

Climate change, Equity and Differentiated Responsibilities: Does the Present Climate Regime Favor Developing Countries?*

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Climate change is the defining human development issue of our generation. All development is ultimately about expanding human potential and enlarging human freedom..... Climate change threatens to erode human freedoms and limit choice. It calls into question the Enlightenment principle that human progress will make the future look better than the past.

Human Development Report 2007/2008, UNDP, Overview

1. Introduction¹

Climate change has received unprecedented attention in recent months. From the Nobel peace prize award to the Climate Change conference in Bali in December 2007, much has been discussed and debated about climate change. Never before has the international community been faced with a problem of this magnitude threatening not only the present generation but generations yet unborn. While global climate change originated as an environmental problem, it now impinges on every aspect of human life with implications for international economy, public health, social issues such as migration, loss of

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¹ Parts of the introduction is taken from the author’s article on “Global Climate Change: Can Human Rights (and human beings) Survive this Onslaught?,” COLORADO J INT’L ENV’TAL LAW & POLICY (forthcoming).

livelihood and, ultimately, threatening international peace and security.² Thus, global climate change has the potential to undermine the very survival of human beings on the planet. As the UNDP notes in its latest Human Development Report which is devoted to climate change:

[m]illions of world's poorest people are already being forced to cope with impacts of climate change..... But increased exposure to drought, to more intense storms, to floods and environmental stress is holding back the efforts of the world's poor to build a better life for themselves and their children.”³

This clearly links climate change with poverty which, in turn, relates to the protection of human rights. Thus, climate change can undermine many of the protected rights including the right to health, the right to a livelihood, the right to choose one's residence and even the right to life in extreme instances.⁴ While the impacts of climate change are wide and varied, it is the world's poor that are bearing the brunt of climate change.⁵

Climate change is considered a problem created by rich countries but the burden will be disproportionately borne by poor countries – issues of equity are very much at the

² See Security Council Holds First-Ever Debate on Impact of Climate Change on Peace, Security, Hearing over 50 speakers, Security Council, SC/9000, April 17, 2007, available at: <http://www.un.org/News/Press/docs/2007/sc9000.doc.htm>. See also Christopher Penny, “Greening the Security Council: Climate Change as an Emerging ‘Threat to International Peace and Security,’” An International Workshop on Human Security and Climate Change, 2005 available at: <http://www.gechs.org/downloads/holmen/Penny.pdf>; Alexandra Knight, *Global Environmental Threats: Can the Security Council Protect our Earth?*, 80 NYUL. REV. 1549 (2005); Climate Change and International Security, Paper from the High Representative and the European Commission to the European Council, March 14, 2008 (S113/08).

³ See Overview, “*Fighting Climate Change: Human Solidarity in a Divided World*,” Human Development Report 2007/08 (UNDP) available at: <http://hdr.undp.org/en/reports/global/hdr2007-2008>

⁴ See Jorge Daniel Taillant, Human Rights, Development and Climate Change Negotiations, Center for Human Rights and the Environment, Argentina (2007), available at: http://www.cedha.org.ar/en/initiatives/climate_change/docs/human_rights.pdf; Hari Osofsky, The Inuit Petition as a Bridge? Beyond Dialectics of Climate Change and Indigenous People's Rights, 31 Am. Indian L. Rev. 675 (2006/2007); Sumudu Atapattu “Global Climate Change: Can Human Rights (and human beings) Survive this Onslaught?” presented at the “Law and Society in the 21st Century: Transformations, Resistances, Futures” conference, Berlin, Germany, July 2007 (unpublished); Marguerite E. Middaugh, “Linking Global Warming to Inuit Human Rights,” 8 *San Diego Int'l L.J.* 179 (2006); and Simon Caney, Cosmopolitan Justice, Rights and Global Climate Change, 19 *Can. J.L. & Juris.* 255 (2006). See also, supra note 1.

⁵ See discussion below.

forefront of the discussion on climate change. International environmental law and the legal regime governing climate change (UN Framework Convention on Climate Change and the Kyoto Protocol) have sought to take the vast disparity between developing countries and developed countries into account as well as the historic contribution to environmental problems in developing a legal regime - the common but differentiated responsibility principle seeks to give effect to this reality. However, this principle is highly contentious as developed countries do not want to take legal responsibility for creating this problem. The common but differentiated responsibility principle seems to be the basis for some of the litigation on climate change – for example, the case filed by the Inuit community against the United States before the Inter-American Commission on Human Rights, discussed below.

This paper seeks to discuss issues of equity surrounding climate change, the common but differentiated responsibility principle and the challenges these emerging principles pose for the international community. It will discuss the relationship between state responsibility and the CBDR principle and how it can be applied in relation to climate change. It will also look at international litigation that has taken place in the field and how the post-2012 legal regime will have to take increasing contribution made by some developing countries into account when framing legal obligations.

