both tangible and intangible assets, which are moved from one country to another under the full or partial control of foreign investors for the purpose of producing wealth.

This definition excludes shareholders and their rights from the protection of international investment law. In the *Barcelona Traction Case*, the International Court of Justice (ICJ) did not hold shareholders and their rights to fall under the protection of international investment law.[22] When the judgment was delivered by the ICJ it caused huge debates over the borders of foreign investment. This debate continues today due to the fragmented nature of international investment law.[23]

As a consequence of broad BIT provisions, the capacity to considering foreign investment as an interpretative tool is in the hands of arbitrators. Because interpretation authority of international investment law norms and principles are strictly in arbitrators' hands.

## III. The Complexity of the Definition of Energy: Defining the Unidentifiable

Law and other disciplines strictly bind each other when their interests of related authorities overlap. Energy is one of the significant examples where these issues overlap. When the term *energy* emerged, not only social science aspects started to be debated, but also aspects of all other science and engineering fields. In engineering and sciences the scientific explanation of energy is used by specialists. However, legal definition of energy also has an important meaning and role for fields such as international relations and political science. To illustrate, energy is defined in three different ways in the Oxford Dictionary; as

> a) the strength and vitality required for sustained physical or mental activity;
> b) power derived from the utilization of physical or chemical resources, especially to provide light and heat or to work machines and;
> c) Physics: the property of matter and radiation which is manifest as a capacity to perform work (such as causing motion or the interaction of molecules).[24]

Even in the dictionary, energy cannot be defined with one single explanation, so it is only logical that every academic field has its own definition or meaning for energy. This

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[21] *Supra* nt. 16, 10.

[22] International Court of Justice, 24 May 2007, *Barcelona Traction, Light and Power Company, Limited (Belgium v. Spain)*

[23] *Supra* nt. 17, 1-20.

[24] *Paperback Oxford English Dictionary,* Oxford University Press, Oxford, 2010.

notwithstanding, the legal definition of energy has a specific importance, which affects other fields. Sometimes, legal regulations or legal definitions have precedence over international relations or political science terminology and, in other cases, legal regulations and definitions are taken over for discussions in other fields. Therefore, often relationships between actors are framed by legal definitions. This is also valid for energy.

Apart from the above explanations - like many international law areas - energy definitions and international energy regulations are of a fragmented nature.[25] In energy sector, fundamental documents, which affect countries' internal law systems are shaped based on international treaties and international organizations' documents which have a binding nature for member states.[26] The fragmented nature of the international law regime also has an impact on energy. In legal terms, energy can refer to different types of energy, such as renewable energy and carbons, oil and gas, as well as the sub-categories of these main groups.

Although energy is regulated under many international organizations, understanding energy and its nature plays an important role in comprehending energy investments. In order to illustrate international energy investments, perspectives of leading public international organisations, such as the United Nations (UN), the ECT Secretariat, and the International Energy Agency (IEA), the Organization of Petroleum Exporting Countries (OPEC).

The first thing to observe, when regarding International Organizations, is the lack of unity in energy governance. Due to this, governing and defining energy and the energy sector is not easy.

For example, the structure of the UN is divided into various agencies, which specialize in different global issues.[27] While most of these issues are the focus of one specialized agency under the UN, energy is dealt with by more than one agency, which works on different types of energy, under several programmes.[28] These different programmes were discussed in the Johannesburg Plan of Implementation (JPOI), 2002. According to decisions taken in this plan, UN-Energy was established in 2004. UN-Energy is established as a coordination mechanism, which aims to improve coherence between all UN departments, which handle programmes related to energy issues. Hence, members of UN-Energy are separate agencies and UN-Energy is structured as a multi-disciplinary mechanism. UN-Energy aims to ensure coherence and coordination under three main themes and each theme is led by two UN agencies.[29] The JPOI and global energy governing programmes do not include any definition or binding legal provisions for signatories or member states. As T. Walde noted, those programmes and their documents do not have international regulatory capacity, but are merely *tangential policy documents*.[30]

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[25] Barker, J. C., *International Law and International Relations,* Continuum, London, 2000, 1-25.

[26] Florini, A., and Dubash, N. K., "Introduction to the Special Issue: Governing Energy in a Fragmented World", *Global Policy*, vol. 2, ed. Supplement S1, 2011, 1-5, 3.

[27] Klabbers, J., *An Introduction to International Institutional Law*, Cambridge University Press, New York, 2009, 47.

[28] Walde, T. W., *International Energy Law and Policy,* Elsevier Inc., 2004, 5.

[29] Varis, O., "Comparative Definition of Energy Under Public International Organizations", *International Journal of Energy Economics and Policy*, vol. 3, Special Issue, 2013, 141.

[30] *Supra* nt. 25, 7.

This situation is no different in the IEA either. Although the main idea behind the establishment of the IEA was to control oil prices and improve cooperation in the oil market, its mandate was defined to cover all different types of energy. In the declaration of establishment, the power to develop new energy sources is also included.[31] This broad power, covering both, known energy types and future energy sources, gives the IEA the power authority to affect the international energy market. However, membership of the agency is not as wide as the IAEA or other the UN based programmes/agencies.[32] As a result of the broad wording in the declaration of establishment, the IEA is the only institution, which may define current and future energy sources, and via this capacity, can draw the limits of the energy sector.

The OPEC is different from the UN and the IEA in a couple of ways. Its limits and mission were well described by its *raison d'être.* The main mission of the OPEC is to keep the privileges and powers of its members – petroleum-producing countries - –in the energy market to provide stabilisation. The second mission is to protect the value and importance of petroleum products in the global energy market.[33]

So far, the OPEC does not have any action plans or decisions about environmental issues or any other energy types. In this regard, the OPEC is the only public international organisation, whose *raison d'être* explicitly affects its actions. Moreover, the OPEC is the only public international organisation whose legal power and capacities are very well clarified.

The Energy Charter Treaty (ECT)[34] is the most important international document for the energy sector. It is neither a tangential policy document like the UN`s JPOI and global energy governing programmes, nor unclear like the IEA's programmes. The ECT also does not involve a specific definition on "What may be considered as energy*?".* However, The ECT is the multilateral energy treaty, with the largest geographical and country coverage.[35] Although there are doubts about the significance and effectiveness after the Russian Federation opted out, the ECT still has an important role in international energy related issues, especially international investment in the energy sector.[36]

According to the ECT Secretariat, the ECT is applicable to all energy types.[37] However, application of the ECT to issues related to renewable energy sources is a problematic point in the doctrine, since they were not separately expressed in the ECT.[38] Another issue about the scope of the ECT is its *raison d'être*. The main idea behind the

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[31] International Energy Agency, Decision of the Council establishing an International Energy Agency, at <iea.org/aboutus/history/> (accessed 1 February 2014).

[32] Florini, A., and Sovacool, B. K., "Who governs energy? The challenges facing global energy governance", *Energy Policy*, vol. 37, 2009, 5239.

[33] *Supra* nt. 25, 9.

[34] For further information about signatories and the history of the ECT Secretariat please check <www.encharter.org/index.php?id=7 > (accessed 14 April 2014)

[35] Konoplyanik, A. and Walde, T. W., "Energy Charter Treaty and its Role in International Energy", *Journal of Energy and Natural Resources Law*, vol. 24, ed. 4, 2006, 523.

