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To Hell with Kyoto, It’s Time for Something Real!

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Abstract

The intended gift of clean air and pristine atmosphere through the inception of the Kyoto Protocol was meant to be a measure to protect the environment for not only the present generation, but the future as well. Instead of accepting this gift, humanity has yet again showed its darker side; shredding the ambitious purpose of this document and crucifying its creators as being overzealous, overbearing fools. People must come to terms and understand that environmental catastrophe is the single greatest threat faced by humanity today.

It is time for a new dawn, a new era where, the global community has to undeniably pledge to resolve the problems first incepted decades ago, without want of fear or hesitation. The Bali Action Plan was a good step with regards to achieving a general consensus among the nations of the world, especially with the considered failure of the Kyoto Protocol.

In order for a successful post-Kyoto protocol there has to be popular support for the move against climate change and this can only be achieved by developing a new framework which speaks to and appeals to the general public and not infested with loopholes catering to the needs of those in power. But, what are these policy changes?

1. DECLARATION - A unanimous declaration that climate change is a catastrophe caused by humankind.
2. COMMITTEE – A committee should be created for the purposes of monitoring and reporting the progress of all signatory countries with regards to their affirmative pledges made.
3. EMISSIONS TRADING – A forum must be instituted so that emissions credit can be traded on both a national and international level to those who fail to comply with emissions caps.
4. TIE-UP – Instead of creating this protocol as a standalone covenant, it should be integrated into international law in a manner so as to have direct effect on all nations’ ability to trade, finance, transport, medicine, etc.
5. DEVELOPED vs. DEVELOPING – Incentives are needed in order to coerce nations into obliging. These incentives should vary because an incentive offered to developed nations might not look as enticing to a developing nation.
6. INDIVIDUALS – All of humanity contributed to the problem of climate change and not industries alone. All of humankind is needed to rectify the situation.
7. SIMPLE LANGUAGE – When looking at what are now recognized as successful treaties; it is those treaties which are short and simple that often proven to be the most effective.

This outline allows for the accomplishment of the basic intent of the Kyoto Protocol as understood in Article 2 of the same convention. It will not severely impact nor cause turbulence in neither the political nor economic arena as the mechanism involved is compensatory in nature. There is very little if any costs involved in the implementation of the proposed architecture as it is very heavily reliant on incentives which are non-monetary in nature. This outline provides a
beginning for an equitable, reliable, effective and efficient covenant to replace the Kyoto Protocol.

Introduction
Climate change is one of the most important challenges facing the global community in the 21st century. A series of reports by the International Panel on Climate Change (IPCC) demonstrate, with more scientific certainty than ever before, that climate change is happening and that it is almost certainly caused by the greenhouse gas emissions released into the air from industries, homes, vehicles, and other energy-consuming activities. The greenhouse effect refers to the absorption of heat by certain gases and the transfer of some of that heat back to Earth. The visible solar energy does not cause the Earth to warm, but rather it is the invisible infrared spectrum of that same energy.

The natural greenhouse effect of the planet keeps it warm and habitable. The natural greenhouse effect, when enhanced by human activity, keeps the Earth warmer than usual which in turn can produce abrupt climate change, rise in sea levels, and regional climate instability. To put it another way “The global warming hypothesis maintains that human-caused emissions of greenhouse gases will intensify this natural greenhouse effect and make the planet less hospitable for humans and nature.”

The present approach with regards to dealing with the current problem of climate change is pathetic at best for it has not seriously addressed the core problem. This approach of ‘beating around the bush’ has wasted precious resources by arguing about the subject as if the purpose of its creation was to cause harm to humanity. In turn, no concrete action has taken place aside from criticism and counter-criticism. Over the last 120 years, the Earth’s temperature has increased by 0.6°C, which might not seem too impressive, but when put in the context that only a few degrees in temperature separate the current period from the last glacial age 20 000 years ago; this presents an alarming situation. A survey revealed that based on mid-range climate warming scenarios for 2050, 15–37% of the species sampled will be extinct. This creates a serious problem which, to this day, goes unappreciated.