2. Climate change, equity and the North-South dialogue

The science of climate change and its occurrence are no longer doubted. The Intergovernmental Panel on Climate Change (IPCC) recognized unequivocally in its 4th report that global greenhouse gas emissions *due to human activities* have contributed to the warming of the earth's surface:⁶ “Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.”⁷

⁶ See IPCC, 4th Assessment Report, summary for policy makers (2007).

⁷ *Ibid.*

It is also no secret that this is a problem created mainly by developed countries although some of highly populated, fast industrializing countries are catching up. While no state in the international community would escape the consequences of climate change, those who would be severely affected by it are not those who caused the problem in the first place. As the UNDP noted in its report, it is mainly poor and vulnerable communities that will disproportionately bear the consequences of climate change, communities that hardly contributed to the problem. Moreover, these communities have the least capacity to adapt to potential consequences of climate change including increased risk of disease.⁸ As articulated by Jonathan Patz et al in the context of climate change and health: “Herein lies the ethical dilemma of climate change and health: those most vulnerable to the health risks are also those least responsible for creating the problem.”⁹

Climate change is a typical North-South issue. Similar to the debate on ozone depletion,¹⁰ the debate on climate change had to address issues of equity not only in relation to the present generation but also in relation to future generations. The main dilemma facing the international community was how to devise an international legal regime which reflects the vast disparity between developing and developed countries not only in terms of wealth (and, therefore, the ability to meet the challenges posed by climate change) but also in terms of their greenhouse gas emissions. In order to address this challenge, the international community devised the common but differentiated responsibility principle which is incorporated into the UN Framework Convention on Climate Change as one of its guiding principles. Other principles include sustainable development, principle of equity (both inter and intra-generational equity) and the precautionary principle. These are important principles which were first articulated in the Rio Declaration and later incorporated into the UNFCCC.¹¹

⁸ See Jonathan Patz *et al.*, *Climate Change and Global Health: Quantifying a Growing Ethical Crisis*, EcoHealth (2007).

⁹ *Ibid.*

¹⁰ See DAVID HUNTER, JAMES SALZMAN & DURWOOD ZAELEKE, *INTERNATIONAL ENVIRONMENTAL LAW AND POLICY*, 2nd ed., (2002), ch: 9 (hereinafter, “Hunter”).

¹¹ For a discussion of these emerging principles, see SUMUDU ATAPATTU, *EMERGING PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW* (2006).

3. Common but Differentiated Responsibility Principle (CBDR)

The first time the CBDR principle was adopted was in the Vienna Convention for the Protection of the Ozone Layer,¹² although the convention itself does not mention the principle specifically. It merely refers to the need to take into account “the circumstances and particular requirements of developing countries.”¹³ The Montreal Protocol, while not specifically referring to the CBDR principle, contains an elaborate set of provisions giving effect to that principle. Acknowledging that “special provision is required to meet the needs of developing countries for these substances,” the Montreal Protocol adopts, for the first time in international environmental law history, three mechanisms that take into account the special situation of developing countries in formulating their obligations: different phase out period for developing countries with a grace period of 10 years to phase out controlled substances; establishment of a fund to help developing countries meet with their obligations under the Protocol; and transfer of technology including facilitating access to environmentally safe alternative substances and technology.¹⁴

The Rio Declaration on Environment and Development was the first international instrument to specifically incorporate the CBDR principle. According to Principle 7:

States shall co-operate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth’s ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.¹⁵

¹² 1513 UNTS 293, signed March 22, 1985, entered into force, September 22, 1988.

¹³ Preamble, *ibid.*

¹⁴ Article 5 of the Protocol is titled “Special Situation of Developing Countries.”

¹⁵ Principle 7, Rio Declaration on Environment and Development, 1992, available at: <http://www.unep.org/Documents/Multilingual/Default.asp?DocumentID=78&ArticleID=1163>

As can be expected, this principle became a very contentious issue at the Rio Conference. The earlier version of Principle 7 that referred to the legal responsibility of developed countries for their past contribution to environmental problems was not adopted. While differential obligations are not new in international law,¹⁶ it constitutes an exception to the principles of sovereign equality and reciprocity.

The CBDR principle is based on the principle of equity which is an important principle of international law. As has been noted by the author elsewhere:

Despite the rather vague language adopted in Principle 7, there is little doubt that it has broken new ground in international environmental law. While it is open to debate whether it is a legal principle or a guiding principle, it could lead to significant legal implications, as more and more environmental treaties adopt differential obligations for states.”¹⁷

The first binding instrument to specifically endorse the CBDR principle is the UN Framework Convention on Climate Change.¹⁸ It is mentioned in both the preamble and Article 3 under “principles.” According to Article 3 the parties to the Convention shall be guided by several principles:

The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, developed country Parties should take the lead in combating climate change and the adverse effects thereof.¹⁹

It also requires the special needs of developing countries to be given full consideration: “The specific needs and special circumstances of developing country Parties, especially

¹⁶ See *supra* note 11, p 400.