[36] International Association for Energy Economics Forum, Nappert, S., *EU-Russia Relations in the Energy Field: The Continuing Role of International Law*, 2009, available online at <iaee.org/fr/publications/newsletterdl.aspx?id=110> (accessed 20 March 2013).

[37] The Energy Charter Secretariat Official Web-Site, Energy Charter, available online at <www.encharter.org/index.php?id=1&L=0> (accessed 20 October 2012).

[38] *Supra* nt. 29, 143.

ECT is to regulate international energy investments and dispute resolutions in energy related issues. During dispute settlements, arbitrators try to clarify the ECT and interpret the meaning of the relevant provisions. Apart from several arbitral dispute settlement awards based on the ECT, there are no explanations of the scope of the treaty or a clear definition of energy.[39]

To sum up, tracking the definition of energy in international documents and under international law is not an easy task. The answer to the question "What may be considered as energy/an energy source?" cannot yet be found under international law. Some public international organisations, such as the OPEC, have an explicit definition of their and limited legal capacity for particular energy types. However, many international organizations do not have binding legal documents. The ECT is the most significant exception. Although the ECT does not provide answers in regard to definitions, it is a binding legal document, which especially governs international investments in the energy sector.

Based on the explanations above, it can be claimed that *energy is the strength and vitality*, *which is necessary to proceed* with *causal works*. Additionally, the energy sector is dependent on economic activities, to provide energy.

## IV. International Energy Investments or International Investments in the Energy Sector: Combining Two Legal Aspects

The energy sector is one of the most important sectors in the global investment regime. Both down-stream and up-stream energy activities have a higher cost, than activities in many other sectors. Consequently, making foreign investments in the energy sector is inevitable, especially for capital-exporting countries. Like other natural resources sectors, raw materials, which are provided by capital-importing countries, are essential.[40] Therefore, foreign investors support many investments in the energy sector.

Due to the above, in order to understand energy investments, international investment law and energy need to cooperate with each other. This cooperation is visualised in the ECT. The main rationale of the ECT and its investment provisions is to create an equal, stable and favorable environment for investors. According to the official ECT resources,[41] all the other treatment principles in international law and investment law are also valid and applicable to the ECT investments.

The *raison d'être* of the ECT is to create a secure and stable investment environment for the nationals of member states. The ECT contains some remarkable provisions in its specific investment chapter, so an analysis of the ECT enables us to understand the concept of energy investments.

The second paragraph of Article 1(6) determines the *ratio temporis*. In accordance with this Article, the ECT covers all investments, which exist at the entry into force of the Treaty and thereafter. The date as of when the investments are covered by the ECT is referred to as the Effective Date, which is the date when the Treaty becomes binding for the Contracting Parties. Although the Treaty is quite clear, some controversy remains

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[39] *Supra* nt. 25, 9.
[40] *Supra* nt. 17, 38.
[41] "Official Resources" refers to the main treaty documents and the readers' guide.

about the precise meaning of the Effective Date, and some scholars interpret it as the date when that the Treaty starts to bind the Contracting state internationally.[42] However, according to Article 45(2), the Effective Date is the date of signature, and all the contracting parties have an obligation to implement the ECT provisions into their domestic law.[43]

The last paragraph of Article 1(6) refers to "an economic activity in the Energy Sector", which raises the question of the definition of economic activity. The most suitable way to clarify this paragraph is to interpret it in a manner consistent with the whole of Article 1(6). In the Reader's Guide to the ECT,[44] the following explanation for economic activity in the energy sector is given: "the exploration, extraction, refining, production, storage, land transport, transmission, distribution, trade, marketing, or sale of energy materials and products". Another issue is the question: "*W*hat type *of,* or to what degree*,* economic activities *are* covered by the ECT*?"* This question has been tested in above- mentioned debates; in *Nykomb Synergetics Technology Holding AB (Sweden) v. Latvia*,[45] the arbitration tribunal decided to include all activities related to the energy sector association in the definition. In the literature, this interpretation has been criticized, especially as it could be seen to exclude non-landed investments.[46]

The definition of investor under the ECT is provided in Article 1(7).[47] The definition refers mainly to a natural or legal person who is making investments under the ECT and who has the citizenship of one of the Contracting States. Citizenship is determined in accordance with the domestic laws of the investor's home State. The ECT also covers investors who are permanently residing in the Contracting State.

Determination of citizenship for legal entities is not as simple as for natural persons. For legal entities, the ECT does not cover any restrictions like the place of the main seat theory (*siège social*) or nationality of the board of directors. The only criterion is that nationality should be in accordance with the law applicable in the Contracting state.[48]

In short, investments are all kinds of economic activities made by investors in the energy sector. Investors can be both natural persons and enterprises, which have legal personality. Therefore, when the essence of this article is considered, the need for the separate term energy investments should be discussed.

As explained in detail, foreign investments cover all kinds of economic activities in host-states that have the intention of producing wealth. When the definition of energy investments is revised, investments in the energy sector should be named as such, as the distinction is obvious.[49] Also, the historical development of international investment law

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[42] Gaillard, E., "Investments & Investors Covered by the Energy Charter Treaty", *in*: Ribeiro, C., "Investment Arbitration & the Energy Charter Treaty", Juris Net LLC, Huntington, 2006, 63.

[43] See for a case in which "Effective Date" is discussed in practice Arbitration Institute of the SCC, 29 March 2005, *Petrobart Ltd. (Gibraltar) v. Kyrgyzstan*, Case No 126/2003.

[44] Energy Charter, *The Energy Charter Treaty Reader's Guide*, 2004, 21, available online at <encharter.org/fileadmin/user_upload/Publications/ECT_Guide_ENG.pdf> (accessed 22 June 2013).

[45] Arbitration Institute of the SCC, **16 December 2003,** *Nykomb Synergetics Technology Holding AB (Sweden) v. Latvia,* Case No. 118/2001, 10, 2.2.

[46] *Supra* nt. 25, 64.

[47] *Id.*, 41.

[48] *Supra* nt. 11, 49.

[49] The author preferred not to discuss *"lex petrolea"* arguments in this paper due to the need of a discussion on specific energy type.

and the nature of the international investment regime do not involve specific legal norms and principles between the sectors.

As a result of all these discussions, foreign investments in the energy sector are made up of all kinds of economic activities, made by foreign investors with the purpose of providing wealth and strength in the host country, which are necessary to daily life.

# V. Conclusion

Analysing the term energy investment and its scope is the essence of this article. Therefore, in order to clarify these terms, international investment law and energy law were discussed in this article. Thereby, special attention was paid to international investment law and its background. In particular, the nature of international investment law and international investment regime were emphasized.

The cyclical and fragmented nature of international law is reflected in international investment law, as well as in energy law and international energy governance. Both regimes are fragmented as they are governed and regulated by different institutions and international legal documents. This fragmentation makes it difficult to clarify fundamental legal terms. Due to the complexity of both international energy law and international investment law regime, judicial authorities (in investment law mostly arbitrators) come across with difficulties during the application of norms and principles. In international investment law, arbitrators generally face with these difficulties because of they have the capacity to interpret rules and principles. In international energy law regime, governmental authorities, lawyers generally face with uncertainty of legal norms and principles. In both regimes those authorities interpret legal norms and principles. Furthermore, if there is a need, they also describe terms.

