The Climate Change Regime: Efficacy, Compliance and Enforcement

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This article provides an overview of the efficacy of the climate change regime. In particular, the author considers whether states party to the United Nations Framework Convention on Climate Change and its Kyoto Protocol have, thus far, achieved the aim of addressing emissions of greenhouse gases. The compliance mechanisms contained within the Convention and the Protocol are examined and an assessment made as to whether such instruments are in fact likely to promote the efficacy of the scheme. Consideration is also given to some of the general barriers hindering substantive compliance with the goal of the Protocol. Finally, the successes of the regime as a whole, at this juncture, are acknowledged.

1. INTRODUCTION

The international climate change regime has reached a critical juncture. The United Nations Framework Convention on Climate Change ("UNFCCC")[1] has been in force for a decade. Its Kyoto Protocol[2] is about to enter into force[3]

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1 Framework Convention on Climate Change 31 ILM (1992), 851. In force 21 March 1994.

2 Protocol to the Framework Convention on Climate Change (Kyoto) 37 ILM (1998) 22. Not in force.

3 Shortly before this article was due to be published, the Federation of Russia announced its intention to ratify the Kyoto Protocol. Pursuant to Article 25 (1), the Protocol shall come into force "on the ninetieth day after the date on which no less than 55 parties to the Convention, incorporating parties to Annex 1 which accounted in total for at least 55% of the total carbon dioxide emissions for 1990 of the parties included in Annex 1, have deposited their instruments of ratification, acceptance, approval or accession". The ratification by Russia will provide the necessary critical mass to bring the Protocol into force.

however, time is pressing; the first commitment period of the Protocol is due to commence in 2008 and run for five years until 2012. This article considers the efficacy of the climate change regime thus far. The gravamen of the regime is

> the stabilization of greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic interference with the climate system[4].

Are states achieving this goal? Has the general aim of the UNFCCC, to lower greenhouse gas emissions by the year 2000 to 1990 levels[5], been met? Are Appendix 1[6] states likely to achieve the greenhouse gas emission reduction targets set by the Protocol? Both the UNFCCC and its Kyoto Protocol have provision for compliance mechanisms and undoubtedly, the purpose of such mechanisms is to promote the success of the regime. This article considers whether those mechanisms are, in fact, likely to encourage compliance.

Part 2 of this article provides a brief overview as to whether Appendix 1 states have been able to achieve a reduction in greenhouse gas emissions thus far. In addition, an assessment is made as to the relative prospects of the Kyoto Protocol reduction targets being met. Part 3 examines theories pertaining to compliance mechanisms within multilateral environmental treaties ("MEAs"). To illustrate the strengths and weaknesses of the regime in terms of promoting compliance, two case studies are considered. The first case study, in Part 4, concerns the United States of America and its compliance with the UNFCCC. Thereafter, in Part 5 of the article, the approach taken by New Zealand to the issue of climate change is used to examine the likely efficacy of the Kyoto Protocol. Concerns relating to compliance in general with the Protocol are highlighted in Part 6. Finally, the potential successes of the regime as a whole are considered and a brief assessment made as to the way forward.

Certain premises have been adopted. The first is that, regardless of any remaining scientific dispute, the fact that anthropogenic emissions of greenhouse gases lead to climate change and further, that all states have a legal responsibility to protect the global atmosphere from climate change, has been established in law. By a United Nations General Assembly resolution, global climate change is recognised as a "*common concern of mankind*"[7]. The Preamble to the UNFCCC acknowledges that:

4 Article 2 of the UNFCCC. There is scientific dispute about the levels of greenhouse gases in the atmosphere that would achieve this aim. For further discussion see in particular the Third Assessment Report by the Intergovernmental Panel on Climate Change at http://www.ipcc.ch/pub/online.htm. Note that all ULRs listed in this article are as at 1st September 2004.

5 Article 2 (a) of the UNFCCC.

6 'Appendix 1' Countries are identified in Annex B to the Kyoto Protocol.

7 United Nations General Assemble Resolution 43/ 53.

> ... change in the earth's climate and it's adverse effects are a common concern of mankind, [the parties are] Concerned that human activities have been substantially increasing the atmospheric concentration of greenhouse gases, that these increases enhance the natural greenhouse effect, and that this will result on average in an additional warming of the Earth's surface and atmosphere and may adversely affect natural ecosystems and humankind...

Secondly, the author believes that there is a clear, moral imperative to address the anthropogenic causes of climate change. This article should be read with that factor in mind.

2. OVERVIEW OF APPENDIX 1 STATES EMISSIONS REDUCTION

The United Nations has made available to the public, greenhouse gas emissions data for the majority of states party to the climate change regime.[8] In tabular form, it is possible to see the greenhouse gas emissions of states in 1990 compared to emissions in 2000.[9] However, of the thirty-eight Appendix 1 states (excluding the European Community as a single entity) independently, accurately verified figures are not available within the tables for ten of those states. Of the remaining twenty-eight states, fourteen managed to return greenhouse gas emission levels to 1990 levels or below by the millennium year.[10]

Appendix 1 countries must prepare 'national communications' at regular intervals of between three to five years and annual inventories in greenhouse gas emissions. At the date of writing, thirty-three Appendix 1 states have completed a 'Third National Communication' ("TNC"). The United Nations Expert Review Teams have undertaken 'in depth reviews' ("IDR") verifying the accuracy of twenty-six of those TNCs. Six of these IDR reports are still under preparation. Of the remaining twenty, the Expert Review Team concurs with eight states that they are likely to meet their emissions reduction targets under the Kyoto Protocol without utilising the Protocol's flexible mechanisms. Seven of these states are undergoing the process of transition to a market economy: Poland, Latvia, the Czech Republic, the Slovak Republic, Estonia, Bulgaria and the Russian Federation. The eighth state is the United Kingdom. Of the remaining twelve states[11], the IDRs highlight the necessity for the implementation of further policies and measures to enable the Kyoto Protocol target reductions to be met.

8 All information contained in Part 2 of this article is available at www.unfccc.int/

9 See <http:ghg.unfccc.int/>

10 Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Latvia, Luxembourg, Poland, Slovakia, Sweden, Switzerland, United Kingdom.

11 Spain, Austria, Belgium, Canada, Switzerland, Finland, France, Japan, Hungary, Netherlands, Norway, New Zealand.

In the absence of IDRs for the TNCs it is difficult to predict the likely compliance of states with the Kyoto Protocol. In depth reviews have been published in relation to the 'Second National Communications' from a number of the Appendix 1 states for whom a third IDR is not yet available[12]. However, such reviews are over five years old in some cases and cannot form the basis for any accurate predictions. Article 3 (2) of the Protocol directs that

> Each Party included in Annex 1 shall, by 2005, have made demonstrable progress in achieving its commitments under this Protocol

Accordingly, the Conference of the Parties / Meeting of the Parties ("COP/MOP") has called upon Annex 1 parties to submit a 'demonstrable progress report' by 1st January 2006[13]. It is clear, however, that in the absence of additional policies and measures, a significant number of Appendix 1 states are likely to be in default of their reduction targets pursuant to the Kyoto Protocol. Within the realms of multilateral environmental treaties, non-compliance is unusual[14].

3. THEORIES OF COMPLIANCE WITH INTERNATIONAL MULTILATERAL ENVIRONMENTAL AGREEMENTS

Given the relative impotence of the international legal system, how is compliance with multilateral environmental agreements ("MEAs") in general ensured? There are a number of factors external to a treaty itself that will promote compliance. Most obviously, political commitment will ensure compliance. In a democracy with a free press and an educated populace, public opinion will exert pressure on governments to comply with environmental treaties. Specific compliance mechanisms within a MEA will also affect a Party's compliance. A great many academics have studied the so called 'compliance dilemma' that pertains to the delicate balance between, on the one hand, providing an effective compliance mechanism and on the other, promoting the fullest participation in environmental regimes.

Chaynes and Chaynes[15] identified the 'soft', 'managerial' approach to compliance. In essence, this approach suggests that Parties, acting as sovereign states, will only consent to obligations if they believe that they can comply with

12 For example: Sweden, Romania, Portugal, Greece, Iceland, Italy, Germany, Denmark, USA, Australia.

13 FCCC/CP/2003/6

14 A. Chaynes and A. Chaynes *The New Sovereignty: Compliance with International Regulatory Agreements* Harvard University Press, 1995.

15 Ibid.

them. Accordingly, compliance with international multilateral environmental treaties is generally high. Chaynes and Chaynes suggest that non-compliance is rare and when it does occur lack of capacity is generally the reason as opposed to any wilful objection to compliance. In such circumstances, compliance and enforcement regimes should focus on capacity building, assistance and incentives.

Downs et al [16] suggest that "when co-operation is more exacting and the incentives to defect greater, you need stronger measures to ensure compliance".

David Victor[17] studied the efficacy of previous MEAs and considered the factors that have lead to the relative successes of such regimes as the 1985 Convention for the Protection of the Ozone Layer[18] and its 1987 Montreal Protocol[19]. Victor argues that compliance with MEAs is historically good because the "lowest common denominator reigns", obligations are relatively easy to meet and in general, MEAs "codify behaviour that's already happening". He believes that there is no parallel to the climate change regime. Accordingly, he states that one cannot draw comparisons between the successes and the effectiveness of existing compliance mechanisms within other MEAs and the prospects for compliance with the climate change regime. The success of the ozone regime can be distinguished for a number of reasons. Primarily, because the alternative and substitute technology was available, implementation of the Convention economically advantaged certain states such as the US. The depletion of the ozone layer, with its threat of a great catastrophe occurring within our lifetime, captured the public imagination and the ozone regime has been relatively inexpensive to implement. In contrast, the climate change regime will require "high short term cost for distant international benefits".[20] Importantly, the 'science' relating to the causes of the hole in the ozone layer and the prospective consequences of this was accepted. Victor believes that the "conviction that climate change is severe and unavoidable is still missing in certain states" such as the US and Russia. Further, the success of the Montreal Protocol, in part, must be attributed to its ability to use trade pressures. The only serious case of potential non-compliance concerned the Russian Federation. Russia's non-compliant status was ameliorated by the use of a combination of incentive

16 George W. Downs, David M. Rocke and Peter N. Barsoom 'Is Good News about Compliance Good News about Cooperation?' 50:3 *Int'l Org.* 379 (1996)

17 David Victor 'Enforcing International Environmental Law: Implications for an Effective Global Warming Regime' *DELPF* Fall 1999 Vol 10 il page 147.