Numerous governments had chosen to stand idly by while this catastrophic problem engulfed humanity, without even trying to put up a fight. But, with recent developments and conclusive scientific data, many have changed their minds or rather have been convinced that the problem warrants their time and effort. This lifts a huge burden off the United Nations which has been searching for a solution for nearly two decades, on how to convince the world that the epidemic that is global warming is a serious threat.

\[5\] See http://www.geocraft.com/WVFossils/ice_ages.html.
This struggle to convince the world has been the source of many jokes, including one made by popular talk show host Jay Leno who said “According to a new U.N. report, the global warming outlook is much worse than originally predicted. Which is pretty bad when they originally predicted, it would destroy the planet.”\(^7\) Rest assured the world for the most part, even if not publicly acknowledged, is convinced that global warming is a problem caused by humanity which, if not categorically dealt with, will lead to certain disaster.

Global warming has been proven to have been caused by mankind by many reports including the Assessment Reports\(^8\) of the IPCC. The start of unusual climate patterns can be traced back to the ‘industrial revolution’ where the release of various compounds into the atmosphere started ozone depletion. These compounds include carbon dioxide, methane and nitrous oxide. Over the last few centuries the quantity of emissions has only continued to increase unhindered and unbridled.

At the forefront of the quest to combat climate change is the Kyoto Protocol, which called upon signatory countries to be vigilant in their efforts against global warming. This Protocol is part of the International Framework Convention on Climate Change, whose purpose is the reduction of greenhouse gases that cause climate change. The Kyoto Protocol was adopted on the 11\(^{th}\) of December, 1997 by the United Nations General Council and entered into force on 16 February 2005. As of June 2008, one hundred and eighty-two (182) parties have ratified the Kyoto Protocol. Of those who ratified the Kyoto Protocol one hundred and thirty-seven (137) are developing nations having obligations beyond monitoring and reporting emissions.\(^9\) Although met with initial hostility and reluctance, the convention leading up to the Kyoto Protocol has at last succeeded in drawing out countries and obtained a general consensus that this issue is of considerable significance. Unfortunately, the Kyoto Protocol has a staunch enemy, the United States which has refused to ratify the same. The major reason for such a stand is the disagreement among various experts, scientists and critics, about the usefulness of the Kyoto Protocol.

**Failure of Kyoto**

The failure of the Kyoto Protocol lies not in the negotiating skills of signatory diplomats, but in the underlying fact that the Protocol itself was so watered down that it did not have any significant measures to scrap off climate change. In order to attain some sort of consensus, the original Kyoto Protocol was so adulterated that it lacked any sort of concrete action with regard to preventing global warming. The reasons for doing so can be viewed in two separate ways. One, consensus was needed in order to convince the world that climate change is a phenomenon which required attention; the other, was that the framers misunderstood the efforts required to contain the threat. No matter the view taken, the underlying message is hauntingly clear: the Kyoto Protocol was only a preview of sorts for what was really needed.

According to Jeffrey Frankel, the Kyoto Protocol is only a processor to the substantive action required to combat climate change. “its goals could be costly to achieve if interpreted literally, neither the largest nor the fastest-growing emitters have signed up, and it would have made only

\(^7\) See http://politicalhumor.about.com/od/environment/a/globalwarming.htm.
the tiniest dent in global [greenhouse gas] concentrations even if it had entered into force with good prospects for compliance and even if all countries had participated.\textsuperscript{10} The Kyoto Protocol failed because it lacked the mechanisms to monitor and enforce the Protocol. Further it did not adequately predict its cost effectiveness and nor the amount of global participation. The following four reasons will illustrate these points:

Firstly, very little is said about the monitoring aspects of the protocol. The Kyoto Protocol does not contain a singular prohibition of a particular compound or substance, but rather a combination of compounds which are called on to be restricted. These compounds are carbon dioxide (CO\textsubscript{2}), methane (CH\textsubscript{4}), nitrous oxide (N\textsubscript{2}O), chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF\textsubscript{6}). This creates a problem in monitoring because of not only the numerous compounds involved but also because it calls for differentiating between human and natural fluxes. Human fluxes need to be controlled while natural fluxes which organically occur in nature do not pose an immediate threat.\textsuperscript{11} For example, the methane produced from sewage systems should be monitored with vigilance but similarly trees that emit carbon dioxide while not engaged in photosynthesis should not be added into the emission calculations for climate change. Herein lies another problem: where to draw a line between manmade emissions and natural emissions.

Second, the Kyoto Protocol never took into account the enforcement repercussions of implementing environmentally friendly changes into societies. A direct outline was never provided as to the implementation of the Kyoto Protocol on a daily basis; should individual nations be given the absolute responsibility for compliance or should the responsibility be placed on NGOs or private firms? Although being discussed several times, this issue has never resulted in a unanimous solution.