Although, uncertainty of content of legal norms and principles widely spread in international energy investment sector. In particular, defining energy is the challenging part. It can be described as "the strength and vitality, which is necessary to proceed casual works". This definition can be the energy sector is formed by all kinds of economic activities to offer essential services to provide energy.

While it is difficult to define energy, the scope of energy investment is defined in the ECT. According to Article 1 paragraph 6, this includes it all kinds of economic assets, which are owned or controlled by foreign investors. If its scope is compared with general foreign investment and other sectors, the distinction cannot be easily made. Due to this reason, using the term "investments in energy sector" is more suitable to illustrate the scope.

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# China's Role in the Transition to a New International Energy Order*

Zewei Yang**

**Keywords**
INTERNATIONAL ENERGY ORDER TRANSITION; NEW INTERNATIONAL ENERGY ORDER; CONTEMPORARY INTERNATIONAL LAW; CHINA

**Abstract**
With the shift of energy production centres and oil consumption markets the international energy order has been changing, indicating four trends: the Arctic region and the international seabed area will become new energy sources; the exploitation of unconventional energy sources - a new focus; and the rulemaking right in the energy market - a new battlefield. Contemporary international law promotes, regulates, and safeguards the transition to a new international energy order, in which China should make efforts to shift its role from a passive recipient to an active innovator of international energy rules; from an onlooker to an active participant in international energy affairs; and from a receiver to a contributor of international energy public goods.

## I. Introduction

The evolution of the international energy order has undergone four stages: the first stage covers the period from the Industrial Revolution, when humans learned to use coal, oil and other fossil fuels, to the late 19th century, which can be regarded as its infancy period; the second stage is from the beginning of the 20th century to the early 1970s, which was dominated by western multinational oil companies; the third stage was relates to the years from the late 1970s to the end of the 20th century, which was characterized by the competing coexistence of oil-producing states and oil consuming states; the fourth stage was from the beginning of the 21st century until now, which has been a transition period to a new international energy order.

On October 24, 2012, "Energy Development Policies and Objectives", Part II of "China's Energy Policy (2012)" white paper issued by China's State Council Information Office, for the first time puts forward the need to 'promote the establishment of a new international energy order.' What has happened, so that it can be achieved and how has its transformation been influenced by the contemporary international law? What should China do in this transition period? All these questions are of practical significance to China's energy security. This paper consists of five parts including an introduction: Part II analyses new changes to the international energy order; Part III prospects the trends of

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its development; Part IV probes into the functions of international law in the transition to a new international energy order and Part V redefines China's role in its establishment.

# II. New changes in the international energy order

In recent years, the international energy order features the following changes:

## II.1. Shift of World's Energy Production Centre

Since World War II, the Middle East has been the centre of the world's energy production. However, with the progress of exploration technology, '[t]he outline of a new world oil map is emerging, and it is centred not on the Middle East but on the Western Hemisphere,'[1] including shale oil in America, oil sands in Canada, offshore oil in Central America, and pre-salt oil in Brazil. The International Energy Agency (IEA) pointed out in its "World Energy Outlook 2012" that, as far as state-of-the-art technology is concerned, the world's most abundant recoverable reserves of petroleum resources are not in the Middle East (1.2 trillion barrels), but in North America (2.2 trillion barrels, of which 1.9 trillion barrels are non-conventional energy resources).

Take the United States as an example; driven by upstream technologies, its unconventional oil and gas resources including shale oil and shale gas, exploited using a hydraulic fracturing method, will have increased its liquid fuel production to 11.4 million barrels per day during 2013, ranking second only to Saudi Arabia's 11.6 million barrels per day; by 2017 the United States will overtake Saudi Arabia as the world's largest oil producer; by 2030 the federation will become a net oil exporter and by 2035 it will achieve energy self-sufficiency.[2] In addition, by 2015, the United States will surpass Russia to become the world's largest natural gas producer.[3] According to the U.S. Energy Information Administration, its production of 10.13 million barrels daily oil was ranked third in the world in 2011 (after Saudi Arabia's 11.15 million barrels and Russia's 10.22 million barrels). In 2012, it surged 7% to 10.9 million barrels daily.[4] As the U.S. energy economist Daniel Yergin has anticipated: «[t]he new energy axis runs from Alberta,

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1 Washington Post, Yergin, D., *Oil's New World Order*, 28 October 2011, available online at <articles.washingtonpost.com/2011-10-28/opinions/35277291_1_energy-policy-hemispheric-energy-oil-sands> (accessed 8 February 2014).

2 International Energy Agency (IEA), *World Energy Outlook 2012*, available online at <worldenergyoutlook.org/publications/weo-2012/> ( accessed 8 February 2014).

3 It is worth noting that the annual Munich Security Conference (MSC) in February 2013, with its participants primarily from Europe and the US, featured a panel on an unusual subject - "The American Oil and Gas Bonanza: The Changing Geopolitics of Energy". US Special Envoy and Coordinator for International Energy Affairs Carlos Pascual described "the US internal energy revolution": a 25 percent increase in natural gas production, which should push down US gas prices, and enough oil output to reduce oil imports from 60 percent to 40 percent of consumption, with an additional 10 percent increase projected. Pascual projected that the US will be able to import *all* of its energy needs from within the America by 2030. *See* Al Jazeera, Slaughter, A.-M., "The Coming Atlantic Century", 24 February 2013, available online at <aljazeera.com/indepth/opinion/2013/02/2013224132644386955.html> (accessed 8 February 2014).

4 US Energy Information Administration, *International Energy Statistics (Total Oil Supply)*, available online at <eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=53&aid=1> ( accessed 8 February 2014).

Canada, down through North Dakota and South Texas, past a major new discovery off the coast of French Guyana to huge offshore oil deposits found near Brazil.»[5]

## II.2. Shift of World Oil Consumption Markets

'Energy demand barely rises in OECD countries, although there is a pronounced shift away from oil, coal (and, in some countries, nuclear) towards natural gas and renewables.'[6] With the westward shift of the world's energy production center, the energy consumption centre is also shifting from developed countries to the Asia-Pacific region, especially to China and India. 'This accelerates the switch in direction of international oil trade towards Asia, putting a focus on the security of the strategic routes that bring Middle East oil to Asian markets.'[7] In the last 20 years, the rapid economic development in this region has demanded increasing oil and gas supplies. The Asia-Pacific region's oil demand has increased from 10% to 25% of the world's total oil consumption.

Take China as an example; its oil imports from Saudi Arabia in December 2009 reached a record high level of 1.2 million barrels per day; while at the same time, Saudi Arabia's crude oil export to the United States, which has been the most important importer of Saudi oil, dropped below one million barrels per day for the first time in twenty years.[8] China has replaced the US as Saudi Arabia's largest oil importer.[9] In addition, the IEA also predicts that, from now to 2035, global energy demands will grow by more than one third, 60% of which will come from China, India, and the Middle East, with India replacing Japan in 2020 to become the world's third largest oil importer.