18 1985 Convention for the Protection of the Ozone Layer, (Vienna) 26 ILM (1987) 1529. In force 22 September 1988.

19 1987 Protocol on Substances that Deplete the Ozone Layer (Montreal) 26 ILM (1987) 1550. In force 1st January 1989.

20 GEF fund is anticipated to require $1 billion in total for the Ozone Regime; the GEF climate change compensatory fund is likely to require tens or even hundreds of billions of dollars. See Victor, supra 17.

measures (financial assistance) and threatened penalties (trade restrictions and financial conditionality).

What, if any, of the above compliance theories are apparent in the climate change regime? This question will be considered by reference first to the UNFCCC and thereafter to the Kyoto Protocol.

4. THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

4.1 Overview

At the date of writing, one hundred and eighty nine nations are party to the 1992 UNFCCC.

Article 4 contains the specific "*commitments*" that the Parties are required to implement. These include reporting and communicating requirements, the development and transfer of 'clean technology', policies to limit greenhouse gas emissions and to enhance sinks, the promotion of education and public awareness, co-operation in preparing for adaptation and developed countries are to assist developing countries in mitigating emissions and adapting to climate change.

4.2 Compliance mechanisms

The two Articles of the UNFCCC relevant to compliance and enforcement issues are Articles 13 and 14. Article 13 concerns "Resolution of Questions Regarding Implementation" and states:

> The Conference of the Parties shall, at its first session, consider the establishment of a multilateral consultative process available to the Parties on their request, for the resolution of questions regarding the implementation of the Convention.

Article 14, "Settlement of Disputes", states that Parties concerned with the "interpretation or application" of the Convention shall:

> ... seek a settlement of the dispute through negotiation or any other peaceful means of their own choice

or may declare in writing that, in the event of a dispute, they accept the jurisdiction of the International Court of Justice ("ICJ") and / or arbitration in accordance with the procedures to be adopted by the COP. If, within twelve months, the

parties cannot settle their dispute Article 14 (6) makes provision for a "conciliatory commission" to be:

> ... created upon the request of one of the parties to the dispute ... the commission shall make a recommendatory award that the parties shall consider in good faith.

Of interest is the fact that the word 'compliance' is not actually present in the text of the UNFCCC nor is it mentioned in the ensuing COPs. The less didactic word *"implementation"* is used in the text of the Convention.

The ability of states to declare acceptance of the ICJ jurisdiction or arbitration has not been readily utilised. Thus far, only the Solomon Islands have made such a declaration.

Of further relevance to compliance issues and international legal processes, is the fact that the governments of a number of small island states (Tuvalu, Nauru, Kiribati, Fiji, Papua New Guinea) made a declaration in writing of their:

> ... understanding that ratification of the Convention shall in no way constitute a renunciation of any rights under international law concerning state responsibility for the adverse effects of climate change and that no provision in the Convention can be interpreted as derogating from the principles of general international law.

The practical relevance of this has been made apparent only recently. The Prime Minister of Tuvalu has instructed law firms in Australia and the US to advise the government of Tuvalu as to commencing a cause of action against those states for the adverse effects of climate change on Tuvalu.[21]

In considering the efficacy of the UNFCCC to address the causes of climate change, a case study may assist by way of illustration.

4.3 First Case Study: The United States of America

> *The dominant power was the one against whose ideas regarding the system of international law all others debated.*[22]

The US has been chosen as a case study for three reasons; the US is the biggest polluter in the world (36.1 % of carbon dioxide emissions in 1999[23]), it is

21 See BBC news report of 4th March 2002 at <http://news.bbc.co.uk/l/hi/world/asia-pacific/1854118.stm>

22 Michael Byers and George Nolte (eds) *United States Hegemony and the Foundations of International Law*, Cambridge University Press 2003, Shirley Viscott at page 451.

23 UNFCCC data at http://www.unfccc.int/

hegemonic and is one of the few Appendix 1 states that has yet to ratify the Kyoto Protocol[24].

The US signed the UNFCCC on 12th June 1992 and ratified the Convention on 15th October of the same year. The UNFCCC came into force on 21st March 1994. The US added its signature to the Kyoto Protocol on 12th November 1998 but as indicated, no ratification has been provided. Signature alone has no significant legal relevance. There is no provision in the Kyoto Protocol for a state to express consent to be bound by signature. Articles 24 and 25 of the Protocol provide for 'ratification', 'acceptance' or 'approval'. Signature imposes no obligation to ratify.[25] Although, of course, there was a change of government in the US following the signature of the Protocol, there is a tactical advantage in maintaining this position. Signing whilst not ratifying enables states to remain involved in the negotiations and thus mould a treaty that they may in the future be party to.[26]

The present political position of the US is encapsulated in a statement given by Paula Dobriansky, US Under Secretary of State for Global Affairs, at the beginning of the ninth COP in Milan. Ms Dobriansky described the Kyoto Protocol as an "unrealistic and ever increasing regulatory straight jacket". Further, the US indicated that it would decrease its financial contribution to the UNFCCC program proportionally to ensure that it did not fund any Kyoto related activities.[27] The stance of the incumbent Government is that "global warming is not a fact ... the environment is actually seeing a new and better day"[28]. It is therefore, extremely unlikely that the US will ratify the Kyoto Protocol, in its present form, under the present administration.

What are the main objections of the US to the Kyoto Protocol? Is it possible to address these concerns to secure US ratification of the Protocol?

The primary objections of the incumbent administration are set out in a 'Cabinet Review Paper' and were reiterated by President Bush in a speech given on 13th March 2001. President Bush said of the Protocol that "it fails to establish a long term goal based on science", it "poses serious and unnecessary risks to

24 At the date of writing these include Croatia, Liechtenstein, Monaco, Australia and the Russian Federation (although, as indicated above the Russian Federation has stated that it is soon to ratify the Protocol).

25 Anthony I. Aust *Modern Treaty Law and Practice* Cambridge University Press 2000, pages 75 to 99.

26 President Clinton's speech re: ICC, reported in 'United States Practice' (2002) 95 *AJIL* 399.

27 See Vanessa Houlder 'US Defends Climate Change Policy' *The Financial Times*, 30th November 2003. Further see www.pewclimate.org and COP 9 Report 'Program Budget' available at www.unfccc.int.

28 US government memo to press secretaries of Republican Congressmen on 4th February 2004. See 'The Observer' Newspaper 4th April 2004 at page 22.

US and world economies" and is "ineffective in addressing climate change because it excludes major parts of the world"[29].

The US preference is for non-binding targets and dynamic emissions targets. Dynamic targets are linked to Gross Domestic Product. In effect, each percentage increase of economic growth would be linked to a restrained target percentage increase in emissions. This policy is central to the present domestic policy in the US. The obvious failing with this concept is that dynamic targets do not provide any baseline limit to greenhouse gas emissions or therefore, guarantee of environmental protection[30].

Non-binding targets formed the basis of the UNFCCC. It is clear that they do not work, particularly in the case of economically developed countries, hence the negotiations that lead to the Berlin Mandate and ultimately, the Kyoto Protocol. There is an argument that non-binding qualitative targets could be utilised to encourage additional developing countries to become more fully involved in the Kyoto Protocol and in particular, to enter the emissions trading scheme[31]. However, acceding to the US proposals for non-binding and / or dynamic targets for all state parties may make the Protocol so weak as to be utterly meaningless.

There have been suggestions to counter US objections. In particular, proposals from bodies such as UNEP have included the suggested model of 'contraction and convergence and per capita emissions equity'. This, for many, is the preferred method for setting emissions targets. Every citizen in every nation would be permitted to emit an equal measure of greenhouse gases. Present inequalities in per capita emissions would gradually converge over a period. High polluting states would acquire emissions permits from lesser polluting states. Such suggestions have not been met with a positive response from the US. The US delegation has taken a back-seat role in the last few COPs. This is concerning for a number of reasons not least because Article 1 of the United Nations Charter lays down the duty to:

> ... achieve international co-operation in solving the problems of an economic, social, cultural or humanitarian character and in promoting and encouraging respect for human rights and the fundamental freedom for all without distinction ...

In the absence of ratification of the Kyoto Protocol, the US is still subject to existing duties under the UNFCCC. There is a legal obligation to continue making efforts to address climate change pursuant to Article 2 of the Convention:

29 Quoted in 'Kyoto and Beyond: Issues and Options in the Global Response to Climate Change', Mark Storey, Naturvardsverket, 2002.

30 Ibid, at page 27. Also see Muller et al (2001) quoted in Storey at page 36, for further difficulties associated with dynamic targets.

31 Storey, supra 29, at page 34.

> The ultimate objective of this convention ...is to achieve, in accordance with the relevant provisions of the Convention stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

The US is also subject to the requirement to adhere to the concept of sustainable development as enshrined in Principle 2 of the Rio Declaration on Environment and Development, 1992[32].

Pacta sunt servanda is a fundamental principle of treaty law. Article 26 of the 1969 Convention on the Law of Treaties[33] ("VCLT") encapsulates the universal rule that every treaty in force is binding upon the parties to it and must be performed in good faith[34]. Although the US is not a party to the VCLT, the Convention is accepted as customary law and specifically the US accepts the principle of pacta sunt servanda[35].