¹⁷ *Ibid*, 387.

¹⁸ 1771 UNTS 107, signed May 9, 1992, entered into force: March 21, 1994, available at:

<http://www.unfccc.de/>

¹⁹ Article 3.1, *ibid*.

those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention, should be given full consideration.”²⁰

The Kyoto Protocol²¹ which embodies substantive obligations in relation to climate change contains no obligations for developing country parties apart from the general obligations or commitments embodied in the UNFCCC. These commitments range from developing national inventories of anthropogenic emissions, formulating and implementing national programs to mitigate climate change, promoting and cooperating in the transfer of technology, promoting sustainable development, cooperating in preparing adaptation plans; promoting and cooperating in scientific research; and promoting education, training and public awareness. As can be seen, these are very broad and vague commitments. Only “Annex I countries” (i.e. developed countries and countries with economies in transition) have specific obligations for emission reduction.²² Taking 1990 as the base year, these countries have to reduce their greenhouse gas emissions (gases listed in Annex A) by at least 5% below their 1990 levels in the commitment period 2008-2012.²³ The Protocol identifies several mechanisms by which the parties can achieve their obligations: joint implementation, the bubble, emission trading and the clean development mechanism.

Thus, unlike the Montreal Protocol, the Kyoto Protocol although specifically embodying the principle, does not actually contain any obligations for emission reduction for developing countries. As can be expected, this led to much controversy. Indeed, it was one of the reasons given by the US government when it announced its decision to pull out of the Kyoto regime.²⁴

²⁰ See Article 3.2

²¹ FCCC/CP/1997/L.7/Add.1, signed December 11, 1997, entered into force February 16, 2005.

²² See Article 2, Kyoto Protocol.

²³ Article 3, Kyoto Protocol. This target can be achieved either individually or jointly.

²⁴ See Hunter, *supra* note 10.

Does this mean that the climate regime favors developing countries? On the face of it, the answer would be yes. Indeed the reason underlying the CBDR principle is to “favor” one group over another taking into account certain disparities that exist in international society. If that were the case, is it equitable that developing countries were not given any obligations at all? In this context, it is useful to recall the wording in the Rio Declaration: it refers to the *common* obligation of states to protect the environment. This obligation is common to all states, whether they are developing, developed or have economies in transition. Moreover, Principle 7 starts with the general obligation of states *to cooperate in a spirit of global partnership.....*²⁵ This general obligation may be qualified by differentiated responsibilities based on different contributions states make to global environmental problems. This does not, however, mean that the general obligation to cooperate to conserve and protect the environment becomes nullified as a result of differential obligations. In the light of this, the one sided nature of obligations in the Kyoto Protocol becomes problematic as it does not contain any differentiated responsibilities for developing countries – on the contrary, it contains **no** obligations for developing countries for the commitment period. Of course, the counter-argument can be made that the Kyoto Protocol applies only for the commitment period and, therefore, it was not necessary to adopt obligations for developing countries as their contribution to global greenhouse gas emissions was negligible.

This argument would have been viable if all developing countries were made equal. Countries with huge populations and fast industrializing economies such as India, China and Brazil are anything but equal to other developing countries and it may become necessary to differentiate even within developing countries. China became the world’s largest carbon dioxide emitter surpassing the United States for the first time in 2007.²⁶ India’s emissions are increasing as well. Thus, it is no longer possible to exclude these countries from the future climate change regime. To do so for political reasons would be disastrous.

²⁵ Emphasis added.

²⁶ See Elizabeth Rosenthal, “China Increases Lead as Biggest Carbon Dioxide Emitter, The New York Times, June 14, 2008.

There may be another explanation why developing countries were not given any binding obligations which makes it easier to reconcile it with the ozone regime. Unlike the ozone regime, the climate change regime is based on commitment periods and developing countries do not have emission reduction commitments in relation to this particular commitment period. It is very likely that in the second commitment period developing countries will have emission reduction obligations similar to developed countries. While it is not clear what specific obligations would be imposed on developing countries, it seems logical that their emission reduction obligations should be commensurate with the emissions for each country.