## II.3. Rapid Growth of New Energy

Given the shortage of traditional fossil energy, environmental deterioration, and the urgency to address climate change, new energy growth has gained increasing momentum in recent years. 119 countries had formulated/set renewable energy development goals or stimulus plans by 2011.[10] It's worth mentioning that the oil-producing countries in the Middle East have also begun to pursue energy diversification with an emphasis on new energy. For example, the UAE government launched the "MASDAR Action Plan" and "Integrated Energy Strategy 2030" in 2006 to increase its investment in the infrastructure construction, education, scientific research and technological development of new energy

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5 Washington Post Official, Yergin, D., *Oil's New World Order*, 28 October 2011, available online at <articles.washingtonpost.com/2011-10-28/opinions/35277291_1_energy-policy-hemispheric-energy-oil-sands> (accessed 8 February 2014).

6 IEA, *World Energy Outlook 2012*, available online at <www.worldenergyoutlook.org> (accessed 8 February 2014).

7 *Ibid*.

8 Guobao, Z,, "The World's Energy Strategy Pattern Will Accelerate Adjustment", *China Development Observation*, Special Issue, 2012 54.

9 US net oil imports dropped to 5.98m barrels a day in December 2012, and in the same month, China's net oil imports surged to 6.12m b/d. China has overtaken the US as the world's leading net oil importer for the first time, and it's predicted that by the end of 2013, or the early 2014, China will overtake the US on an annual basis. Financial Times, Blas, J., "China Overtakes U.S. as World's Top Oil Importer", (March 4, 2013), available online at <cs.com.cn/english/ei/201303/t20130305_ 3883798.html> (accessed 11 October 2013).

10 Liangfu, Z., "China will replace the U.S. to guard the Strait of Hormuz? - Changing international energy pattern", *World Affairs*, No.24, 2012, 20.

industry, and it's anticipated that Dubai would achieve the conversion from fossil fuel energy to ecological energy in 2030.[11]

It should be noted that, although Barack Obama and Mitt Romney proposed different energy policies in the US presidential election debate in October 2012, they both claimed that the United States needed energy independence. Obama's policy philosophy was to boost clean energy, for which he had approved $90 billion in investment to stimulate its development sources and limit or even ban high polluting coal. This is a real green revolution: in his first term, wind power generating capacity doubled, and solar capacity increased six-fold.[12]

## II.4. Reduction of OPEC's Influence

Established in 1960, the Organization of the Petroleum Exporting Countries (OPEC) was the most influential organisation of oil-producing countries. OPEC has dominated the international oil market for more than fifty years. However, due to the expansion of non-OPEC oil producing countries including Russia and Kazakhstan in the world oil market, as well as its inefficient coordination, OPEC's control of international oil price has been greatly weakened.

According to the IEA's statistics, the organisation accounted for 55.5% of world oil production in 1973, but dropped to 42% in 2012. In addition, the oil production of non-OPEC countries will increase in a sustainable manner: because of the rapid growth of unconventional energy, especially - of American light tight oil and Canadian oil sands as well as Brazilian deepwater oil, the share of non-OPEC oil production will increase from less than forty nine million barrels per day in 2011 to more than fifty three million barrels per day in 2015, which will last until the mid-2020s, and then fall to fifty million barrels per day by 2035.[13]

## II.5. Complexity and Volatility of the International Energy Market

First of all, endless geopolitical battles for energy will increase the turbulences of the international energy market. On the one hand, the chaos and instability in African and in the Middle Eastern countries such as Libya, Syria, Iraq and Iran have an adverse effect on international energy market. On the other, the debates over the transit of Russian Natural Gas through the territory of Ukraine, the friction with respect to energy transit in the Persian Gulf, as well as the oil and gas dispute between Sudan and South Sudan, etc. are potential dangers for the international energy market.

Second, driven by the new wave of nationalisation, national oil companies have undergone rapid development, consequently, the monopoly of oil-producing countries on domestic oil markets has been gradually strengthened. Statistics indicate that 85% (excluding China) of the world's proven oil and gas reserves in the twentieth century were controlled by large multinational oil companies; except for 14% controlled by the

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[11] Yishan, X., Dezhao, C., *High Coverage of China's Energy and Climate Diplomacy*, World Affairs Press, 2012, 56.

[12] Xinhua, T., "Campaign President Really Believes "Completely Independent" Energy Policy?", *World Affairs*, No. 21, 2012, 7.

[13] IEA, *World Energy Outlook 2012*, available online at <www.worldenergyoutlook.org/publications/weo-2012/> (accessed 8 February 2014).

former Soviet Union, only 1% of total energy was directly controlled by individual countries; however, the 40 countries with the largest oil reserve have gained 55% of the total governmental revenue through their cooperation with foreign countries in 2002, and up to 85% in 2007.[14] Third, with the diversification of energy market subjects, the oil derivatives market has become an integral part of the international oil market.

### II.6. Adjustment of Energy Strategies

Major countries and regions have accelerated steps aiming at adjusting their energy strategies in order to meet growing energy demands, address climate change and adapt to changing energy pattern. For example, the United States issued a blueprint for its future energy security, entitled by launching the "Green" and "New" energy policy. Meanwhile, the US House of Representatives adopted the *American Clean Energy and Security Act 2009*. Britain unveiled in succession *The UK Low Carbon Transition Plan: National Strategy for Climate and Energy 2009*, *UK Renewable Energy Strategy 2009* and the *UK Energy Act 2010*. The European Parliament adopted the *EU Third Energy Reform Plan* (which included three regulations and two directives) in 2009; the European Commission also released in succession "*Energy 2020 - A Strategy for Competitive, Sustainable and Secure Energy*"[15] in November 2010 and "Energy Roadmap 2050"[16] in December 2011. In 2010 Japan published "*Strategic Energy Plan of Japan*." in 2010 and so on, all of which have attracted worldwide attention.

## III. Developing trends of the international energy order

Based on the above changes, the international energy order has shown the following trends:

### III.1. The Arctic region and the international seabed area will become new energy sources.

Energy resources in the Arctic are abundant. It is estimated that their potential recoverable oil reserves are 100 - 200 billion barrels;[17] natural gas reserves are fifty to eighty trillion cubic meters, hence the designation of "the Middle East at the end of the earth."[18] That's why in recent years many countries have invariably turned their eyes to the North Pole. For example, in September 2007, Britain claimed that it had sovereignty

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[14] Yuanhua, Y., "Profound Changes of World Energy Pattern", *China Maritime*, No. 9, 2010, 21.

[15] European Commission, COM(2010) 639 final, Brussels, (10 November 2010), available online at <eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0639:EN:HTML:NOT> (accessed 8 February 2014). The European Commission has proposed the "20:20:20 objective": greenhouse gas emissions in 2020 will decrease 20% compared to 1990, energy efficiency will increase 20%, and new energy will account 20% of total energy production.

[16] European Commission, Communication From the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Energy Roadmap 2050 (COM/2011/0885 Final), available online at <eur-lex.europa.eu/LexUriServ/ LexUriServ.do?uri=CELEX: 52011DC0885:EN:NOT> (accessed 8 February 2014).

[17] One estimate suggests that 400 billion barrels of oil may be found in the Arctic oceans. Botkin, D. B., *Powering the Future: A Scientist's Guide to Energy Independence*, Financial Times Prentice Hall, 2010, 30.

[18] Zewei, Y., *International Law*, 2nd ed., Higher Education Press, 2012, 169.

over a portion of the continental shelf of the Atlantic Ocean near the North Pole, trying to get energy exploitation rights near the Rockall Island, which has been disputed by Britain, Ireland, Denmark and Iceland. In 2009 Russia developed the "Russian Federation's Policy for the Arctic to 2020"; in 2010 the Russian Security Council introduced its Arctic Strategy, announcing the Arctic will become Russia's strategic energy base in 2016.[19] Furthermore, the United States, France, Germany, Denmark, Sweden, Canada and other countries have already carried out expeditions in the Arctic, and strengthened their presence there. It is thus clear that the resource competition in that area is gearing up.