It is appropriate therefore to consider what specific obligations are contained within the UNFCCC and to which the US is bound. Article 4 of the UNFCCC contains the commitments of the parties. Regarding the substantive aim of the Convention to address climate change by reducing emissions of greenhouse gases, Article 4 (2) a) states that in respect of Annex 1 countries:

> Each of these parties **shall** adopt national policies and take corresponding measures on the mitigation of climate change, by **limiting** its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying long-term trends in anthropogenic emissions consistent with the objectives of the convention, **recognising that the return by the end of the present decade to earlier levels** of anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol **would contribute** to such modification, and **taking into account the differences in these parties starting points and approaches, economic structures and resource bases, the need to maintain strong and sustainable economic growth, available technologies and other individual circumstance**, as well as the need for equitable and appropriate contributions by **each of these parties to the global effort** regarding the objective...

32 31 ILM (1992) 876.

33 Convention on the Law of Treaties (Vienna) 8 ILM (1969) 689. In force 27 January 1980.

34 P. Reuter *Introduction to the Law of Treaties* 2nd English Edition, 1995, paragraph 44 "Treaties are made to be performed".

35 Byers and Nolte, supra 22, Pierre Klein, chapter entitled ' Law of Treaties', at page 379.

Article 4 (2) a) begins by suggesting binding law with the inclusion of a command, "**shall**". However, as becomes apparent, the Article is a master study in obfuscation and anamorphosis. Article 4 (2), sub-paragraphs a) and b), display purposefully imprecise drafting. The word "**limiting**" is used as opposed to reducing or returning emissions to 1990 levels. Parties are only committed up to the "**end of the present decade**". Nothing is said about commitments post 2000 (that came later with the Berlin Mandate that lead to the Kyoto Protocol). The idea that parties could return emissions to previous levels is a mere suggestion, "**recognising ... would contribute**", not a command and in any event, the goal is to "**earlier levels**" not 1990 levels. Ultimately, despite even these inexactitudes, the provisos are extensive. As the US relies heavily upon the consumption of oil for all energy requirements[36] it is arguable that the Government could claim special consideration under this paragraph. The cost of retiring coal and oil-fired power stations, earlier than the natural lifetime of the capital stock to accommodate clean technology, is a prime reason for the US opposition to the Kyoto Protocol. Further, Article 3 (3) of the UNFCCC refers to the requirement that policies and measures to protect the planet and its inhabitants from the consequences of climate change "*should be cost effective*".

Article 4 (2) b) includes the "**aim** of returning individually or jointly to their 1990 [emission] levels" not the command that would be inherent in the wording **shall** return. The inclusion of the wording "individually or jointly", whilst acknowledging 'regional economic integration organisations' such as the EU, emphasises that there are no individual targets.

It is therefore apparent that the UNFCCC does not establish clear mandatory rules. As a result, the "commitments" with regards to emissions reduction contained therein would prove particularly difficult to enforce; what are you enforcing? There is no timeframe and no emissions levels to meet. To question whether the US is complying with the substantive "commitments" of the UNFCCC, is a rather misleading question.

The US has provided three national communications in accordance with its duties under the UNFCCC. Chapter 4 of the TNC, dated 28th May 2002, sets out the federal policies that the US Government have put into place to tackle greenhouse gas emissions[37]. Great emphasis has been placed on technological advancement and voluntary partnership measures with industry. The United Nations expert review team reviewed the TNC by the US in February 2003. The IDR verifying the accuracy of the TNC has not, at the date of writing, been published. However, the IDR on the 'second national communication' suggests that there is little real evidence that the US have implemented any significant

36 In 2002 71.4% of electricity in the US was provided by fossil fuel generated power. CIA Factbook at <www.cia.gov/publications/factbook/goes>

37 See <http://unfccc.int/resource/docs/natc/usnc3.pdf>

policies or measures at federal level to reduce greenhouse gas emissions[38]. United Nations data for the period 1990 to 2000, whilst revealing a drop in emissions of sulphur hexaflouride, methane and perflourocarbons in the US, shows a significant increase in carbon dioxide emissions over the period and an increase in total emissions of greenhouse gases[39]. Total emissions increased from 6,130,724 (in Gg of CO2 equivalent) in 1990 to 7,001,225 in 2000[40]. According to the UN expert review team, the US is not complying with the 'spirit of convention' but how far does that take the matter? The US Government would not agree with that assessment. A cursory reading of US Country Report in the 2002 'Yearbook of International Environmental Law'[41] sets out the measures that the Federal Government have taken to address climate change. The US would argue compliance[42].

Within the treaty, there are no mandatory measures that must be introduced by a party; there is certainly not a clear distinction between legal and illegal behaviour, it is a matter of interpretation. V. Lowe comments that, "before we can decide what non-compliance is, we have to decide what compliance would be, what the law requires"[43]. This is not set out clearly in the UNFCCC. Lowe further argues that non-compliance must be distinguished according to the frequency and gravity of this, the attitude that lies behind the non-compliance, its context etc. (a point taken up by the Kyoto Protocol Article 18 and the compliance procedures). Within the legislature for the ozone regime the constituents of compliance and non-compliance have been defined; a precedent in environmental treaty making[44].

In light of the above, compliance mechanisms within the UNFCCC would of necessity have to be of a managerial or 'soft' nature. What, if any, such mechanisms are apparent within the Convention?

The COP is responsible for monitoring, assessing and ensuring implementation of the Convention. The COP has two ancillary bodies concerned with implementation, the Subsidiary Body on Implementation ("SIB") and the Subsidiary Body on Technical Advice ("SIBTA"). These bodies provide specific information to the COP.

As stated above and pursuant to Article 13, a multilateral consultative process ("MCP") was to be established. The aim of the MCP was to act on information

38 See <http://unfccc.int/resource/docs/idr/usa02.pdf> at paragraphs 29, 109.

39 UN greenhouse gas data at <http://ghg.unfccc.int/>

40 Ibid.

41 2002 *Yearbook of International Environmental Law* page 439.

42 Sean D. Murphy, *United States Practice in International Law* Volume 1, Cambridge University Press 2002 at page 174.

43 Byers and Nolte, supra 22, at page 478.

44 Alexander Gillespie 'Implementation and Compliance concerns in International Environmental Law' *NZJEL* 2002 Volume 7 page 53 at 54.

given to the COP by SIB and SIBTA. The draft proposal describes the role as the MCP as "facilitative, co-operative, non-confrontational, transparent and non-judicial". The MCP would make recommendations to assist a party in implementing the Convention. In effect, the MCP was to be a 'soft', managerial non-compliance mechanism; given the generality of the commitments contained within the Convention it would be inappropriate for the MCP to be anything but[45].

In the absence of the Kyoto Protocol entering into force, the MCP would have been the only international 'compliance control' mechanism for the climate change regime. However it has not been possible to conclude an agreement about the MCP. Specifically the composition and size of the panel has proved contentious. The MCP has not been addressed at the last two COPs and to date is not on the provisional agenda for the tenth COP. There is therefore no working compliance mechanism for the UNFCCC.

The Vienna Convention on the Law of Treaties governs non-compliance in the event of a lacuna within the pertinent Treaty. Article 60 (2) sanctions a party "*specially affected*" by a "*material breach*" of another party to suspend the operation of the treaty, in whole or in part, with regard to that defaulting party. Within the realm of climate change there are a number of difficulties with this traditional approach. Firstly, establishing causation is fraught with difficulty. Given the observations aforesaid, it would be most difficult to establish a "*material breach*" and in any event, the withdrawal of an injured party from the climate change regime is simply counter-productive.

Article 14 (5) and (6) of the UNFCCC, as specified above, make provision for the establishment of a non-optional conciliation commission in the event of a dispute. It is foreseeable that 'The Association of Small Island States' would have the necessary political will and impetus to challenge the US utilising this mechanism. However there are a number of difficulties. Paragraph (7) of Article 4 directs that:

> Additional procedures relating to conciliation shall be adopted by the Conference of the Parties ...

Thus far, such procedures have not been agreed. It is questionable that, even in the event of the necessary procedures being adopted, this mechanism would be effective in encouraging the US to comply. Firstly, Article 14 concerns disputes as to the *"interpretation or application"* of the Convention. It may be difficult to argue that even the widest interpretation of the phrase "*interpretation and application*" connotes compliance with or implementation of the Convention.

45 Report of COP 4 Decision 10/CP.4 note 8.

In light of that, unless parties to the UNFCCC agreed to widen the remit of any conciliation committee, would such a committee be entitled to make findings of non-compliance? Secondly, the composition of a committee ("... *composed of an equal number of members appointed by each party concerned...*") would militate against adverse findings in any event. Finally, there is an inherent weakness in the procedure; any decision would not be binding.

4.4 Summary

At best, the UNFCCC is an expression of political ideals. It is not an effective legal tool. US recalcitrance in the matter of climate change demonstrates the weakness of international law and legal systems and is to date, the most pressing evidence for reform. Where there is a lacuna in international law concerned citizens will have to depend on piecemeal, litigious, confrontational actions within the domestic sphere[46]. Is this the best method to ensure action on major environmental issues? At present it may be the only option.

5. THE KYOTO PROTOCOL

5.1 Overview

The Protocol to the Framework Convention on Climate Change was adopted in Kyoto in 1997. At the date of writing, there are one hundred and twenty-seven parties to the Protocol. These include thirty-five of the thirty-nine economically developed countries that make up Annex 1 of the Convention.

The Kyoto Protocol sets greenhouse gas emissions reduction targets for state parties identified in Appendix 1. Appendix 1 identifies economically developed countries and countries undergoing the process of transition to a market economy[47]. Using 1990 emissions levels as a baseline (1995 may be taken as a baseline for the synthetic gases HFCs, PFCs and SF6, Article 3 (8)), Appendix 1 parties must make reductions in total greenhouse gas emissions in accordance with specific targets. The targets differ between states. For example the United States target was to be 7% below 1990 levels, the United Kingdom's target is 8% lower and New Zealand's target is to return emissions to 1990 levels. A state may make reductions in whichever combinations of gases it chooses; targets are not specified for each gas. The targets must be met during the first commitment period, that is, five years between 2008 and 2012.