While both the climate change regime and the ozone regime purport to apply the CBDR principle, the two regimes approach differential treatment differently. While some developing countries such as Argentina have voluntarily adopted Kyoto commitments, developing countries as a whole do not have any binding obligations under Kyoto. It is, therefore, commendable that developing countries expressed their willingness (albeit rather cautiously) for the first time to be subjected to binding commitments under the post-2012 regime. Thus, the Bali Action plan refers to the need for “[E]nhanced national/international action on mitigation of climate change, including, *inter alia*, consideration of:

Nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner;”²⁷

Although the wording is rather vague and cautious, this is a significant development from their pre-Kyoto position where they took the view that climate change was a rich country made phenomenon and it would be unfair to get developing countries to pay for

²⁷ Bali Action Plan, Advanced unedited version, Decision /CP.13, (2007) available at: http://unfccc.int/files/meetings/cop_13/application/pdf/cp_bali_action.pdf

mitigation when they had other pressing problems to deal with such as poverty.²⁸ This is reflected in the UNFCCC as well. The Preamble affirms that “responses to climate change should be coordinated with social and economic development in an integrated manner with a view to avoiding adverse impacts on the latter, taking into full account the legitimate priority needs of developing countries for the achievement of sustained economic growth and the eradication of poverty.”²⁹ The Convention further calls upon parties to integrate policies and measures to protect the climate with national development programs “taking into account that economic development is essential for adopting measures to address climate change.”³⁰

However, it should be stressed that the whole debate on climate change should be placed within the context of sustainable development and the above provision is significant in this regard. Sustainable development requires us to integrate environmental protection into the development process, not consider it *ex-post facto* or in isolation.³¹ It also requires us to integrate issues of equity into the process as well as procedural rights such as access to information, participation and access to remedies.³² Sustainable development has come a long way from its articulation by the World Commission on Environment and Development in 1987.³³ From a vague and slippery concept,³⁴ sustainable development has developed into something more than a mere concept with both substantive and procedural elements some of which now have legal connotations.³⁵ In this light, it would be difficult for developing countries to raise their age-old argument that economic development must come first and environmental protection can come later. The international community has hopefully learned from this mistake not once but many times over!!

²⁸ See Hunter, *supra* note 10.

²⁹ Preamble, UNFCCC.

³⁰ Principle 3.4, UNFCCC.

³¹ See SUMUDU ATAPATTU, *supra* note 11, chapter 2 for a discussion on sustainable development.

³² *Ibid.*

³³ OUR COMMON FUTURE, REPORT OF THE WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT (1987).

³⁴ See Hunter, *supra* note 10.

³⁵ See Sumudu Atapattu, *supra* note 11.

While differentiation is necessary to redress past imbalances, at some point it becomes necessary to do away with differentiation. Affirmative action is based on this premise. In other words, differentiation is temporary, utilized mainly to level the playing field.³⁶ If these norms are temporary in nature, can they become generally applicable, outside particular treaty regimes? It is submitted that differential norms have to be specifically adopted in a treaty regime and cannot be assumed to exist in the absence of such specific inclusion.³⁷

4. Inuit litigation – a sign of things to come?

In December 2005, the Inuit Circumpolar Conference filed a petition before the Inter-American Commission on Human Rights alleging that the United States government by failing to reduce its greenhouse gas emissions is contributing to global climate change which, in turn, is having a disproportionate impact on the Arctic region leading to a violation of their human rights.³⁸ They alleged that climate change is causing the Arctic region to melt at an alarming rate:

Thinning sea ice and thawing permafrost are threatening the existence of the Inuit people and destroying the habitat of polar bears, seals and caribou upon which the Inuit depend for subsistence and cultural identity. Travel is increasingly dangerous as extensive melting compromises the predictability of wind and precipitation patterns and ice strength.....³⁹

The Inuit argued that as a result of the changes that are taking place in the Arctic region caused by climate change, their traditional way of life, hunting practices and even their lives are being jeopardized, which they argued, is a violation of their protected rights:

³⁶ See *supra* note 11, chapter 5.

³⁷ *Ibid.*

³⁸ See http://www.ciel.org/Climate/Climate_Inuit.html and a summary of the petition is available at: http://www.ciel.org/Publications/COP10_Handout_EJCIEL.pdf

³⁹ See Randall Abate, “Climate Change, The United States, and the Impacts of Arctic Melting: A Case Study in the need for Enforceable International Environmental Human Rights,” 26 *Stan. Envtl. L. J.* 3 (2007).

One of the most significant impacts of warming in the Arctic has been on sea ice. Commonly observed changes include thinner ice, less ice, later freezes and earlier, more sudden thaws. Sea ice is a critical resource for the Inuit, who use it to travel to hunting and harvesting locations, and for communication between communities. Because of the loss in the thickness, extent and duration of the sea ice, these traditional practices have become more dangerous, more difficult or, at times, impossible. In many regions, traditional knowledge regarding the safety of the sea ice has become unreliable. As a result, more hunters and other travelers are falling through the sea ice into the frigid water below. The shorter season for safe sea ice travel has also made some hunting and harvest activities impossible, and curtailed others. For the Inuit, the deterioration in sea ice conditions has made travel, harvest, and everyday life more difficult and dangerous.⁴⁰