The International Seabed Area (Area), accounting for about 65% of the marine area, is rich in energy reserves, such as methane hydrates (combustible ice), etc.[20] Not until recent years has the resource exploration and development activities in the Area been on agenda. First, the International Seabed Authority adopted the "Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area"[21] in 2000 and "Regulations for Prospecting and Exploration for Polymetallic Sulphides"[22] in 2010. These two regulations have paved the way for the relevant prospecting and exploration of resources. Meanwhile, the International Seabed Authority has signed polymetallic nodules exploration contracts with 8 contractors including the China Ocean Mineral Resources Research and Development Association (COMRA), and approved two applications for polymetallic nodules exploration made by Nauru Ocean Resources Inc. and Tonga Offshore Mining co., LTD, and two applications for polymetallic sulphides exploration made by COMRA and the Russian Federation Ministry of Natural Resources and Environment Ministry.[23]

Second, the Legal and Technical Commission of the International Seabed Authority drafted the "Regulations on prospecting and exploration for cobalt-rich ferromanganese crusts in the Area,"[24] and submitted it to the Council for approval in 2009, which was

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[19] In December 2001, Russia made an official submission into the UN Commission on the Limits of the Continental Shelf for the establishment of new outer limits of the continental shelf of Russia beyond the previous 200 mile zone (370 km) which is within the Russian Arctic sector.

[20] Japan has extracted natural "ice" gas from methane hydrates beneath the sea off its coasts in a technological coup, opening up a super-resource that could meet the country's gas needs for the next century and radically change the world's energy outlook. According to Japan's state-owned oil and gas company JOGMEC, the immediate discoveries in Japan's Eastern Tankai Trough are thought to hold forty trillion cubic feet of methane, equal to eleven years gas imports, which will change the world energy map. Telegraph Official, Pritchard, A., "Japan cracks seabed 'ice gas' in dramatic leap for global energy", 12 March 2013, available online at <telegraph.co.uk/finance/newsbysector/energy/9924836/Japan-cracks-seabed-ice-gas-in-dramatic-leap-for-global-energy.html> (accessed 8 February 2014).

[21] International Seabed Authority, Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, 13 July 2000, available online at <www.isa.org.jm/files/documents/EN/Regs/MiningCode.pdf> (accessed 12 October 2013).

[22] Decision of the Assembly of the International Seabed Authority Relating to the Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area (7 May 2010) ISBA/16/A/12, available online at <isa.org.jm/files/documents/EN/16Sess/Assembly/ISBA-16A-12.pdf> (accessed 8 February 2014).

[23] Zewei, Y., *International Law (Second Edition)*, Higher Education Press, 2012, 208.

[24] International Seabed Authority Council, Regulations on Prospecting and Exploration for Cobalt-Rich Ferromanganese Crusts in the Area (29 November 2009) ISBA/16/C/WP.2, available online at <isa.org.jm/files/documents/EN/16Sess/Council/ISBA-16C-WP2.pdf> ( accessed 8 February 2014).

adopted by the eighteenth session of the International Seabed Authority in July 2012.[25] The International Seabed Authority has also begun preparatory work on draft mining regulations. Third, in February 2011 the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea delivered its advisory opinion on "Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area,"[26] which will promote resource exploration and development in the Area and provide a legal basis for the International Seabed Authority and sponsoring states to assume their responsibilities.[27]

## III.2. The exploitation of unconventional energy will become a new direction.

The concept of unconventional energy corresponds to that of conventional energy, or traditional energy, which refers to 'energy which has been produced on large-scales and has been widely utilized for a long historical period and with certain conditions of science and technologies, such as coal, oil and natural gas.'[28] The potential reserves of unconventional energy could be huge. According to statistics, the geological reserves of extra-heavy oil in the world are 294.5 billion tons; those of oil sands are 456 billion tons; those of shale oil - about 689.3 billion tonnes; coal bed gas reserves - 260 trillion cubic meters; shale gas resources - 419 trillion cubic meters, and methane hydrate reserves may be 3,000 trillion cubic meters.[29]

Also, some scholars have estimated that there are six trillion barrels of oil in oil shale and oil sands, which is twice as much as proven oil reserve.[30] Shale oil and oil sands are located in North America. It can be expected that with scientific advances, and technology breakthroughs, production of unconventional energy, such as oil sands in Canada, extra-heavy oil in Venezuela, shale oil and gas in the US as well as methane hydrate in the international seabed area, will increase by a large margin, thus playing a substantial role in future energy supply.

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[25] International Seabed Authority, Decision of the Council relating to the Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area, 26 July 2012, ISBA 18/C/23, available online at <isa.org.jm/files/documents/EN/18Sess/Council/ISBA-18C-23.pdf> (accessed 8 February 2014).

[26] Seabed Dispute Chamber of the International Tribunal for the Law of the Sea, "Responsibilities and obligations of States Sponsoring persons and Entities with respect to activities in the Area" (Request for Advisory Opinion submitted to the Seabed Disputes Chamber), Advisory Opinion, available online at <www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/adv_op_010211.pdf> (accessed 8 February 2014).

[27] Gao, Z., ed., *China's Ocean Development Report*, China Institute for Marine Development Strategies, Ocean Press, 2011, 78.

[28] Tao, L., *et al.*, ed., *Energy Utilization and Environmental Protection - Thinking of Energy Structure*, Metallurgical Industry Press, 2011, 31.

[29] World Energy Council, *2010 Survey of Energy Resources*, World Energy Council, London, 2010, available online at <www.worldenergy.org/documents/ser_2010_report_1.pdf> (accessed 8 February 2014).

[30] Botkin, D. B., *Powering the Future: A Scientist's Guide to Energy Independence*, Financial Times Prentice Hall, 2010, 29.

### III.3. Climate change and low-carbonisation will become a new agenda for energy.

British scholar Anthony Giddens pointed out in his *The Politics of Climate Change* that tackling climate change problems would become the main topic in the regional and global arena during the next twenty years.[31] It is acknowledged that the rising tendency of carbon dioxide and other greenhouse gases is extremely hard to stop, which requires that the international community to take strong measures to curb this trend. The international community has reached a consensus in this regard. Consider for example; the "Copenhagen Agreement;" "Cancun Agreement;" the launch of the Green Climate Fund after the World Climate Conference in Durban; and a package of resolutions including the second commitment period of the Kyoto Protocol adopted during the Doha Conference on Climate Change in December 2012, and so on. Therefore, a low-carbon economy and low-carbon energy have become worldwide trends.

Since a low-carbon economy is founded on low-carbonisation in energy production and consumption, it is dominating the advancement of energy technology in the world. In fact, the developed countries have integrated low-carbonisation of energy into their new round of energy strategy adjustments, 'whose energy legislations also show the characteristics of low-carbonization.'[32] For example, the "Low-carbon Investment Promotion Law" adopted by Japan's House of Representatives and Senate in May 2010 provides an important legal foundation for Japan to create a low-carbon society. Since July 2012, the state has begun to operate its "Total Amount of Renewable Energy Power Purchase System (FIT)."[33] It is thus clear that climate change mitigation and the transition to a low-carbon economy will produce changes in the rules, systems and regulations of the international energy order. Low-carbon energy is a basic guarantee of a low-carbon economy; clean production is the key to a low carbon economy; recycling is an effective method for sustaining a low-carbon economy; and sustainable development is the aspiration of a low-carbon economy.