46 See Climate Justice website at www.climatelaw.org for examples of national legal action.
47 Supra 6.

Pursuant to Article 3 (3):

> The **net** changes in greenhouse gas emissions by sources and removals by sinks ... shall be used to meet the commitments ...

States can therefore, take into account sinks and land use changes since 1990 in calculating the final emissions tally. To be credited with 'forest uptake' of carbon dioxide a country must have a correct forest inventory in place by 2007 (Article 5) and only directly anthropogenic carbon dioxide uptake is to be counted.

The reporting requirements and subsequent review process aims to promote transparency and the early identification of problems concerning compliance. The importance of parties reporting greenhouse gas inventories and progress with implementation is reiterated by the Protocol. Reporting requirements apply to both developed and developing countries, although requirements for the latter are less onerous as to detail and as to frequency. The information provided is reviewed by the UN Expert Review Teams, who prepare the IDRs. Expert teams undertake a "thorough and comprehensive technical assessment of the implementation" by each Annex 1 state [48] and identify "any potential problems in, and factors influencing, the fulfilment of commitments"[49]. The process aims for transparency and the reviews are to be "non confrontational" and "facilitative"[50]. All reports are published by the Secretariat. If an IDR raises "questions of implementation" a party is not allowed to use "transfers and acquisitions of emission reduction units" to "meet its commitments under Article 3 until any issue of compliance is resolved" (although the trade may continue).

The Kyoto Protocol is radical in its utilisation of flexible mechanisms. The aim of these mechanisms is to lower the cost of emissions reduction and to promote sustainable development. There are three mechanisms.

Article 6 concerns 'joint implementation'. An Annex 1 country can carry out projects in other Annex 1 countries aimed at "reducing anthropogenic emissions by sources or enhancing anthropogenic removals by sinks of greenhouse gases ...". The developer can be credited with 'emissions reduction units' ("ERUs") for the resultant decrease in emissions. Nuclear projects are excluded.

Article 12 establishes the 'clean developing mechanism'. Annex 1 countries carrying out joint emissions reducing projects with developing countries can, from 2008, be credited with part of the emissions reduction in the form of 'certified emission reductions' ("CERs"). Nuclear projects are once again excluded but this mechanism includes, for example, afforestation projects. An

48 Report of COP 1 Decision 2/CP.1.
49 Kyoto Protocol Article 8 (3).
50 Supra 48.

aim of this mechanism is to assist in technology transfer and aid to developing countries.

'Emissions trading' is established by Article 17. Appendix 1 countries are allocated a set number of 'assigned amount units' ("AAUs"). All units equate to 1 metric tonne of emissions in carbon dioxide equivalent terms. Parties meeting their target can sell the excess units on the market to Parties in default. Parties need not sell units; they can carry them over to next commitment period.

5.2 Compliance Mechanisms

Article 19 of the Kyoto Protocol specifies that the UNFCCC's provisions on dispute settlement shall apply to parties to the Protocol. Article 16 directs the COP/MOP to determine how the UNFCCC multilateral consultative process shall apply to the Protocol. This hasn't been achieved but is otiose in any event for reasons that are explained below.

Article 18 of the Protocol provides for the development of non-compliance mechanisms within the Protocol. The Marrakesh Accords, adopted at the seventh COP/MOP, provides the details of the rulebook for the Kyoto Protocol. Specifically, Decision 24/CP.7 adopted on 10th November 2001 sets down the procedures and mechanisms relating to compliance under the Protocol.

Writing before the adoption of the Marrakesh Accords and Decision 24/CP.7, Birnie and Boyle stated "If adopted these enforcement measures would transform Kyoto non compliance procedure into a quasi judicial process more akin to WTO dispute settlement than the Ozone Protocol non-compliance process. This would be a highly significant development in the enforcement of environmental agreements"[51].

Decision 24/CP.7 established the compliance committee whose aim is to "facilitate, promote and enforce compliance"[52]. The compliance committee consists of a plenary and a bureau (primarily concerned with administrative functions), a facilitative branch and an enforcement branch.

The facilitative branch is concerned with all parties to the Protocol. Its aim is to aid implementation of the Protocol, to provide technical and financial advice and assistance and to make recommendations to Parties. The facilitative branch cannot make findings of non-compliance.

The enforcement branch deals only with Annex 1 countries at present. The enforcement branch is responsible for determining cases of non-compliance with

51 Patricia Birnie and Alan Boyle, *International Law and the Environment* 2nd Ed. Oxford, at page 531

52 Decision 24/CP.7 Section I.

"quantified emission limitation ...methodological and reporting requirements ... the eligibility requirements under Articles 6,12, and 17 of the Protocol ..."

Whilst decisions of the compliance committee including the facilitative branch may be passed by a three quarters majority of the committee, a decision of the enforcement branch must receive a double majority i.e., a majority vote from both Annex 1 and non-Annex 1 countries[53].

After a 'submission' raising 'questions of implementation' is made, the matter is referred to the compliance committee who will then allocate the matter to the appropriate branch according to their mandate and depending upon the type of non-compliance. A defaulting party is granted one hundred days after completion of the expert review to further attempt compliance (by, for example, acquiring credits in the form of ERU's, CER's, AAU's and / or RMU's). Thereafter, a preliminary screening investigation will ensue. If matters proceed, rules provide for an independent quasi-judicial process.

If a party is found to be in default, consequences will be applied in a graduated manner and will depend upon consideration of the cause, degree and frequency of the non-compliance[54]. In the event of a party failing to comply with its emissions reduction target, the enforcement branch can apply the following consequences:

(a) Declare that the party is not in compliance,
(b) Deduct *"from the parties assigned amount for the second commitment period ...a number of tonnes equal to 1.3 times the amount in tonnes of excess emissions"* (the '1.3 penalty rule'),
(c) Direct the party to develop a compliance action plan within three months; the implementation of the plan will be reviewed and assessed by the enforcement branch,
(d) Suspend a party's ability to sell or transfer units under Article 17 of the Protocol.[55]

Do the compliance mechanisms contained within Decision 24/CP.7 promote the efficacy of the Kyoto Protocol and thereby support the aims of the UNFCCC? To illustrate the efficacy, or otherwise, of the Protocol and its compliance

53 Decision 24/CP.7 Section II.

54 Article 18 of the Kyoto Protocol. Within the Protocol itself there are many layers of compliance over and above compliance with the substantive emissions reduction targets for Annex 1 countries. There are, for example, issues of compliance with reporting and methodological requirements, with eligibility for the flexible mechanisms, compliance relating to the use of sinks etc. The focus of this study is on substantive compliance with the emissions reduction targets and accordingly this paper only addresses the consequences to be applied in the event of a State exceeding its emissions reduction target.

55 Decision 24/CP.7 Section XV paragraph 5.

mechanisms and to explore issues highlighted by this question, New Zealand is used as a case study and thereafter, general observations about compliance with the Protocol are made.

5.3 Second Case Study: New Zealand

New Zealand has been chose as a case study for a number of reasons that will be detailed in the following paragraphs. In essence, however, New Zealand has been chosen because its international reputation for taking environmental issues seriously is at odds with its approach to climate change.

As a small nation, New Zealand relies heavily upon its reputation as a 'good global citizen' to amplify its submissions on the international stage. The country has a 'clean green image' and this has been utilised to great effect in not only promoting tourism in New Zealand but also in boosting its 'good citizen' reputation throughout the world.[56]

The effects of climate change will be particularly prescient for New Zealand for a number of reasons:[57]

(a) Proportionate to the surface area, New Zealand has one of largest coastlines in the world,
(b) The economy is dependant on primary production and therefore requires climactic stability,
(c) New Zealand's geography makes certain significant areas (such as Auckland) vulnerable to extremes of precipitation,
(d) New Zealand has a wealth of biodiversity; there are many types of flora and fauna exclusive to New Zealand and therefore the state of natural assets is important for the tourism and pharmaceutical industries etc.

New Zealand is a party to the UNFCCC. The Convention was signed on 4th June 1992, ratified on 16th September 1993 and entered into force on 21st March 1994. Further, New Zealand signed Kyoto on 22nd May 1998 and with the accession of the Climate Change Response Act 2002 ratified the Protocol on 19th December 2002. At Kyoto, the New Zealand delegation successfully argued that as a significant proportion of the national energy supply already came from

56 In 2002 the Government spent $22,098,000 on the successful '100% Pure NZ' campaign capitalizing upon New Zealand's image as an exemplary environmental custodian. See Ministry of Tourism Financial reports at <http://www.tourisminfo.co.nz/cir_pub/annual_report/files/Complete_Tourism_Annual_Rep.pdf>

57 Klaus Bosselmann, Jenny Fuller and Jim Salinger, *Climate Change in New Zealand: Scientific and Legal Assessments* (New Zealand Centre for Environmental Law, 2002).

renewable sources it would be inordinately difficult to make further progress in this area. As a result, the emissions target for the country is to return emissions to 1990 levels.

New Zealand is only responsible for 0.2 % of global greenhouse gas emissions however this is consequent upon its small population. Measures of per capita emissions place New Zealand seventh highest in the world.[58]

Although the present Government expresses wholehearted support for the aims of the climate change regime, there has, in reality, been no serious attempt to reduce greenhouse gas emissions and it shows. UNFCCC data reveals that New Zealand has been unable to comply with the spirit of the Convention and reduce aggregate greenhouse gas levels in 2000 to 1990 levels[59]. There is still debate as to whether New Zealand will meet the emissions reduction target. The Government is confident the targets can be met by the use of its voluminous forest sinks and further that there will be spare emissions units to sell on the international trading market. However, given the inaccuracies associated with the measurements pertaining to sinks and the large margin for error, coupled with rising emissions, it is difficult to make a categorical judgement.