Thirdly, the cost of the entire project was never completely formulated. Several experts had advised that the costs would be in excess of billions of dollars and even verge on the trillion dollar mark.\textsuperscript{12} This could be a reasonable and acceptable amount in a developed country but not in developing nations, wherein an average household does not have enough money to buy basic staple foods to sustain their lives. The Protocol in question fails to address the economic ramifications of implementing a program focused on preventing climate change. A simple acknowledgement that climate change poses a severe threat to mankind does not de facto rectify the problem at hand. There have to be tangible solutions which are effective and efficient in battling climate change, not solutions which resemble strategies copied from cheap science fiction novels.

Finally, the grand question about participation as a reason for its failure: Can a treaty be considered truly global if it is only enforced on a handful of countries? This question has been around ever since the debates about climate change engulfed the international political arena back in 1985 at the Vienna Conference. As a testament to the past, the debate continues to dominate discussions on climate change and is considered by some to be the major reason why the United States moved away from the treaty in the first place. Developing countries such as

\textsuperscript{10} Aldy and Stavin (2007) – Pg.31.  
\textsuperscript{11} Victor(2004) – Pg.61.  
\textsuperscript{12} Ackerman and Stanton(2006) – Pg. iv.
China and India are expanding at such a large pace that it is impractical that they not actively take concrete actions on par with the rest of the developed world. The lack of overall participation can only result in the downfall of the cause, thereby the downfall of humanity.

**Skeleton Structure**

There is an undeniable need for change from the methodologies used by previous regimes, what are these changes, how are they any better than those that are already in place, is it feasible to implement them. These and many more questions are the visible remnants of the aftermath of the Kyoto Protocol. The rise in predicted effects of climate change has come to pass, proven by the overwhelming increase in natural calamities such as droughts and floods.\(^{13}\) It is now more crucial than any other period in history to take affirmative actions to combat climate change.

The Kyoto Protocol has been dismissed by experts as a failure and it is time for a bolder and braver approach to the problem. The following are the key points to be adapted into the post 2012 climate change protocol.

1. **Declaration**
2. **Enforcement**
3. **Emission Trading**
4. **Tie-up**
5. **Incentives**
6. **Individuals**
7. **Simple Language**

**1. DECLARATION**

A unanimous declaration must be made which categorically states that climate change or as the media connotes it “global warming”, is a man made catastrophe not unlike the atom bomb. Further, that only man through his persistence and determination can ward off this self created foe. This declaration is to be considered as a fact and not an opinion available for dispute by other scientists trying to make a buck. It is frankly just irksome for those individuals who stand to lose very little to fight, to dispute the gravity of the situation. The situation is quite reminiscent of the tobacco disputes in the 1990’s, where corporate tobacco companies, and lobbies funded by them bombarded various scientific findings with questions of validity and hidden intent\(^14\). They even went as far as to question the motivation behind the Surgeon General’s claims that tobacco induces cancer. The whims and problems of a few individuals do not and should not be allowed to take precedence over human life.

In furtherance of this declaration, there is to be a binding commitment by all the countries, both developed and developing, to fight climate change. It is not reasonable to force just the industrialized countries to emission caps and regulatory norms. This is true especially in the light of the fact that developing countries led by India and China will represent up to two-thirds of global carbon emissions over the course of this century.


\(^{14}\)As depicted, in the based on real life movie, *The Insider* (1999)
The Kyoto Protocol does not contain an implicit declaration by the concerned parties as to whether human intervention is the sole cause, if not, at least the defining cause of rapid climate change. Granted, the Kyoto Protocol is only a protocol to the United Nations Framework on Climate Change, but neither convention has bluntly admitted that human activities are to be blamed for unusual climate change. One might argue that the 1992 Convention on Climate Change inadvertently mentions the above point; nevertheless, an implied meaning is far too subtle and does not radiate the gravity of the situation. The Bali Action Plan too is similar in this regard. It states that climate change is an “unequivocal” problem and emissions have to be reduced in order to curb this problem.\(^\text{15}\) Again little emphasis is placed on the ‘human blame’ aspect of the problem. Unless the global community admits that homo-sapiens are solely responsible for the drastic change in temperature and weather, there is little feeling of guilt and remorse. These are key factors in getting a solid response from the global community and are crucial for drawing out support.