### III.4. The rulemaking right in the energy market will become a new battlefield.

First, some oil-producing countries and consuming countries have established their own petroleum exchange to compete for international discourse power in the oil market. Currently there are two international pricing systems for crude oil: one is the trading price of Brent crude oil in the London International Petroleum Exchange; the other is the WTI (West Texas Inter-medium) pricing in NYMEX Exchange, USA.[34] In order to

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[31] Giddens, A., *Climate Change Politics*, translated by Cao Rongxiang, Social Sciences Academic Press, 2009, preface.

[32] Zewei, Y., "New Energy Laws and Policies in Developed Countries: Features, Tendencies and Implications", *Journal of Social Science of Hunan Normal University*, ed. 4, 2012, 7.

[33] Under this system, the power companies are obliged in a prescribed period to purchase renewable energy power produced from solar, wind, geothermal, etc., at a price regulated by the government. This policy is considered to promote Japan's rapid development of renewable energy and has strategic significance for renewable energy resources.

[34] Daojong, Z., *Zhongguo shiyou anquan de guoji zhengzhi jingjixue fenxi (International Political Economy Analysis of China's Oil Security)*, Contemporary World Press, Beijing, 2005, 252-253.

protect their own interest, some countries have joined the battle for the oil pricing right. The India MCX listed crude oil futures in 2002, and the Iranian Oil Futures Exchange opened in 2008. In addition, the UAE in cooperation with the New York Mercantile Exchange has established the Dubai Mercantile Exchange (DME). Also, Russia has been making preparations for its crude oil futures exchange.

Second, investment funds have gradually become the main force to manipulate the oil market. With the fluctuations of the international oil price, banks, hedge funds, pension funds, social security funds and other types of investment funds, have invested in the oil futures market, and have in consequence controlled the oil pricing right, which has traditionally been dominated by the international oil industry. "Oil futures and options have developed into a new type of financial investment vehicle from a hedging instrument."[35]

Third, the competition between developed countries and emerging economies for the rule-making right of new energy has become increasingly intensified. As mentioned above, they have been contending for possession of a commanding height on new energy. On the basis of their advanced technology of new energy, developed countries have taken the leading position in international new energy market by dominating the rule-making authority of world energy sector, which further consolidates their international status and influence. On the other end of the spectrum, "emerging economics like China and India have built up their competitive advantages in some specific areas of the new energy industry to compete with developed countries by virtue of their labour cost, huge market and late-starter, etc."[36] Therefore, there will be more contentions over new energy, similar to the photovoltaic war between China and the United States and the European Union in the field of solar energy. At the same time, there will be more fierce competition in respect to the rulemaking right including technology standards, trade rules and management systems.

## III.5. Diversification will become a feature of the new energy order

First of all, new energy will be more diverse. Nowadays we can make use of various types of energy, including traditional energy, like oil, gas, coal and other fossil fuels, and new energy, like solar, nuclear, biomass and other resources, and also unconventional energy, e.g. oil sands, shale oil, and methane hydrate. Undoubtedly, energy resources will be even more diverse in the future.

Second, the energy market will be diversified. On one hand, with the establishment of oil futures exchanges in United Arab Emirates, India, Iran, Japan, Russia and other countries, the energy trading market has been diversified. On the other hand, the participants in the energy market have been diversified as well, with a reshuffle of their influential power: the power of multinational oil companies has been further compressed with their market controlling abilities declined; national oil companies have taken the dominant position after a new round of nationalisation as rule-makers for international energy cooperation; meanwhile, investment funds have become a significant force in international oil market.

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[35] Yuan-hua, Y., "Profound Changes in the World's Energy Pattern", *Power System and Clean Energy*, vol. 26, ed. 11, Nov. 2010, 21.

[36] Liangfu, Z., "China will replace the U.S. to guard the Strait of Hormuz? Changing international energy pattern", *World Affairs*, ed. 24, 2012, 21.

Finally, the energy pattern will be diversified. The United States and the European Union will maintain its advantages in the energy sector and control the rulemaking right of the international energy order; China, India and other emerging economies, with their growing economic strength, especially in the rise of the energy consumption market, will present their demands in the transition to a new international energy order. Therefore, the bi-polar international energy pattern of production countries and consumption countries will be diversified into a multi-polar pattern.

## IV. Functions of Contemporary International Law in the Transition to a New International Order

International law as a regulator of international relations has a wide range of social functions. Based on the coordinated state will or consent, international law regulates state actions with limited mandatory norms. It's indispensable for the transition to a new international energy order,[37] since contemporary international law plays an important role in promoting, regulating and safeguarding the international energy order transformation.

## V. International Organisations Provide platforms for international energy cooperation.

International organisations are important subjects of international law while its operating mechanisms and resolutions are also basic contents of contemporary international law. Most importantly, international organisations, such as the UN, the IEA, IAEA, OPEC, the Arab Petroleum Exporting Countries, the International Energy Forum, "G8" Summit, the Asia-Pacific Economic Cooperation Organization, the World Petroleum Congress and the World Energy Council, etc. have provided a platform for international energy cooperation. It's worth mentioning that the Energy Charter Conference (EEC), with its aim to facilitate dialogues and cooperation between energy producing and consuming states, has provided a common platform to develop and implement binding rules for all energy stakeholders.[38]

Since there is no single entity in the UN system that has primary responsibility for energy, UN-Energy, the interagency mechanism on energy, was established in 2004 to ensure coherence in the UN system's multi-disciplinary response and effective engagement on energy-related issues, with an aim to promote system-wide collaboration in the area of energy with a coherent and consistent approach.[39] UN-Energy has created an international platform to jointly handle international energy issues with substantive and collaborative actions both in regard to energy policy development and implementation, as well as in maintaining an overview of major ongoing initiatives

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[37] Zewei, Y., *New International Economic Order Research - Political and Legal Analysis*, Wuhan University Press, Wuhan, 1998, 95.

[38] Goldthaw, A. and Witte, J. M., eds., *Global Energy Governance: The New Rules of the Game*, Brookings Institution Press, Berlin, 2010, 65-66.

[39] UN-Energy, Energy Information Resource Integration, 01 June 2009, available online at <ny.whlib.ac.cn/RSdetail/detail.asp?id=111> and <un-energy.org> (accessed 21 February 2014).

within the system.[40] In recent years, UN-Energy has issued several energy-related reports, including "The Energy Challenges of Achieving Millennium Development Goals" and "United Nations Energy Situation: The General Mechanism for Activities". At the same time they initiated many action plans, such as "Promotion of New Energy and Renewable Energy",[41] "Renewable Energy and Energy Efficiency: EU's Southern and Eastern Neighbors' Innovative Policies and Financing Instruments",[42] "Main Groups Priority Action in Energy for Sustainable Development, Industrial Development, Air Pollution/Atmosphere and Climate Change",[43] and "Promotion of New Energy and Renewable Energy, Including The Implementation of the World Solar Programme".[44] All of these efforts have provided a strong impetus to international energy cooperation.