The most recent 'national communication' from New Zealand is dated 30th November 2001. The relevant IDR is dated June 2002[60]. Between 1990 and 2000 total greenhouse gas emissions increased by 5 % higher or 3 % higher if land use, land use change and forestry ("LULUCF") is taken into account. Disappointingly, carbon dioxide emissions increased by 22% during this period and nitrous oxide emissions by 6% although there was a decrease of 6% in methane emissions.

Why is New Zealand failing to reduce emissions? It is a country that has every natural advantage. With a temperate climate, there is less reliance on heating and / or air conditioning. New Zealand's geography ensures that it could have an abundance of natural wind, wave and geothermal power. A Government report commissioned in 1992 showed that all of New Zealand's electricity requirements could be met by solar power[61].

In a report for the Pew Centre on Climate Change, Eric Dannemaier and Isaac Cohen found that "the key to state climate change compliance is how

58 See UNFCCC Data at www.unfccc.int/

59 See <http://ghg.unfccc.int/>

60 See <http://unfccc.int/resource/docs/idr/nzl03.pdf>

61 Ministry of Commerce, 'Energy Baseline Forecast to 2020' Wellington, quoted in Klaus Bosselmann, 'Compliance without Complying? New Zealand's Differentiated Response to the Principle of Common but Differentiated Responsibilities' Paper for the 4th International Symposium at ICECA, Kakawa University 'Common but Differentiated Responsibilities in the Protection of the Global Climate' Takamatsu 13-15 December 2002. Copy of the paper held with the author.

effectively the sovereign translates it's duties to its citizens ... the role of states as regulators, more than merely regulated, is thus critical in achieving meaningful compliance with international climate change commitments"[62].

New Zealand is failing to reduce greenhouse gas emissions because the Government has not introduced direct policies that address the major causes of emissions. The Government is depending wholeheartedly on its use of sinks to offset emissions.[63] Such policies that have been introduced tend to be focused on non-regulatory and voluntary market based approaches. Measures expressed in the 'Energy Efficiency and Conservation Act' 2000 and its consequent strategy, the 'National Energy Efficiency and Conservation Strategy' 2001 are not mandatory and enforceable; they can only be encouraged and promoted by the use of education and financial incentives. Klaus Bosselmann, reporting on the New Zealand approach to climate change, comments that "as long as there are no targets and timetables in relation to the first commitment period of the Kyoto Protocol, the foundation policies [of present legislation and proposed legislation] will not lead to any significant reductions of greenhouse gas emissions".[64] By way of an example, transport is responsible for 40% of carbon dioxide emissions but petrol prices are very low compared, for example, to many European countries. The Government does not propose to introduce a carbon tax for petrol or to ensure improvements in the emissions standards of vehicles nor do they intend to make catalytic converters mandatory. Further, the increase in nitrous oxide is due primarily to the use of nitrogen fertilizer however the Government has not introduced any measures to abate nitrous oxide emissions. Methane has reduced generally as a result of the decrease in sheep following changes to agricultural subsidies and a global market slump but once again, no measures have been introduced to combat other sources of methane (for example a landfill tax).

Dannenmaier and Cohen conclude that a balance of 'hard' and 'soft' policies i.e. regulatory, voluntary and market measures prove most effective in tackling rising greenhouse gas emissions. They emphasise the necessity for "minimum performance standards"; that is, "clearly established and enforced basic norms provide a baseline for performance against which voluntary programmes can be measured and from which more flexible market orientated programmes can be promoted"[65].

The New Zealand Government has signalled their intention to introduce carbon taxes for certain businesses in 2007 if voluntary measures to reduce

62 Eric Dannenmaier and Isaac Cohen 'Promoting Meaningful Compliance with Climate Change Commitments' November 2000 published by Pew Centre for Climate Change, page 5.

63 Bosselmann, supra 61.

64 Bosselmann, supra 61.

65 Dannenmaier and Cohen, supra 62.

emissions are not effective. The charge will be capped at NZ$25 per tonne and will fluctuate according to the international price of carbon. It will attach to emissions from energy supply and use, process emissions and fugitive energy emissions. How effective a 'threat' this may be, is debatable. Policies change and governments change. A major election is to be held in 2005. The main opposition party, the National Party, proposes to withdraw from Kyoto if elected.

The Government has in place an active policy called 'Projects to Reduce Emissions'. In essence, new business ventures, that would reduce emissions as opposed to 'business as usual' practices, can tender for emissions units that will be tradeable on the international market. A practical example of this concerns the Meridian Energy Company. Meridian is developing a wind farm at Manuwata in New Zealand. The Government has awarded Meridian in the region of half a million emissions reduction units. The Dutch Government has already offered a contract to Meridian to buy the units for NZ$10.50 each. The Government had stated that if Kyoto didn't enter into force, such units would be worthless. There are no plans for an internal national emissions trading market such as that established in the UK.

There is a difference between full compliance effected as a result of moral belief in the purpose of the regime and behavioural change on the one hand and technical conformity on the other. Although the risk remains of non-compliance, the real issue concerns New Zealand's true commitment to the climate change regime. The underlying philosophical approach is predicated upon financial and economic considerations. A cursory examination of the website for the Ministry for the Environment shows an emphasis on the financial opportunities that the Protocol may bring to the country[66]. There is undue reliance on sinks at the expense of curbing rising emissions. Given that sinks are, at best, temporary stores of carbon dioxide, New Zealand has done little if anything thus far to tackle the problem of climate change in the long term.

New Zealand's approach is in contrast to that of the EU and nations committed to reductions in greenhouse gases in order to prompt the transfer from a carbon based economy. By way of example, the UK 'Climate Change Programme', published in November 2000, sets a domestic goal of reducing carbon dioxide emissions to 20% below 1990 levels by 2010. This is highly relevant. Pursuant to the Kyoto Protocol, the UK has an emissions reduction target of 8% below 1990 levels for the first commitment period. Within the EU 'bubble', the UK's reduction target is 12.5% below 1990 levels [67]. It is clear that the UK is taking action over and above the bare minimum demanded by the Kyoto Protocol. The UK sees the necessity to reduce global warming as an imperative that goes beyond

66 Ministry of Environment at<http://www.climatechange.govt.nz/sectors> and in particular, the 'business' sector'.

67 See www.defra.gov.uk.

mere compliance with duties set down by international treaty law. The 'Energy White Paper' published in February 2003 sets a long-term target of reducing UK carbon dioxide emissions to at least 60% of 1990 levels by 2050. The present UK Government has introduced a raft of both 'hard' and 'soft' policy measures to tackle climate change. Importantly, the UK already has an internal national emissions market that commenced trading in April 2002. Six thousand bodies and companies are entitled to take part. This commitment over and above a mere desire to comply is telling. The UK is likely to be one of the few OECD members to meet its Kyoto target[68].

The European Union 'cap and trade scheme' or 'emissions trading market' opens for business on 1st January 2005, regardless of the Protocol's status. This scheme will cover 40% of greenhouse gas emissions within the Union. The EU has primarily adopted binding legislation to combat rising emissions as opposed to voluntary strategies[69]. In essence, the European Parliament accepts that finite mineral resources are running out and hopes that by promoting green technology, European States will steal a technological and therefore economic march on the rest of the world.[70] It is trite to say, but nevertheless a truism, that as the majority of the world's known oil supplies are to be found in the politically unstable Middle East region[71] the less reliant the EU is on oil, the better.

So how would New Zealand be classified? They are not "wilfully objecting" to the aims of the UNFCCC and the targets of Kyoto. On the contrary, the Government expresses support for the regime. Capability is not an issue. New Zealand is a modern, democratic, wealthy country and a member of OECD. The country has access to clean and advanced technology.

Using New Zealand as an example reveals firstly, the problems inherent in the net emissions approach (see Part 6 below), secondly, the weaknesses of relying solely upon voluntary measures at national level[72] and thirdly, the deficit in the theory that supports a 'soft' managerial approach to non-compliance. The Chaynes and Chaynes theory falls down in the real world of politics and economics. Whilst lauding the necessity of reducing greenhouse gas emissions, short-term political and financial concerns take precedence for many parties to the Protocol. The transition from a carbon-based economy is likely to be expensive and politically fraught for most countries and this militates against significant measures being implemented in the absence of clear incentives and

68 See Part 2 of this article.

69 Speech of Jos Delbeke to US Senate on 1st October 2003 at www.europa.eu.int

70 See < http://europa.eu.int/comm/environment/climate> .

71 25% in Saudi Arabia alone and Iraq has the second largest reserves; see Philips Atlas of the World Chancellor Press, 1999 and 'The Economist' May 29th 2004 page 66.

72 As Dannenmaier and Cohen note, "there is no such thing as voluntary compliance ... if one is bound to comply, by definition it isn't voluntary", supra 62.

penalties. A 'soft', management approach to compliance alone is unlikely to work.

New Zealand is a prime example of the necessity for a holistic approach to non-compliance. The compliance mechanisms of the Kyoto Protocol proclaim to be holistic in nature. A 'managerial' approach is apparent in the role and functions of the compliance committee's facilitative branch. The enforcement branch has the power to impose more stringent conditions. But does the enforcement branch and the consequences available to it really equate to the 'tough measures' advocated as necessary by theorists such as Downs et al?[73] Will the compliance mechanism prove successful in promoting compliance, ensuring the smooth running of the Protocol and its flexible mechanisms and ultimately, achieving the aims of the UNFCCC or do the 'stakes need to be raised'?

In addition to states substantive compliance with emissions reduction targets a number of difficulties pertaining to compliance with the Protocol and within the architecture of the Protocol itself are apparent. Each shall be addressed in turn.