This declaration should be in the preamble of the fore coming protocol as it is of significant importance in determining the reason why financial, social and political resources should be allocated to combat global warming. Most nations do not like to admit to detrimental actions caused by its citizens against the global community for it opens up a venue for cross border blame. This attitude cannot be changed, but nevertheless if all nations join in taking blame for the actions of mankind against nature, then no individual can be identified for discrimination. The point must again be reiterated that unless there is an unequivocal admission by the global community that the present trend of climate change is strictly a human induced phenomenon, there will always be those who would profit from weakening the resolve to fight climate change.

2. ENFORCEMENT

One school of thought believes that governments tend to obey international law because it exerts prestige and ego in the global arena. In order to maintain its reputation internationally, governments will conform to international pressure rather than devise crafty and devious ways to skirt international obligations.\(^\text{16}\) This school of thought is absurd because most of its derivative data comes from advanced democratic nations which have huge lobbies consisting of environmental NGOs and other public interest groups who exert strenuous pressure upon their governments. If international conventions were being strictly adhered to then there would not have been the need to constitute tribunals seen in Rwanda, Yugoslavia, and the International Court of Justice (ICJ). When dealing with an issue as explosive as global warming, little doubt is left for the need of a mechanism which will verify compliance.

There are three traditional approaches for enforcement of conventions. The first approach is the use of dispute resolution procedures to enforce international legal commitments. Most environmental agreements carry elaborate dispute resolution mechanisms but none have been vested with any significant power to resolve any issues.\(^\text{17}\) The second approach is the use of unilateral enforcement actions, wherein actions such as trade sanctions are used to force the other

\(^\text{17}\) Victor(2004) – Pg.64.
countries hand into compliance\textsuperscript{18} This methodology although effective, is not even handed and gives certain countries an opportunity to exert its dominance over others. Third is the use of non governmental organizations (NGOs) to enforce international obligations. In practice NGOs only enforce those agreements which are in their interests to do so and are capable of the same.\textsuperscript{19} These traditional approaches are impotent to deal with the issue of climate change, thereby giving opportunity for the rise of a new system of enforcement.

A committee should be created for the sole purpose of monitoring and reporting the progress of all signatory countries so as to verify the compliance with the pledges made. The committee should report back to the United Nations (U.N.) General Body with recommendations as regards punishments for those who fail to follow through on their promises without justifiable reason. This is based on the Sao Paulo proposal\textsuperscript{20} by the organization BASIC\textsuperscript{21}, with an additional twist, so to speak. The fact that previous conventions and protocols have not even mentioned a mechanism to monitor the flow of emissions, speaks volumes about the enthusiasm of the international community in preventing climate change. The committee should constitute, monitor, and regulate the international emissions trading forum.\textsuperscript{22} It should set standards in this regard and provide accreditation to individual national institutions so as to ensure trading nationally and internationally follow the same set of rules, thereby making it universal.

The Kyoto Protocol and the Bali Action Plan do not mention a committee to regulate the control of emissions. This comes as no surprise since any real goals set forth by the international community lack strict compliance. The argument remains that a committee is necessary to fight global warming. There are no other feasible means of ensuring total compliance by participating countries, which also allow for a multi-party bi-partisan review of the effect of the implemented policies.

It would be extremely difficult to implement a committee because no nation likes having an international semi-policing authority breathing down their backs about policies that they have agreed to in good faith and on humanitarian grounds, which are of no immediate benefit and drain economic resources. This when compared to other International monitoring associations such as International Atomic Energy Agency (IAEA) where the need is more visible and hence enjoys support from the international community. IAEA whose purpose since inception is to restrict the use of nuclear technology especially by those nations that the international community views as a threat; the fear factor played a dominant role for its continued success. In this case a majority of nations were afraid of the devastating effect that a nuclear weapon would have in the hands of an undesirable nation, hence the success of the agency. No parallel line can be drawn to the issue of climate change, wherein there still remains skeptics within the ranks of the most dedicated countries.