Moreover, as the Inuits' way of life and culture are intrinsically linked to their physical surroundings, climate change is violating their right to practice their culture. The petition alleged that the United States which is currently the largest contributor to greenhouse gas emissions in the world has consistently refused to take steps to reduce GHG emissions, despite having ratified the UNFCCC. It is now well documented that anthropogenic emissions of GHG are causing global climate change, which in turn, is violating the rights of the Inuit people. The rights that are being violated include: the right to use and enjoy traditional lands; the right to enjoy personal property; the rights to health and life; rights to residence and movement, and inviolability of the home; right to their own means of subsistence; and the right to culture. The relief requested includes the preparation of a report with facts and applicable law and declaring that the United States is internationally responsible for the violation of rights in the American Declaration on Rights and Duties of Man; holding a hearing; adopting and implementing a plan to protect the Inuit land and resources; and providing assistance to the Inuit to adapt to the impacts caused by climate change where they cannot be avoided.

⁴⁰ Inuit petition, *supra* note 38.

The Inter-American Commission on Human Rights initially declined to entertain the petition. However, after a renewed request in January 2007, the Commission invited Sheila Watt-Cloutier, Chairperson of the Inuit Circumpolar Conference, Martin Wagner of Earthjustice and Daniel Magraw of the Center for International Environmental Law to a hearing on global warming and human rights on March 1, 2007.⁴¹

4.1 Legal issues involved

If the Inter-American Commission were to find United States responsible under international law, it would have had to do so under the CBDR principle. In other words, responsibility would have been for the portion of climate change that the United States was responsible for causing. In theory this should not be problematic as we have scientific proof of the percentage of US contribution to the global GHG emissions (25%). However, for purposes of state responsibility, one has to prove that United States was responsible for the damage caused to the Inuit – i.e. it was the emission of GHG by the United States that caused the environmental damage to the Arctic which, in turn, resulted in the violation of the protected rights of the Inuit people. In other words, this relates to the issue of causation. Linking environmental harm to human rights violations is not problematic as there is often a correlation between the two. Much has been written on the relationship between the enjoyment of human rights and environmental damage.⁴² As noted, the real issue is whether state responsibility can be based on the CBDR principle.

4.2 State responsibility and the CBDR principle

Under principles of international law, an internationally wrongful act gives rise to the responsibility of that state. This is reflected in the ILC draft articles on State

⁴¹ See the press release by Earthjustice at: <http://www.earthjustice.org/news/press/007/inter-american-commission-on-human-rights-Hearing-on-Global-Warming.html>. The invitation of the Inter-American Commission is available at: http://www.earthjustice.org/library/legal_docs/inter-american-commission-on-human-rights-inuit-invite.pdf

⁴² There is a wealth of literature on the subject. While not all human rights violations are a result of environmental damage, most environmental harms have an impact on human beings, and their enjoyment of human rights. *See supra* note 4.

Responsibility.⁴³ There is an internationally wrongful act of a State when conduct consisting of an action or omission: (a) Is attributable to the State under international law; and (b) Constitutes a breach of an international obligation of the State.⁴⁴

Quite apart from the general obligations in the UNFCCC which the United States has ratified,⁴⁵ there is a customary international law obligation on states to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or to the global commons. This is reflected in Principle 21 of the Stockholm Declaration:

Under principles of international law and the UN Charter, every state has the right to exploit their natural resources according to their environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.⁴⁶

Therefore, it is clear that the United States has violated at least this general principle by refusing to take action to reduce its greenhouse gas emissions. However, one question that arises here is whether the US caused *damage* to the “environment of other states” or “to the environment of areas beyond the limits of national jurisdiction.” What is the legal status of the Arctic? Is it part of the global commons?⁴⁷ However, it is not necessary to get into this debate as the principle embodied in Principle 21 has now developed into a principle of harm prevention – in other words, states are under a general obligation to

⁴³ Article 1, Draft articles on Responsibility of States for Internationally Wrongful Acts, adopted by the ILC at its 53rd session (2001), available at: <http://www.ilsa.org/jessup/jessup06/basicmats2/DASR.pdf>

⁴⁴ Article 2, *ibid.*

⁴⁵ Article 4 embodies commitments of the parties.

⁴⁶ Principle 21, Stockholm Declaration of the Human Environment, 1972, available at: <http://www.unep.org/Documents/Multilingual/Default.asp?DocumentID=97&ArticleID=1503>

Of course, while the Stockholm Declaration itself is not binding, it is widely accepted that Principle 21 reflects customary international law, *see generally*, PATRICIA BIRNIE & ALAN BOYLE, *INTERNATIONAL LAW AND THE ENVIRONMENT* (2002)

⁴⁷ The Arctic is governed by the Arctic Council which is an intergovernmental forum created by the eight Arctic countries (Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the United States). *See* <http://www.arctic-council.org/>

prevent environmental harm⁴⁸ and its international responsibility will entail if this damage extends beyond its national borders.