6. PROBLEMS WITH COMPLIANCE AND THE KYOTO PROTOCOL

6.1 Lack of participation

As Dannenmaier and Cohen state, "participation is a compliance issue"[74]. Non-participation prompts other states to withdraw and indeed, the US defection has influenced, in particular, the participation of Australia. Ensuring participation is one of the concerns of the compliance mechanism. If compliance and enforcement mechanisms are too strong, the argument is that states will be reluctant to subject their sovereignty to the regime.

The cleverest form of compliance mechanism incorporates both incentives and penalties. Within the Kyoto Protocol, the aim of the flexible mechanisms, inter alia, is to create a scheme that decreases the costs of compliance and therefore increases participation. Prima facie, the flexible mechanisms are an insufficient incentive to ensure full participation with the Kyoto Protocol. Do the incentives for participation need to be stronger? The Montreal Protocol[75] bans the import of specified controlled substances from any state not a party to

73 Downs et al, supra 16.

74 Dannenmaier and Cohen, supra 62.

75 1987 Protocol on Substances that Deplete the Ozone Layer (Montreal) 26 ILM 1550 (1987). In force 1st January 1989.

the Protocol thus creating an exclusive trading market. In addition, CITES[76] and to an extent, the Basle Convention [77] also create exclusive trading markets. States can only trade in certain goods if they are parties to the regimes. Should there be an exclusive trading market created for the climate change regime? Specific goods that are only available to participants might include the artificial gases perflourocarbons, hydroflourocarbons and sulphur hexaflouride and also particular forms of technology. Putting aside, for one moment of indulgence, political realities, an exclusive trading market for fossil fuels would secure full participation. The rational would be that states would only be able to trade in fossil fuels if they used them responsibly. Will the adverse effects of climate change become so pronounced that this present whimsy becomes a future reality?

6.2 The Concept of Net Emissions and the Inclusion of Sinks

As stated above, the emissions reduction target calculation is to include anthropogenic carbon dioxide emissions removed by sinks. The UNFCCC distinguishes between 'reservoirs' and 'sinks'. Reservoirs are defined as

> a component or components of the climate system where a greenhouse gas or a precursor of a greenhouse gas is **stored** (Article 1 paragraph 7).

A sink is defined as

> any process, activity or mechanism which [sic] **removes** a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere (Article 1 paragraph 8).

This is an imprecise distinction and proves unhelpful. The use of the word 'remove', in conjunction with the distinction, connotes permanence and extinction. This is not the case. The Royal Society[78] has emphasised that "We do not fully understand the processes that control how much carbon dioxide is absorbed by vegetation and soils acting as land carbon sinks". What is clear however is that forest sinks can become net emitters of carbon dioxide in

76 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington) 12 ILM 1085 (1973). In force 1st July 1975.

77 1989 Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal (Basle) 28 ILM 657 (1989). In force 24th May 1992.

78 The Royal Society is the foremost body of UK Scientists. See report at <http://royalsoc.ac.uk/templates/press/releasedetails.cfm?file=p.324.txt>

situations of drought, fire or wet periods when trees decompose.[79] Sinks are at best a temporary store of carbon. They do not permanently remove carbon from the atmosphere. The inclusion of sinks in calculating emissions reduction targets in effect passes the problem onto future generations and equates to intergenerational inequity. The EU argued vociferously against the inclusion of sinks in the calculation of emissions targets. However as a number of countries, including New Zealand, would not ratify the treaty without the inclusion of sinks, they are to be incorporated in the calculation.

A number of general difficulties are associated with sinks for example rapid, mass afforestation projects can lead to a loss of biodiversity and other natural qualities and the dependence upon sinks lowers incentives to reduce emissions. Forests are clearly valuable for many reasons but should they detract from the emphasis being upon emissions reduction?

Of direct relevance to the question of compliance is the fact that the uptake of anthropogenic carbon dioxide by sinks is acknowledged to be incredibly difficult to quantify[80]. Given the difficulty in accurately measuring the effectiveness of sinks, the inclusion of sinks and the concept of net emissions may jeopardise the accuracy of compliance assessment.

The example of New Zealand reveals the folly of the net emissions approach and the inclusion of sinks[81]. Sinks have allowed New Zealand to all but ignore rising emissions. In addition, given the inaccuracies inherent in quantifying the effectiveness of sinks, New Zealand's true compliance with the emissions reduction target is not a certainty. Prue Taylor describes the ability of countries to use sinks as a "dangerous balancing act which leaves room for creative accounting in circumstances where the necessary science is less than certain"[82].

6.3 The Consequences of the Enforcement Branch

Despite the adoption of the Kyoto Protocol in 1997, rules relating to the *compliance mechanism* weren't adopted until November 2001. As David Victor notes there is an "inherent problem in leaving the drafting of the enforcement mechanism until later because countries likely to be in breach will only agree to soft measures".[83] How effective will the consequences be, of the enforcement branch, pursuant to Decision 24/CP.7 section XV paragraph 5? How much of an incentive to compliance or threat to non-compliance will they prove?

79 Scott Selaska of Harvard University, *Science Magazine*, November 2003.
80 IPCC Guidelines for National Greenhouse Gas Inventories (1996) at www.unfccc.int/
81 Bosselmann, supra 61.
82 Prue Taylor *An Ecological Approach to International Law* (1998) Routledge, p.338.
83 Victor, supra 17.

6.3.1 Declaration of non-compliance – Decision 24, section XV, paragraph 5
The adverse publicity associated with a declaration of non-compliance could, in theory, be a powerful tool. Whereas the prospect for adverse publicity is unlikely to influence some countries, there is an argument for stating that this may be unwelcomed by countries such New Zealand. However the galvanising effect of adverse publicity associated with a declaration of non-compliance is diluted in the event of mass default. If a great number of countries fail to comply, defaulting states will be able to point to other countries, band together and blame the impossibility of the regime for failure as opposed to their own inactions.

6.3.2 The '1.3 penalty rule' – Decision 24, section XV paragraph (5) (a)
States negotiate emissions reduction targets for each commitment period. A target cannot be imposed upon a state without its consent. Unless targets for the next commitment period are agreed well before the conclusion of the first commitment period, it is quiet feasible that a non-compliant party, subject to a '1.3 penalty' will simply take this into account when re-negotiating the target for the next commitment period and in reality most states will know now whether they are likely to be in default. In any event, if a party has failed to meet its reduction target, such additional burdens are likely to place compliance even further out of reach. States may simply accumulate penalties, passing them on to the next commitment period, like a bad debt. In the absence of alternate and stronger penalties, how likely is the '1.3 penalty rule' likely to achieve the desired result?

The COP/MOP rejected a proposal that non-compliant parties suffer financial penalties. That penalty would have been paid into a compliance fund to finance greenhouse gas reduction programmes.

6.3.3 Compliance Action Plan Decision 24, section XV paragraph (5)(b)
In response to concerns akin to those hereinabove a procedure was introduced to ensure that a defaulting party must produce a 'compliance action plan' detailing measures it will take to ensure compliance. The enforcement branch will review and assess this plan. How efficacious will this monitoring process prove? To assume that this procedure will produce the desired result, entails an assumption that any measures proposed in the 'compliance action plan will actually be implemented (that is pass national political and parliamentary accession) and further, will prove successful in reducing greenhouse gas emissions. The enforcement branch has no power to dictate what policies and measures a state should implement within its own territory, no power to order, for example, that a government introduce environmental taxes or penalties. Depending upon the political circumstances of the time, it would be surprising however if a country such as New Zealand, anxious to preserve its role as a 'good global citizen', wilfully disregarded recommendations of the compliance committee.

The absence of trade sanctions undoubtedly weakens the effectiveness of the compliance mechanism. The World Trade Organisation ("WTO") Appellate Body suggested, in 'The Shrimp Turtle Case',[84] that sanctions consequent upon non-compliance with multilateral and bi-lateral environmental treaties may be compatible with WTO rules. It would appear that as long as such consequences were not simply 'well disguised' protectionist measures, were relatively narrow in scope and provided for by the treaties compliance mechanism they would not fall foul of WTO rules. It was arguably the threat of sanctions coupled with incentive measures that resolved Russia's risk of non-compliance with the Montreal Protocol (see Part 2 above).

Publicity and cautions may have a greater effect on New Zealand than some other states but more importantly for a country that has an economic perspective on the climate change regime as opposed to a moral environmental stance, the only way to ensure compliance is to increase the costs of non-compliance. This would ensure that the government of the day and any future government tackles climate change effectively by implementing efficacious legislation. In theory, the ability of the climate change regime to impose sanctions would assist national governments in persuading populations and businesses that such measures must be implemented, as parties at both ends of the political spectrum would be duty bound to address the issue. Critics of 'trade sanctions' argue that by making compliance mechanisms too strong, participation in the regime is decreased. The situation in New Zealand is interesting. At present the climate change regime cannot impose trade sanctions on a country; arguably therefore there is not an enforcement mechanism of the 'utmost strength' within the Protocol. Yet despite this, the main opposition party in New Zealand proposes, if elected, to withdraw from the Protocol in any event[85]. It is not the strength of the compliance mechanism that has prompted this policy. The objections of other states that have refused to become parties to the Protocol have not focused on the compliance mechanism either. Accordingly, concerns that the strength of a compliance mechanism deleteriously affects participation may be overstated.

6.4 The Consequences of the Compliance Mechanism are not Legally Binding

Article 18 of the Kyoto Protocol states inter alia:

84 *Import Prohibition of Certain Shrimp and Shrimp Products*, 38 ILM 118 (1999).

85 See <http://national.org.nz/files/national_climate_policy_pdf>. The National Party prioritises New Zealand's economic competitiveness with its major trading partners such as Australia and the US.

> Any [non-compliance] procedures and mechanisms under this Article entailing binding consequences shall be adopted by means of an amendment to this Protocol.