\textsuperscript{18} Victor(2004)- Pg.64.
\textsuperscript{19} Victor(2004)- Pg.55.
\textsuperscript{21} “The BASIC Project is a capacity strengthening project – funded by the European Commission –that supports the institutional capacity of Brazil, India, China and South Africa to undertake analytical work to determine what kind of climate change actions best fit within their current and future national circumstances, interests and priorities.”
\textsuperscript{22} To be discussed in detail below. See subtitle EMISSIONS TRADING.
There is no probable way in which the majority of the countries could be forced into creating a monitoring committee which inspects the compliance and dedication in the prevention of emission of greenhouse gases. The only foreseeable event which would cause the creation of such an agency or committee is if a sudden and cataclysmic event happens, or is proven to happen in the not too distant future, unless drastic actions are taken to prevent it. Perhaps, if the developing nations take a leading role in the formation of such a committee, this might be cause for embarrassment for those countries, which are developed, to form such a committee.

3. EMISSIONS TRADING

Emission control is the central focus of global warming diplomacy and rightly the best way to dawdle down climate change.\(^23\) It has been argued that monitoring and trading carbon dioxide gases is cheaper and far more realistic to regulate.\(^24\) The problem remains that the remaining gases although harder to monitor causes severe harm to the atmosphere, it is with this reason that it has been included in the Montreal Protocol, and to a certain degree in the Kyoto Protocol. Monitoring carbon dioxide also raises several problems such as how to assess carbon ‘sinks’ such as forest which provide oxygen during photosynthesis while emitting carbon dioxide all the other while. Similar to this is the case of the paddy field which at times emits methane. It is not a realistic approach to regulate just one harmful compound, although the amount of emissions of such compound can be loosely variable from country to country according to technological and financial feasibility.

A system of emission trading similar to the one proposed in the Kyoto Protocol should be created and the same should be made the responsibility of private companies. Governments should enact laws in conformity with international norms to enforce and monitor emission caps. Private firms armed with the ability to buy and sell the surplus and shortage of emissions as per market demand, will be easily able to conduct trade because of the nature of these commodities. E.g. If an industrial unit is allowed to emit 10 tones of carbon dioxide and it emits less, the difference will be allowed to be sold to another who has exceeded their allotted amount. There have been many disputes as to how to implement and enforce such a system and whether the system should advocate sellers or buyer’s liability, price targets or quantity targets?\(^25\) These systems cause more confusion rather than providing any real solution to the problem at hand.

There need not be so many complications involved in the implementation of a carbon trading system. Each country is allotted a certain quantity limit per restricted compound, these countries in turn issue out permits to various industries which indicate the amount of emissions allowed and the applicable penal actions for excess emissions. Inspectors employed by the relevant government should be trained and dispatched to ensure compliance with emission standards. The revenue derived from those who violate these caps can be funneled into paying for the inspectors and to a certain degree lower the burden upon governments. These inspectors can recommend punitive actions to the relevant authorities. This course of action includes everything from plant closure to hefty fines. This inadvertently promotes the emissions trade market because those who

\(^{23}\) Victor(2004)- Pg.76.  
\(^{24}\) Victor(2004)- Pg.60.  
\(^{25}\) Nordhaus (2006) – Pg.47.
have exceeded to meet emission caps will want to purchase emission points to avoid stringent action.

Carbon sequestration is a cheap alternative for achieving carbon emission caps.\(^\text{26}\) Carbon sequestration is the production of oxygen during photosynthesis, and exuberating of carbon dioxide else while. This method wherein both oxygen and carbon dioxide is pumped into the atmosphere does not provide any real long term solution to global warming. Countries that have carbon ‘sinks’ should be allowed to be granted credit for maintaining the same, but it should not be viewed as a feasible alternative to emission caps. These biospherical sinks are not the ultimate solution. The ultimate solution can be found only through the advancement of technology, which is ironic in a way because it was the development of technology that caused this situation in the first place.

International carbon trading is essential for the success of this proposal. If international carbon trading were not allowed, it would create great difficulties for developed countries and remove an important incentive from developing countries. E.g. if the United States were to confine carbon caps solely within its national territory, it would cost each household roughly US $1000.00.\(^\text{27}\) This is bound to be met with internal resistance and unrest, especially considering most emissions of greenhouse gases come from burning fossil fuels such as petroleum used in cars and coal used in the production of electricity.

Trading in carbon fluxes\(^\text{28}\) has its own initial difficulties, such as differentiating between mannmade carbon fluxes and natural carbon fluxes.\(^\text{29}\) These problems are to be anticipated, just as problems are to be anticipated when embarking on any new mission. They are prone to be rectified during the course of time and do not bear any significant harm to warrant the cessation of the idea. Carbon taxing is a very popular concept which is advocated by acclaimed personalities in the field, but the use of carbon taxes would result in general wide spread public disapproval. It is quiet probable to say no civilization in history has taken to increase in taxes with good humor, no matter how noble the cause. Therefore, to advocate this would result in distaste towards the issue of climate change, which is an unaffordable mistake especially during the initial years which are crucial to gain momentum.