## V.1. Contemporary international law provides basic legal norms for international energy cooperation and transition to a new international energy order

As mentioned above, "Regulations on Prospecting and Exploration for Polymetallic Nodules" and "Regulations on Prospecting and Exploration for Polymetallic Sulphides", adopted by the International Seabed Authority respectively in 2000 and 2010, have provided detailed provisions on terminology, scope, prospecting, exploration plan application, exploration contract, protection and preservation of the marine environment, confidentiality, etc., thus laying a solid legal basis for all parties to conduct relevant prospecting and exploration activities in the Area. In addition, the draft "Regulations on prospecting and exploration for cobalt-rich ferromanganese crusts in the Area" and "Exploitation Regulations" will also provide legal norms on the exploration and development of cobalt-rich ferromanganese crusts resources in the Area. Take The Energy Charter Treaty, founded on the fundamental principles of non-discrimination, transparency and a commitment to the progressive liberalisation of international trade, it has laid down provisions on energy investment, energy trade and energy transit. It has also developed well-acknowledged goals and standards necessary for energy-related environmental protection, thus creating a level playing field of international energy rules to be observed by all participating governments.[45]

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40 Yu Hongyuan, L.W., *International Energy Mechanism Innovation and the International Energy Law*, Ocean Press, 2010, 19.

41 UN-Energy, REPORT: *Promotion of New Energy and Renewable Energy*, A/RES/62/197, available online at <un.org/chinese/esa/energy/docs.shtml> (accessed 21 February 2014).

42 UN-Energy, REPORT: *Renewable Energy and Energy Efficiency: EU's Southern and Eastern Neighbors' Innovative Policies and Financing Instruments*, E/CN.17 / 2007/11, available online at <un.org/chinese/esa/energy/docs.shtml> (accessed 21 February 2014).

43 UN-Energy, REPORT: *Main Groups Priority Action in Energy for Sustainable Development, Industrial Development, Air Pollution/Atmosphere and Climate Change*, E/CN.17/2007/7, available online at <un.org/chinese/esa/energy/docs.shtml> (accessed 21 February 2014).

44 UN-Energy, REPORT: *Promotion of New Energy and Renewable Energy, Including The Implementation of the World Solar Programme*, A/RES/60/199, available online at <un.org/chinese/esa/energy/docs.shtml> (accessed 21 February 2014).

45 Energy Charter Secretariat, The Energy Charter Treaty and Related Documents, September 2004, available online at <www.encharter.org/fileadmin/user_upload/document/EN.pdf> (accessed 21 February 2014).

In addition, relevant international treaties, the UN General Assembly resolutions and international judicial decisions have confirmed a state's permanent sovereignty over natural resources, thus providing a legal foundation for the state to strengthen their control and management of its natural resources. Article 56 of United Nations Convention on the Law of the Sea, specifically provides that the coastal state has "sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources of the waters superjacent to the sea-bed and of the sea-bed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the (EEZ) zone, such as the production of energy from the water, currents and winds"; the "Declaration of permanent sovereignty over natural resources", adopted by the UN General Assembly in 1962, has declared "[t]he right of peoples and nations to permanent sovereignty over natural wealth and resources" is a basic element of self-determination and also provided the right to nationalisation of their resources; the tribunal in *Kuwait v. Aminoil* award reached a conclusion in 1982 that, since a large number of constitutions have claimed all natural resources as national property, Kuwait enjoys full ownership of oil resources which could be placed under its domestic jurisdiction.[46]

## V.2. Contemporary international law provides settlement mechanisms for international energy dispute.

International lawyers divide international disputes settlement mechanisms into two categories: "peaceful means" and "non-peaceful or compulsory means".[47] Peaceful means include political means (also known as diplomatic means) and legal means. The former consists of negotiation, good offices, mediation, conciliation, international investigation and resort to the United Nations; the latter consists of arbitration and judicial settlement. After World War II, settling disputes with peaceful means has become a fundamental principle of international law. Contemporary international law provides principles and methods for sovereign states and investors to settle various international energy disputes.

First, the principle of settling international disputes with peaceful means is not only a fundamental legal principle, but also a *jus cogens* norm. All international disputes, including international energy disputes, should be resolved with peaceful means. Moreover, "Pacific Settlement of Disputes", Chapter 6 of "The UN Charter" provides for detailed procedures on peaceful settlements of international disputes.

Second, contemporary international law is the legal basis for judicial organs to decide cases on international energy disputes. For example, the Preamble of "The UN Charter" emphasises that "to ensure, by the acceptance of principles and the institution of methods, that armed force shall not be used"; Article 38 of "Statute of the International Court of Justice" clearly states: "The Court, whose function is to decide in accordance with international law such disputes as are submitted to it". International law includes international conventions, international custom, the general principles of law, judicial decisions, the teachings of the most highly qualified publicists, resolutions of international organisations and so on.

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[46] Meizhen, Y., *International Investment Law as case studies*, Wuhan University Press, Wuhan, 1989, 125-144.

[47] Shearer, I. A., *Starke 's International Law*, 11th ed., Buttersworth London, 1994, 441-442.

Third, some international conventions have provided special mechanisms to settle specific energy disputes. For example, "The Energy Charter Treaty" has special provisions for the settlement of disputes over trans-boundary energy pipelines, which set forth a specialised conciliation mechanism under the ECT besides conventional mechanisms, such as negotiation, consultation, arbitration and judicial settlement. The special conciliation mechanism is a unique settlement, which can play the role of a safety valve.[48]

### V.3. Contemporary international law safeguards the new international energy order.

On one hand, international legal documents have clearly defined a state's obligation to abide by contemporary international law, which is the code of conduct for the whole international community. All states are equal before international law, and all states must comply with international law and fulfil its international obligations. For example, "The UN Charter" Preamble solemnly proclaims "to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained"; Article 26 of The Vienna Convention on the Law of Treaties (1969) adopts the ancient principle of *pacta sunt servanda*: every treaty in force is binding upon the parties to it and must be performed by them in good faith"; meanwhile, "A party may not invoke the provisions of its internal law as justification for its failure to perform a treaty." (Article 27)

On the other hand, these international legal mechanisms are more than external pressure for states to fulfill their international obligations; most importantly it's the legal basis for international community to impose sanctions against those states that have failed to fulfil their international obligations. For example, "Draft Articles on Prevention of Trans-boundary Harm from Hazardous Activities", adopted by the International Law Commission in 2001, has confirmed a state's responsibility and international liability arising from the trans-boundary harms caused by its hazardous activities. Therefore, every state must meet its obligations while enjoying its right under the new international energy order; otherwise, it shall accept liability for any damage or international sanctions.

## VI. China's Role in the transition to a new international energy order

In 2011, China's primary energy production amounted to the equivalent of 3.18 billion tons of coal, the largest energy producer in the world.[49] However, China faces many challenges in its energy development: shortage of energy resources with low per capita volume of coal, petroleum and natural gas; rapid growth in energy consumption in recent years; increasing pressure on the security of energy supply; and more than 57% oil

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[48] Wandoo Nomhwange, G., "Transboundary Pipelines: What Is the Role of the Energy Charter Treaty Regarding Disputes Settlement?", Dundee University Thesis, 2005, 49.