At present and in the absence of an amendment to the Protocol, the non-compliance mechanism contained within Decision 24/CP.7 is not legally binding on parties. The process of agreeing to the necessary amendment follows standard treaty law. Parties must first attempt to reach a consensus. Failing that, a majority of three quarters is required in order for the amendment to be adopted. Thereafter, the amendment will only enter into force ninety days after three quarters of the parties have ratified it and of course, it would only bind those that had ratified.[86]

There are a number of difficulties inherent in this process. Firstly, there will be inevitable delay if an attempt is made to agree an amendment. Secondly, given the likelihood that a significant number of states will fail to comply with the emissions targets, it is unlikely that those states would agree to expose themselves to a legally binding non-compliance mechanism. As a result, the prospect that a consensus could be obtained is unrealistic. It may even be impossible to obtain majority support for the amendment. However, if a majority amendment were passed, a wholly unsatisfactory situation would exist whereby the legal status of non-compliance would differ between parties; only those that agreed to the amendment would be exposed to legally enforceable consequences for non-compliance. Given the impotency of the international legal system this may well prove an empty argument but it is the lack of uniformity that is the greatest concern. Lack of uniformity is divisive and hinders progress in further negotiations. An extreme practical example is the withdrawal of the US. This was partly predicated upon the fact that developing countries (such as the emerging economic powerhouses, China and India) are not subject to binding targets. Increasingly different rules applying to different states and a fragmented compliance mechanism will ultimately prevent the climate change regime from functioning properly.

The interplay between the UNFCCC and the Kyoto Protocol compounds the matter further. Decision 24/CP.7 applies only to parties to the Protocol however the compliance mechanisms contained therein apply to some commitments contained within the Convention. This can be seen at paragraphs (c) and (d) of section XIV, Decision 24/CP.7, which state that consequences applied by the Facilitative Branch are to include:

86 Teall Crossen 'The Kyoto Protocol Compliance Regime: Origins, Outcomes and the Amendment Dilemma' in *Resource Management Journal* Issue 1 Volume XII March 2004 at page 1.

(c) Facilitation of financial and technical assistance, including technology transfer and capacity building, taking into account Article 4, paragraphs 3,4 and 5, of the Convention,
(d) Formulation of recommendations to the Party concerned, taking into account Article 4, paragraph 7 of the Convention

UNFCCC Article 4 paragraphs (3), (4) and (5) concern the responsibility of developed country parties to assist developing countries by:

(a) providing "new and additional financial resources" to pay for the full cost of national emission inventories,
(b) providing the financial resources and technology transfer needed by the developing country parties to meet the agreed full incremental costs of implementing climate change measures (paragraph 3),
(c) assisting with adaptation to climate change (paragraph 4),
(d) promoting, facilitating and financing as appropriate the transfer of, or access to, environmentally sound technologies and know how (paragraph 5).

Importantly Article 4 (7) of the Convention states:

> The extent to which developing country parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country parties of their commitment under the Convention related to financial resources and transfer of technology ...

Therefore whilst these commitments apply to all parties to the UNFCCC, active and public scrutiny and encouragement via a compliance committee will only fall on those parties to the Protocol.

6.5 'Submissions'; Policing Kyoto

There is provision within section VI of Decision 24 for

(a) the expert review teams to report 'questions of implementation' as identified in the IDRs (paragraph (1)),
(b) for parties to self-report difficulties with compliance (paragraph (1)(a)) and
(c) for parties to report the non-compliance of another if there is corroborating information for this assertion (paragraph (1)(b)).

Section III paragraph (2)(d) anticipates that the plenary shall develop further rules of procedure that may be needed including, inter alia,

> submission of information by intergovernmental and non-governmental organizations.

Whilst non-governmental organisations are not an international police force and are restricted by funding constraints they do provide a valuable role in providing information to the public that ultimately promotes state compliance. It would be highly advantageous to place this role on a formal footing.

Wang and Wiser[87] follow the course of negotiations on 'submissions' and set out the reasons for inclusion or exclusion of a particular conduit. Consideration was given to specifying the secretariat as a 'trigger' to call states to task over non-compliance (a similar mechanism exists under the CITES and Montreal regimes). Ultimately, this was discounted. It was felt that the secretariat was an administrative "servant of the parties" and should be seen as and remain completely bi-partisan. Some artificiality exists however. The secretariat acts as an important conduit within the non-compliance mechanism. Pursuant to Section VI paragraph (1) of Decision 24/CP.7

> The Committee shall receive, **through the secretariat**, questions of implementation indicated in reports of expert review teams ..."

In reality the onus of 'submissions' will fall upon expert review teams. The mechanism allowing parties to allege that another is in breach is unlikely to be used. Firstly, given that few states are likely to be in compliance, there will be few in a position to allege non-compliance by others without risking reciprocal allegations. Secondly, to accuse another of non-compliance would invariably prove deleterious to diplomatic relations. Thirdly, how would a state police another? The main source of information about compliance will be derived from the IDR and if questions of implementation are apparent from the IDR there is an automatic mechanism for the expert review teams to refer the matter via the secretariat to the compliance committee. Inter state submissions have not proven an effective mechanism in other MEAs. So far, no complaints have been levelled by one state against another. It has been suggested that The Association of Small Island States will prove vigilant in reporting non-compliance by others, but given the above factors this may be unnecessary.

Once the emissions trading market is well established there may be greater scope for a party to be particularly vigilant about the compliance of other parties in order to protect its interests and the interests of its business investors[88].

87 Xeuman Wang and Glen Wiser 'The Implementation and Compliance Regimes Under the Climate Change Convention and its Kyoto Protocol' *RECIEL* 11(2) 2002 181.

88 Jacob Werkman 'Compliance and the Kyoto Protocol: Building a Backbone into a Flexible Regime' *YBIEL* 1999 page 48 at 82.

Ideally, the greatest emphasis should be upon a central objective bipartisan body and to an extent, it is. So will expert review teams be faced with prospect of alerting the compliance committee via the secretariat to thirty or so instances of non-compliance amongst Annex 1 countries? Will the facilitative branch encounter mass default on the part of developing nations? Is the regime set up for such a task? There are huge implications for funding and resources.

6.6 The Timetable

Decision 24, sections IX and X set down an extremely tight timetable for the compliance mechanism. In effect, a preliminary decision on non-compliance will be made within fourteen weeks and fourteen weeks thereafter the enforcement branch shall reach a final determination. Matters relating to eligibility requirements for the flexible mechanisms are expedited (section X). This is essential for the proper functioning of the market system. Will these timetables be realistic? In March 2000, at a meeting of the Joint Working Group on Compliance, the secretariat noted that "the process of verifying compliance with the Protocol was taking as long as fifteen months after receipt of a country's national communication".[89] The IDR will be of vital importance, particularly in relation to countries relying heavily upon sinks and those that envisage selling emissions units on the trading market, for example New Zealand. It took seven months following the date of New Zealand's third national communication for the IDR to be published. A delay of this magnitude would not assist the smooth running of the Protocol's market mechanisms.

Given the enormous onus upon the expert review teams perhaps there should be a consequence (for example a financial penalty) for inaccurate reporting or reporting that does not follow the strict methodologies set down.

Whilst this paper emphasises the weaknesses of the compliance regime another perspective is apparent. The compliance regime will seek to bring to task those countries that have engaged in the climate change regime and subjected themselves to binding targets. Will this be a pyrrhic victory? The real environmental rogue states that are blatantly doing little if anything to abate rising emissions escape 'Scott free' under the international regime.

6.7 The Efficacy of the Kyoto Protocol

Crudely put, will the Kyoto Protocol achieve anything, even if complied with? An aggregate goal was determined and thereafter states negotiated their individual

89 Dannenmaier and Cohen, supra 62, at page 32.

targets as a proportion of the total goal. Accordingly, with the lack of participation of several Annex 1 countries, even full compliance by the present parties will fail to achieve the goal originally envisaged.

In the absence of further, more significant targets the actual effect on global warming of the Kyoto Protocol will be minimal. Models have calculated that the consequence of Kyoto would be a temperature decrease in 2100 of 0.15% less than if Kyoto had not been implemented.[90] The emissions reduction targets are acknowledged to be woefully inadequate. They should have been at least 60% below 1990 levels[91]. B.Bolin, prior director of IPCC, said that the targets were a "first step ... but far from what is required to reach goal of stabilising the concentration of CO2 in the atmosphere"[92].

Should therefore we abandon Kyoto and begin negotiations for a completely new protocol as some have suggested? The answer is clearly "No". Kyoto acts as a potent public symbol; it is synonymous with global acceptance of the problem of climate change and efforts to tackle this. It is imperative that the Kyoto Protocol remains a template for efforts to address global warming and is used as platform for advances. To support this assertion, consideration is given to some of the successes of the climate change regime.

7. SUCCESSES OF THE CLIMATE CHANGE REGIME

When one considers the vast number of countries involved in the negotiating process, the huge diversity of views, interests contained therein and differences in understanding and emphasis, the fact that any measures have been agreed at all is quite remarkable. "Such achievements should not be lightly discarded".[93]

The UNFCCC is the first fully realised framework convention and expression of the 'funnel effect'. Once locked into a vague framework convention, states have a moral duty to negotiate more difficult and demanding terms. Civil society participation can increase compliance by exerting political pressure and stimulating debate. Greater emphasis is now being placed on public participation and access to information in all forms of international treaty law and MEAs are

90 Parry et al 'Buenos Aires and Kyoto targets do little to reduce climate change impacts' *Global Environmental Change* (1998) 8 (4) at 285.

91 IPCC First Assessment Report pages 25, 26 at www.ipcc.ch/

92 B. Bolin 'The Kyoto Negotiations on Climate Change: A Scientific Perspective' *Science* 279 January 1998 at 330.

93 Grubb et al 'Keeping Kyoto: A Study of Approaches to Maintaining the Kyoto Protocol on Climate Change', Climate Strategies: International Network for Climate Policy Analysis 2001 quoted at p37 of 'Kyoto and Beyond: Issues and Options in the Global Response to Climate Change', Mark Storey, Naturvardsverket, 2002.

leading the way.[94] Public participation and access to information has been placed on a formal footing in the UNFCCC and its Kyoto Protocol. Examples include section VIII of Decision 24/CP.7 that states, inter alia,

> ... the information considered by the [enforcement or facilitative] branch shall also be made available to the public, unless the branch decides, of its own accord or at the request of the party concerned, that information provided by the party concerned shall not be made available to the public until its decision becomes final ...the secretariat shall make final decisions available to other parties and the public.