Credit must be given to the Kyoto Protocol for introducing the system of carbon trading especially in devising the three different systems of trading.\(^\text{30}\) These systems were:

1. Emissions Trading – an industrialized country would be allowed to meet its Kyoto targets by being able to purchase another country’s Kyoto allocation.
2. Joint Implementation – allows industrialized countries to earn special credits when implementing projects aimed at reducing emissions

\(^{26}\) Aldy and Stavin (2007) – Pg.81.
\(^{27}\) Victor(2004)- Pg.4.
\(^{28}\) A term used synonymously with carbon dioxide. For further reading see http://cdiac.ornl.gov/trends/landuse/houghton/houghton.html
\(^{29}\) Victor(2004)- Pg.61.
\(^{30}\) Victor(2004)- Pg.4.
3. Clean Development Mechanism – allows industrialized nations to earn credits for projects aimed at reducing emission when implemented with developing nations.

Nevertheless, these methods leave an air of confusion as to which method is better to be followed and as such leaves a notable problem which certain nations might use to evade their responsibilities. Realistically, all the Kyoto Protocol states is that there should be emission caps and the trade of these emission points should be internationally allowed. According to David G. Victor “diplomats who crafted the Kyoto Protocol painted have themselves into a corner. In Kyoto they achieved [an] agreement by setting emissions targets that would be politically impossible to implement without an emission trading system; yet they deferred discussions of all detail about how the system would operate.”

The Kyoto Protocol was also uneven in its allocation of emission caps. For example, the crafty negotiators for Russia and Ukraine managed to carve a deal which benefited their respective countries, while other countries with similar deals faced an economic burden. This was not an unexplained phenomenon but rather visible evidence, to the exploitation of a loophole. Russia and Ukraine agreed to freeze emission at the 1990 emissions level, but ever since the collapse of the Soviet Union, these nation’s industries have scaled back production anyways, thereby making them the greatest benefactors of emissions trading and to an extent global warming. The Western World was considerably outraged but unfortunately could not do anything. If the negotiations were to be reopened it would have provoked Russia, perhaps to the extent to pull out. Being the second largest emitter, Russia’s cooperation was crucial, especially since the United State’s position was yet to be made absolute.

The Montreal Protocol did not face the same problems that Kyoto is currently facing because it was solely about the reduction of ozone depleting substances such as the CFC chemicals. It was during this time that data suddenly revealed the existence of a hole in the ozone layer over Antarctica. This egged diplomats on to come up with a plan that ensured that countries would eventually phase out ozone depletion chemicals. The Bali Action Plan has not given any serious consideration to the topic of creating an emissions trading market. It has merely mentioned that the approach should be explored.

Implementation of a system of emissions trading is quiet complicated unless an International Convention puts forth a standard which is universal with regard to measuring emissions. This standard can then be used to establish an emissions market which is consistent in its approach while dealing with emissions from around the world. Then, every country should be allocated an emissions cap which is realistic and achievable. Individual nations while ratifying the convention

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31 The loophole being that since there are various forms of earning credit, developed nations might claim credit for projects which when implemented in a developing region will fail due to the inability of the government to pursue the same. For example, the use of special fertilizer in controlling methane released by paddy fields is useless in the Ukraine were paddy fields are not significant in number to be assessed as a threat.
32 Victor(2004)- Pg.7.
33 Victor(2004)- Pg.9.
34 “Various approaches, including opportunities for using markets, to enhance the cost-effectiveness of, and to promote, mitigation actions, bearing in mind different circumstances of developed and developing countries;” 1(a)(v) of the Bali Action Plan.
should encourage a national emissions market, so that those industries that cannot meet the
emission limit will have an alternative rather than face punitive actions. There has to be
willingness on the part of all the governments of the world to come together and work towards
an unified goal. Unless individual governments are willing to enforce emission caps and
stringently regulate licensing, there is little incentive for companies to cooperate resulting in
continued global warming.