[49] China's State Council Information Office, China's Energy Policy (2012), White Paper, 24 October 2012, available online at <www.gov.cn/jrzg/2012-10/24/content_2250377.htm> (accessed 05 February 2014).

dependence on foreign states. For these reasons, it's of significance for China to further strengthen international energy cooperation and promote the transition to a new international energy order, thus safeguarding its energy security. So it is particularly critical to redefine China's role in this process.

## VI.1. To international energy rules: an active innovation instead of a passive recipient

Due to various reasons China has always been a passive recipient of international rules with well-behaved performance, which is featured by the fact that 'Chinese government tries to make their behaviours consistent with the international rules instead of advocating new rules or changing the decision-making mechanism behind them for its own sake'.[50] As the second largest oil consumer and importer in the world, China has been excluded from the international crude oil pricing mechanism. China imports crude oil at the price of Brent or West Texas Intermediate (WTI). China does not have pricing power in the international crude oil market, so it can only passively accept the international oil prices. Wild fluctuations of the international oil price will not only bring tremendous market risks to Chinese petroleum and petrochemical companies, and end-users, but also will have an adverse impact on its social and economic development. Moreover, it will threaten China's energy security. In consequence, China should make a long-term plan to actively participate in the international oil pricing mechanism, formulate its own oil quotation system, and increase its influence on international oil prices. China should seize the 'strategic opportunity of establishing crude oil pricing center in the Asia-Pacific region'.[51]

Although there are the India Commodity Exchange, Dubai Mercantile Exchange and Tokyo Industry Commodity Exchange and so on, the crude oil futures market and the Asia-Pacific oil pricing centre are still in their initial stages. Therefore, it is a strategic opportunity for China to build up its own crude oil futures market and its international discourse power on energy.[52] In addition, China should make efforts to strengthen its coordination and cooperation with energy producing states, consuming states, and interest community in the multilateral international energy rule-making process and construct a new international energy order with its influence as a large energy consumer.

## VI.2. To international energy affairs: from an onlooker to an active participant

For a long time, the Middle East was crucially important to American energy security. However, the United States has made a strategic shift from the Middle East to its

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[50] Yien, J., "China and international system: the perspective of China outside", *in*: Yizhou, W., ed., *Construction in Contradiction: a multiple-insight into relationship between China and key International Organizations*, China Development Press, Beijing, 2003, 351.

[51] Yishan, X. and Dezhao, C., *High Coverage of China's Energy and Climate Diplomacy*, World Affairs Press, 2012, 56.

[52] According to the Voice of Russia radio website reported on November 26, 2012: " China is to start oil futures exchange project in Shanghai Futures Exchange, which means that China is actively participating in activities of oil market, can enable China to improve the impact on energy pricing." Quoted from: *Reference News*, 5th ed., 28 November 2012.

domestic and American market to secure its oil supply. Instead, China's energy supply has been increasingly dependent on the Middle East. Consequently, China needs the Middle East to be stable more than the United States. Although China is still a latecomer, an onlooker and a passive player in international energy affairs for the time being, it's urgent to put an end to the traditional diplomacy with an aloof detachment, and redefine its role as an active participant in international energy affairs. As some scholars have pointed out: 'China's international status and national interests make it difficult to detach itself from international affairs and stick to the principle of non-interference in each other's internal affairs, so 'protective intervention' will become China's inevitable choice to address this challenge.'[53]

## VI.3. To international public Goods: from a receiver to a contributor

According to IEA statistics, China consumed 2.252 billion tons of oil equivalents of energy in 2009, about 4 percent more than the United States, becoming the world's biggest energy consumer in that month.[54] However, the Chinese government rejected this assertion.[55] China's unwillingness to accept the title of the world's biggest energy consumer reflects China's lack of confidence with its growing global influence, and mentality to undertake greater international responsibilities.[56] In fact, China's GDP has surpassed Japan to become the world's second largest economy in 2010.[57] The international community has expected China, as one of the five permanent members of the UN Security Council with growing economic strength, to play a bigger role in global governance, regional cooperation and international conflicts. Observing that China has a seat at virtually every table and a role in virtually every institution of importance in the world, US Secretary of State Hillary Clinton said that 'China's power, wealth, and influence have pushed China rapidly to a new echelon in the international order', so the U.S. and 'the world are looking for even greater leadership from China'.[58] Therefore,

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[53] "Protective intervention" means: in case of serious humanitarian disaster in international relations, or China's national interests facing a serious threat or breach, the Chinese government will intervene to practice international law and democratic value and to protect Chinese national interests. Therefore, there are two main prerequisites for China to implement protective intervention: first, breaches of genocide, war crimes, ethnic cleansing and crimes against humanity and other international crimes; Second, China's national interests are threatened. See Zewei, Y., "The International Community's Democracy and Law Values and protection intervention", *Legal Science*, No.5, 2012, 45-46.

[54] International Energy Agency, *World Energy Outlook 2010*, 2010, available online at <www.worldenergyoutlook.org/publications/weo-2010/> (accessed 21 February 2014).

[55] *Supra* nt. 40, 10.

[56] American trade data indicated that China's total amount of import and export was 3.866 trillion dollars in 2012, 44 billion dollars more than the U.S. 3.822 trillion, thus reaching a conclusion that China has become the newly largest trading nation in the world. However, the Chinese government refuted the relevant reports in an unusual way: Chinese Commerce Ministry pointed out that according to WTO standards China's total trade volume in 2012 was 156 billion dollars less than that of the U.S. See McDonald, J., *China Reject the World's Largest Trading Nation Status*, The Associated Press, Beijing, 20 February 2013, quoted in: *Reference News*, 15th ed., 21 February 2013.

[57] Sina Financial Network, *China's annual economic output of 2010 surpassed Japan for the first time*, 21 January 2011, available online at <finance.sina.com.cn/china/hgjj/20110121/12529291562.shtml> (accessed 21 February 2014).

[58] The Hindu, *Global problems can't be solved without U.S., China: Hillary*, 8 March 2012, available online at <thehindu.com/news/international/global-problems-cant-be-solved-without-us-china-hillary/article2973249.ece> (accessed 21 February 2014).

China is facing the task of transforming from a recipient to a provider of public international goods on energy.

China should improve its international discourse power by actively participating in the development of new technology standards, trade rules and management systems on energy. True to some scholar that 'China should understand that more power also means more responsibility, and it cannot expect greater influence without also assuming a part of the burden borne almost exclusively by the US in terms of providing public goods for the rest of the world.'[59] Great powers not only share prestige and influence, but also share the obligations to improve international security and general welfare.

# VII. Conclusion

In conclusion, dramatic changes of the international energy order have indicated the advent of a new international energy order. Meanwhile, in front of these new challenges for its energy security, China should make a full use of its growing global status to seize this historical opportunity and contribute more "Chinese Initiatives" and "Chinese Solutions" to accelerate the transition to the new international energy order.

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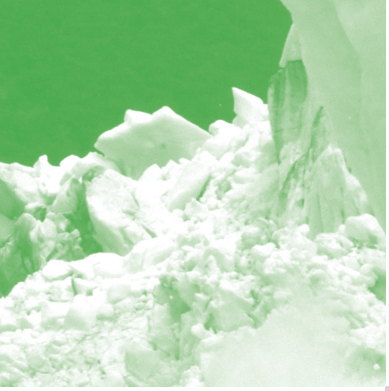

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