The climate change regime is the first mechanism whereby the principle of 'sustainable development' has been made legally binding. The UNFCCC and the Protocol incorporate of a number of environmental law principles. This helps to solidify their status in international law. Further specific examples include the principle that the 'polluter pays'; developed countries, who have thus far contributed the most to the culmination of greenhouse gases in the atmosphere, have the most stringent restrictions on their present usage as a result of the emissions targets regime. Linked with this, is the principle of 'common but differentiated responsibility'; the climate change regime acknowledges the different capacities of states to comply with policies to address global warming (Article 3 (1), (2)). The 'precautionary principle' is expressly stated to apply to the sphere of climate change (see Article 3 (3) of the UNFCCC). The importance of inter-generational and intra-generational equity is asserted (Article 3 (1)).

In relation to the Kyoto Protocol 'reporting', 'communication' and the 'review process' are essential components of the compliance mechanism and indeed can be considered one of the main successes of the Protocol. In contrast to other multilateral environmental treaties that provide for self-reporting with the barest minimum of verification, the Kyoto Protocol has a detailed and stringent reporting and review process. The effect of this is to give a clear picture as to the health of the environment thus prompting action.

The non-political, impartial nature of the Kyoto Protocol compliance committee is a positive step forward. Each branch of the compliance committee consists of a ten-member panel. Each expert panel member shall act in an independent and individual capacity. To safeguard against any risk of politically weighted decisions the branches shall be composed of

94 See for example 'AARHUS Convention', Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters. 38 ILM (1999), 517. In force 30 October 2001.

> one member from each of the five regional groups on the United Nations and one member from the small island developing States; and two members from parties included in Annex I; and two members from parties not included in Annex I

The fact that the compliance committee is not required to refer decisions to the COP/MOP for approval is extremely positive. Invariably COP/MOP decisions are affected by diplomatic manoeuvring. In contrast, the compliance committee is not a political or a diplomatic body. It has a clear purpose and mandate and must follow the rules set down. This will aid consistency and promote the confidence required for the market mechanisms.

The Kyoto Protocol established the first "formalised procedures and institutions for the independent administration of facilitation and enforcement [of MEAs]"[95]. This compliance mechanism may prove to be a transferable model with uses to other multilateral agreements. In particular, the architecture of these institutions may fit well with implementation of the Millennium Development Goals[96]. The Millennium Project, established by the UN Secretary General to look at ways to facilitate implementation of the Millennium Declaration and Goals, recognises that

> achieving the Millennium Goals in low-income countries will require an intensified programme of global partnership and co-ordination lasting at least a decade. Many stakeholders have a key role to play ... this enormous range of actors diminishes the responsibility that any single actor has in meeting the MDGs. There is little accountability when co-operation is so complex and maintained for many years. It is therefore especially important that all of the relevant actors be subject to some degree of co-operation and review ... reviews would stress the mutual responsibility of all the actors in achieving success in the MDGs, and would aim to hold each of the key actor responsible for their particular contributions to the process.[97]

The holistic approach inherent in the Kyoto Protocol compliance mechanism, that includes, inter alia, reporting, review, market mechanisms, facilitation and enforcement, may prove entirely fitting and it is to be hoped that the Project considers this in depth. Of particular relevance is the clean development

95 Bosselmann, supra 61

96 See www.un.org/millenniumgoals/

97 See Interim Report of the First Task Force of the Millennium Project 'An Enhanced Strategy for Reducing Poverty by the Year 2015' dated 1st February 2004 available at <http://unmillenniumproject.org/htm/tfldocs.shtm>

mechanism ("CDM")[98]. Appendix 1 states could utilise the CDM to great effect not only in meeting their targets pursuant to Kyoto but also to aid developing countries in meeting the MDGs.[99] For example, the transfer of environmentally sound technology could help meet many of the MDGs. The Facilitation Committee could positively encourage developed countries in this regard.

Might the Kyoto Protocol compliance mechanism suggest a tentative move towards international environmental governance and policing? Once countries are parties to the Protocol they are locked into a system of compliance. Parties must report. The reports are reviewed. If a country is found to be in non-compliance with commitments under the Protocol, an automatic process takes place. The IDR will note the non-compliance and the expert review teams will report the non-compliance, through the secretariat, to the Compliance Committee. Thereafter, the matter will be referred to the appropriate branch, consideration given to the appropriate consequences and consequences applied. Although it may be argued that states have, at the outset, to consent to all the different facets of this compliance procedure and that, accordingly, this is no different from the existing general international legal framework, whereby a state must consent to becoming subject to the jurisdiction of the ICJ for example, the difference is that once states are locked into the Protocol the processes are automatic. Independent technical experts can report alleged non-compliance. An independent expert legal committee determines non-compliance. Governments do not control the process; they are not even involved in the decision making process. State consent is not required at each and every stage, as is necessary within the general international framework. There was a great deal of dispute with regards to the specifics of the compliance mechanism; concerns were raised that the procedure encroached upon state sovereignty and not all states chose all facets of the resulting mechanism. Nevertheless a comprehensive, independent compliance mechanism has been implemented and this must be considered a great achievement.

The Kyoto Protocol has incorporated market mechanisms into an international regime. Methods to effect compliance with the Protocol are highly flexible. States can decide how to comply by determining national policies and using the flexible mechanisms as they so choose. The emissions trading regime has transmogrified from a controversial proposal to being seen as the favoured policy instrument. The true value of Kyoto may well prove to be the emissions trading

98 See the report by The Energy and Research Institute available at <http://www.teriin.org/climate/sbstadl.htmaaaa> on linking the CDM with support of the developmental process in developing nations.

99 Also see S. M. Neal 'Bringing Developing Nations on Board the Climate Change Protocol: Using Debt-for-Nature Swaps to Implement the Clean Development Mechanism' 11 *GEOIELR* 163 (1998)

scheme. The creation of a price for carbon will influence policy and provide an incentive for technological change spearheading the move from a carbon economy to true sustainable development.[100]

B. Bolin states that the main purpose of the Kyoto Protocol was to provide a foundation for states to negotiate higher reductions later and to provide a signal to industry to commence changes[101]. International law has a triggering function. Perhaps the true value of the climate change regime is the 'knock-on' effect it has had elsewhere. The World Bank, for example, has recently published a report that gives consideration to and recommends removing funding from fossil fuel projects by 2008.[102] The actions and views of the World Bank set a precedent for other banks and financial institutions.

Many Appendix 1 parties to Kyoto will, in the absence of utilising the flexible mechanisms, fail to comply with their emissions reduction. However, despite this, many of those countries will have made some reductions, certain states are likely to meet their targets and others to exceed their target reductions. Would this have happened without the Kyoto Protocol? The Kyoto Protocol provides a step upon which political will has to go forward. It is norm creating. As scientific consensus hardens and knowledge increases, Kyoto will invariably be built upon to address the measures necessary to abate climate change.

8. CONCLUSIONS

A number of states have refused to ratify the Kyoto Protocol claiming that the inherent fault with the emissions reduction target approach is that a state cannot be sure how expensive compliance will prove.[103] However, in the absence of agreement as to the 'per capita emissions' approach, emissions reduction targets are the only mechanism that provides a baseline for environmental protection. During negotiations at Kyoto, Simon Upton[104] said "it will be technologies not targets that reduce emissions" but what is the impetus for technology if there are no targets, compliance mechanisms and consequent penalties?

Despite the concerns as to compliance included in the body of this article, the author believes that states must not use compliance difficulties to attempt to

100 Storey, supra 29

101 Bolin, supra 92

102 Dr Emil Salim, 'The World Bank Extractive Industries Review', 2003. See <http://eireview.org for the full report and the article written by Dr Salim, *The Financial Times*, 16th June 2004 for an overview.

103 A primary concern of the US.

104 Chief negotiator for New Zealand during the Kyoto negotiations and Minister for the Environment at the time.

re-negotiate targets downwards[105]. Negotiations for the second commitment period are due to begin in 2005 and it is imperative such negotiations proceed in good faith regardless of the status of the Protocol or parties difficulties in achieving the targets at the time.

Further issues to be explored in the near future include:

(a) The need to establish short term, medium term and long term targets for the concentration levels of greenhouse gases in the atmosphere.[106] This will help to direct policy and will lend clarity to whole issue. If elements of scientific dispute become de-minimis, opposition to the regime from states, on this basis, is undermined.

(b) Serious consideration must be given to the 'contraction and convergence model of per capita emissions targets'. This is perhaps the most equitable measure of greenhouse gas emissions[107] and the only fair basis for the trading of carbon internationally with the full participation of all states. The status of developing nations within the Protocol is becoming increasingly critical and all efforts must be made to resolve this difficulty.

(c) Despite the emphasis on the flexibility of the Protocol, consideration must be given to returning the emphasis to emissions reduction (as opposed to offsetting by sinks). Perhaps the Protocol needs to be rather more prescriptive as to what constitutes compliance and non-compliance. Should states be allowed the utmost creativity and thus allowed to effectively manipulate 'sink loopholes' at will[108]? Should the illustrative list of measures included in Article 2 (1)(a) be placed on a firmer footing?

The Kyoto Protocol is the only serious attempt, at present, to address global climate change and it must therefore be preserved and built upon.

105 In German public law, once parties are committed they cannot make excuses to fall back on targets and attempt to renegotiate – 'Optimization' process – however this concept is not recognised in international law.

106 A further concern of the US.

107 Although this does not reflect the 'polluter pays' principle.

108 Bosselmann, supra 61