This general obligation does not cover every kind of environmental damage – in the absence of specific obligations (such as those established under treaty), it is accepted that this obligation extends only to significant or serious damage.⁴⁹ The petition filed by the Inuit before the Inter-American Commission indicates that the damage caused by global warming associated with climate change in the Arctic region is indeed significant. Quoting from the Arctic Climate Impact Assessment, the petition notes:

The Arctic is extremely vulnerable to observed and projected climate change and its impacts. The Arctic is now experiencing some of the most rapid and severe climate change on Earth. Over the next 100 years, climate change is expected to accelerate, contributing to major physical, ecological, social, and economic changes, many of which have already begun.⁵⁰

Thus, there does not seem to be any doubt that global warming associated with climate change is causing significant environmental damage in the Arctic region, more than in any other part of the world.⁵¹ There is a clear causal link between greenhouse gas emissions, climate change, and environmental problems in the Arctic, which, in turn, are causing problems for the indigenous communities living in the Arctic, resulting in hazardous conditions for them, interfering with their traditional way of life and even threatening their right to life in extreme situations.

However, the most important question that we have to ask ourselves is: is the United States internationally responsible for the damage caused to the Arctic region by global climate change? Global climate change is a global phenomenon – every state in the international community is a perpetrator as well as a victim of this global problem. If

⁴⁸ See *supra* note 11.

⁴⁹ See BIRNIE & BOYLE, *supra* note 46.

⁵⁰ Inuit Petition, *supra* note 38.

⁵¹ Indeed it was very recently reported that a 19 square mile ice sheet has broken away from the Ellesmere Island in Canada's northern Arctic region, available at: http://news.yahoo.com/ap/20080903/ap_on_re_ca/arctic_ice_shelf

that is the case, can we hold one state in a community of about 200 states responsible for the damage caused by global warming? Clearly, the easy answer would be no.

However, if we look at the top emitters of greenhouse gases in the world, the United States accounts for 20% of all greenhouse gas emissions with China coming second at 14.7% (although China overtook the US last year).⁵² All EU countries collectively accounted for 14% of emissions with India, coming 5th at 5.6 percent. While aggregate totals are helpful, it is more accurate to look at per capita emissions: here again, US comes high on the list with a per capita emission of 24.5 tons of CO₂ while China's is only 3.9 tons. While Australia's emissions only account for 1.5% of all GHG emissions, its per capita emissions are higher than the United States' emissions at 25.6 tons. Canada's situation is similar. Thus, by both accounts, United States' contribution to the global climate change is significant – accounting for almost ¼ of the global GHG emissions. This, by no means, can be ignored. While it would be impossible to establish with certainty that the damage caused to the Arctic is due to the GHG emissions by the United States as required under traditional international law, it is obvious that the United States' contribution to global climate change which is causing damage to the Arctic is significant. It is, therefore, clear that we need to re-think the traditional rules of state responsibility for global environmental problems such as climate change.

While the general trend in international environmental law has been to adopt a preventive and a precautionary approach to environmental problems, particularly global environmental problems where so many actors are involved and move away from a liability approach, the question arises as to what happens when past emissions cause environmental problems such as in the Inuit case, despite precautionary measures taken to mitigate *future* damage. While the Inuit case will not provide us with any answers, the legal community will have to invent novel legal strategies to deal with this situation as the case discussed below also highlights the same set of questions that would arise at the US federal level:

⁵² See Hunter, *supra* note 10 at 663.

“The city of Kivalina and a federally recognized tribe, the Alaska Native village of Kivalina have sued Exxon Mobil Corporation, eight other oil companies, 14 power companies and one coal company in a lawsuit in federal court in San Francisco claiming that the large amount greenhouse gases being emitted by them contribute to global warming that is threatening the community’s existence.”⁵³

In a way, suing companies might be more problematic than filing action against the United States because here causation would be even more difficult to establish: the law generally requires proof that a specific company’s activities actually caused the damage in question.⁵⁴ However, courts have been willing to deviate from this general principle in some instances: “In certain cases involving the drug DES, some courts have adopted a market-share liability rule that allocates percentage of liability according to the percentage of market share held by each company.”⁵⁵ In the case of *Sindell v. Abbott Laboratories*, the Supreme Court of California held that:

Therefore, once plaintiffs joined the manufacturers of a substantial percentage of DES, defendants were required to prove they could not have manufactured the injury-causing product. Absent such proof, liability for damages could be apportioned based on each defendant’s share of the appropriate market.⁵⁶

Thus, in this case, the court adopted the theory of market share liability, holding that if defendants could not prove they did not make the DES at issue which caused the harm in question, liability for damages would be apportioned based on their market share. Would international courts adapt this principle to global climate change and develop a theory of liability based on the GHG emissions of each country? Similar to the theory of market share liability, can international courts reverse the burden of proof and require states to show that their emissions *did not* result in the damage in question? This is also tied to the

⁵³ See “Eskimo Village Sues Over Global Warming,” CNN news, Feb 27, 2008, available at: http://www.cnn.com/2008/WORLD/americas/02/26/us.warming.ap/index.html?eref=rss_topstories

⁵⁴ See Hunter, p 627

⁵⁵ *Ibid*

⁵⁶ Supreme Court of California, 26 Cal. 3d 588; 607 P.2d 924; 163 Cal. Rptr. 132; 1980 Cal. LEXIS 151; 2 A.L.R.4th 1061; CCH Prod. Liab. Rep. P8648

precautionary principle. In the *MOX Plant Case*, for example, Ireland argued that: [t]he precautionary principle places the burden on the United Kingdom to demonstrate that no harm would arise from discharges and other consequences of the operation of the MOX plant.....”⁵⁷

If courts were to adopt this theory of liability the temporal element of the issue becomes relevant – given that it was only recently that it was unequivocally established that anthropocentric emissions of GHG are causing global climate change,⁵⁸ can we hold states and companies liable for past emissions? Can we couple this with the precautionary principle and use 1992 as the cut off date – when the UNFCCC was adopted? These are some of the questions that the legal community will have to grapple with in the near future.

In advocating for the development of a liability regime for climate change Philippe Cullet contends that:

[s]ome degree of climate change is unavoidable in the coming years and decades because of past and current greenhouse gas emissions. As a result, besides mitigation, adaptation measures have to be taken. Regardless of the adaptation measures taken, damages will occur. It is thus necessary to provide a framework for allocating responsibility for damage that has and will occur.⁵⁹

However, he accepts that while a separate liability regime is desirable, it will be complicated and developed countries in particular would oppose such a regime. Indeed, the international community has always been reluctant to develop an international liability regime for environmental damage in general, the Biosafety Protocol and the Protocol to the Basel Convention being the only exceptions. By its very nature, a liability

⁵⁷ *Ireland v. United Kingdom*, December 3, 2001, International Tribunal for the Law of the Sea, No 10 (Request for Provisional Measures), available at <http://www.itlos.org/>. See also, Philippe Cullet who argues that the precautionary principle reverses the burden of proof.

⁵⁸ IPCC 4th assessment report, *supra* note 6.

⁵⁹ See Philippe Cullet, “Climate Change Liability and the Allocation of Risk: Liability and Redress for Human-induced Global Warming: Towards an International Regime,” 43 STAN. J INT’L L. 99 (2007).

regime depends on damage which environmental law seeks to prevent. While the emphasis on prevention is important, it is equally important to ensure that victims of environmental damage should not go uncompensated. However, devising a liability regime for climate change would be more complicated than in relation to other environmental problems given the complexity of the issue and the number of actors involved.

Since it is inevitable that the international community would experience negative impacts of climate change, it may seem more practical to develop the Climate Change Fund established in 2001⁶⁰ or the Adaptation Fund established under the Kyoto Protocol to allow victims of climate change damage to seek compensation from the fund. Contributions to the fund should be proportionate to the greenhouse gas emissions of each country. Thus, the higher the emissions are, the higher the contribution to the fund would be. This alone would be an incentive for high emitters to reduce their emissions in the short term. While this would avoid the need for establishing the responsibility of a particular state – and indeed, the responsibility of developed countries as a whole for causing this phenomenon is now well established - it would ensure that victims of adverse effects of climate change are compensated for their loss. However, some guidelines will have to be drawn on what kind of damage would be compensated and who can claim from the fund. Such a fund together with a mitigation plan for the post-2012 commitment period that includes developing countries would be necessary to avoid adverse consequences of climate change for at least the next generation.

5. Post 2012 regime: recommendations

It is no secret that the international community will have to take measures of mitigation as well as adaptation because past emissions of GHGs are causing changes in the climate. While much of the present international law on the subject has been targeted mainly at

⁶⁰ See Philippe Cullet, *ibid.*

mitigation (both the United Nations Framework Convention on Climate Change⁶¹ and the Kyoto Protocol⁶² are based on this premise), there is increasing recognition that mitigation alone would not be sufficient and we need to pay closer attention to adaptation as consequences of global climate change are taking place even today. The IPCC warns that despite the current mitigation policies and sustainable development practices, global greenhouse gas emissions will continue to grow in the next few decades.⁶³ It further warns that anthropogenic warming and sea level rise would continue for *centuries* due to the time scales involved with weather processes, even if greenhouse gas concentrations are to be stabilized today. It points out that more extensive adaptation measures than that are currently being practiced would be necessary in order to reduce vulnerability to climate change, regardless of the mitigation methods adopted. In other words, global climate change will continue to take place due to past emissions – the results of mitigation methods adopted today will not materialize probably until next century or so. Therefore, for the present generation and the next, adaptation strategies⁶⁴ would be more crucial than mitigation strategies.

The IPCC report notes that a wide array of adaptation options is available – however, more extensive adaptation is necessary to reduce vulnerability to climate change. While it is true that societies have long managed to deal with weather and climate-related events,

“[a]dditional adaptation measures will be required to reduce the adverse impacts of projected climate change and variability, regardless of the scale of mitigation undertaken over the next two to three decades. Moreover, vulnerability to climate change can be exacerbated by other stresses. These arise from, for example, current climate hazards, poverty and unequal access to resources, food insecurity,

⁶¹ 1771 UNTS 107, signed May 9, 1992, entered into force: March 21, 1994, available at: <http://www.unfccc.de/> See also, “The Latest Myths and Facts on Global Warming,” Environmental Defense (2005).

⁶² FCCC/CP/1997/L.7/Add.1, signed December 11, 1997, entered into force February 16, 2005.

⁶³ IPCC 4th Report, Summary for Policymakers, 2007 (unedited version), available at: http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf

⁶⁴ Adaptation is defined as “finding and implementing ways of adjusting to climate change,” see UNFCCC website: <http://unfccc.int/adaptation/items/4159.php>

trends in economic globalisation, conflict and incidence of diseases such as HIV/AIDS.”⁶⁵

It is thus obvious that climate change would exacerbate global inequalities that already exist. While more affluent societies will be better able to deal with adaptation, even they remain vulnerable to climate change, variability and extremes. However, this discussion clearly highlights that poor and vulnerable communities are more prone to be affected by climate change and they are also less able to adapt because of poverty, disease and unequal access to resources. This imbalance in society must be addressed in adaptation strategies and a human rights approach must inform these adaptation strategies. Otherwise, such strategies themselves run the risk of further violating human rights of these vulnerable communities, rather than helping them to adapt. It is here that participatory rights would come into play. When adaptation strategies are being developed, it is crucial to get the input of those groups for whose benefit these strategies are being prepared. Such groups must participate in the process and information of such adaptation strategies should be readily available. Giving a voice to these communities is crucial to ensure that the adaptation strategies are suitable for these affected communities.

The Human Development Report also recognizes the importance of a two-pronged strategy of adaptation and mitigation particularly in the context of poverty and equity:

Adaptation priorities must also be addressed. For too long, climate change adaptation has been treated as a peripheral concern, rather than as a core part of the international poverty reduction agenda. Mitigation is an imperative because it will define prospects for avoiding dangerous climate change in the future. But the world’s poor cannot be left to sink or swim with their own resources while rich countries protect their citizens behind climate-defence fortifications. *Social justice and respect of human rights demand stronger international commitment to adaptation.*⁶⁶

⁶⁵ See IPCC 4th report, *supra* note 6.

⁶⁶ See summary, Human Development Report, *supra* note 3 (emphasis added).

Thus, the UNDP is advocating that climate change adaptation should be considered part of the international poverty reduction agenda. This approach makes sense as adaptation would have a direct impact on poverty. De-linking the two would result in a fragmented approach to both poverty and climate change.

Thus, for the commitment period starting in 2012, it is inevitable that developing countries would be brought into the emission reduction phase – whether all developing countries would have to do so irrespective of their emission rate is, however, debatable. What is not debatable is that more attention would have to be paid to adaptation strategies as more and more consequences of climate change will have to borne by vulnerable communities – communities least able to defend themselves. In this regard, closer attention should be paid to the development of the adaptation fund as envisaged under the Kyoto Protocol.

6. Conclusion

To return to the question that was posed at the beginning of this presentation - whether the present climate regime favors developing countries - the superficial answer seems to be in the affirmative because the Kyoto Protocol does not contain any emission reduction targets for developing countries. However, if one takes the bigger picture into consideration – that the Kyoto regime deals only with the present commitment period, that this is a problem created primarily by developed countries in their quest for development who gained economic wealth in the process and the fact that most of the negative consequences of climate change will be borne by developing countries - the answer will be different. If one compares this with the ozone regime, one can consider the grace period of 10 years given to developing countries to comply with their commitments under the Montreal Protocol as being similar to the first commitment period under Kyoto where developing countries have no emission reduction commitments – in reality these approaches are not different at all. If we take all the

above factors into consideration including the fact that some small island states face extinction due to rising sea levels, it becomes obvious that developing countries are getting a raw deal from the consequences of climate change – they are being disproportionately burdened by the negative consequences of a phenomenon that they neither contributed to nor benefited from. Thus, one may pose the question – “is this equitable?”