4. TIE-UP

Instead of creating this protocol as a standalone covenant, it should be sculpted in a manner so as
to integrate it into all of the major international bodies, from UNESCO to WTO. The provisions
of this covenant should have direct and immediate effect on all nations’ ability to trade, finance,
transport, etc. Thus, if a country purposefully and willfully violates pledges, it is not a violation
of the relevant treaty but a combined violation of a variety of treaties. The integration of climate
change prevention concepts into various existing treaties is the best way to ensure a level of
dedication to the prevention of climate change. If countries were to see that their ability to
conduct international negotiations, trade, etc. is dictated by their compliance to preventing
climate change, the incentive would be paramount to anything else. In this increasingly
globalized environment of trade and business, the ability of nations to use cross boundary
resources is essential and in fact treasured. This may be considered to be an unorthodox concept,
but nevertheless a concept suited to the desperate times.

The Kyoto and Bali Conferences, both do not envisage such a concept, which is understandable
considering the complications involved in amending all existing conventions. But, the current
relaxed approach is not acceptable and human beings should pressure their respective
governments into taking concrete steps. The current approach being taken is similar to a
fisherman lying on a boat with a line in the river expecting the fish to come and bite. A more
sensible and efficient fisherman would use a net to capture a large number of fish, with the aid of
sonar and other empowering devices.

The implementation is no doubt a long and drawn out process but once done it will undoubtedly
become the most powerful arsenal in combating climate change. Another method would be in the
interpretation of various conventions and treaties. A passing of a singular treaty by the
international community stating that henceforth all conventions are bound to follow international
norms with regard to prevention of climate change and such norms are to take precedence over
any activity to be conducted. If such a declaration were to be made, then the hassle of amending
covenants would be nonexistent. Unfortunately, unless nations understand the gravity of the
situation, there can be no incentive given which could convince countries that restriction on
international activities of a nation is justified.

5. INCENTIVES (DEVELOPED vs. DEVELOPING)

It is of the utmost importance that the right incentives are offered for cooperation, otherwise
there will be little willingness to participate without which nothing will get done. This approach
is not too different from the carrot and stick approach\textsuperscript{35}, nations must be motivated to fight climate change in its entirety and should be rewarded for their efforts. This will be a little more complex because the hemisphere is divided into two, countries which are industrialized and those countries that are in the process of industrialization. Hence, it is only reasonable to anticipate that the developed and developing countries would need different incentives to motivate them further.

Many researchers and diplomats from developing countries have pointed out the fact that it was overzealous industrialization policies pursued by developed countries that started the chain which is causing global warming. Thus, it is only reasonable and fair that these industrialized countries pay for the rectification of the situation that they themselves created. This sort of innate bickering belongs in the school yard, where picked on kids go complain to the teachers that another student is bullying them. It is time to earn up to the fact that climate change is an issue which is devastating in magnitude and unless a cooperative action is undertaken the global population will suffer equally.

Many studies have concluded that developing countries would suffer the most from climate change being predominantly based on agriculture and hence dependent on the weather. Scientists have forgotten to address the fact that most coastlines in industrialized countries are vulnerable to rising sea levels and coastal storms.\textsuperscript{36} The harm done to nature would be absolute; ecosystems cannot sustain a rapid temperature change without wiping out indigenous species. Thus, the absolute value of the impact of global warming may be larger in developed nations, while the economic activity in developing regions will be more predominantly affected. Indeed, developing countries are not going to be too thrilled to take measures that slow down the development of their respective economies, so incentives must be given in some form as a means of encouragement.

\section{Developing Countries}
To motivate a developing country is quite easy because there are a wide variety of incentives which would inspire actions against global warming. An example of such an incentive would be membership into exclusive groups such as NATO, NPT, etc. The terms of membership would obviously be determined at the time of ratification. For developing nations who aspire to become developed, this would provide a major enticement. Illustration, it is no secret that India has aspirations to join the NPT.\textsuperscript{37} Every developing country has similar aspiration and catering to these aspirations, provides adequate incentive.

Another possible incentive is one by repercussion of having an emission trading program. “If developing countries were to join a Kyoto-like system of targets-with-trading, it would not only have environmental and economic advantages for

\textsuperscript{35} Farmers used donkeys as a tool, predominantly to carry goods and plough through fields. In order to get the donkey to their bidding they used a carrot to motivate the donkey further and a stick as means of discipline in the event that the donkey strayed from the path.

\textsuperscript{36} While the effect of global warming on rising sea levels and storms is yet to be proven absolutely, strong evidence remains which deserves attention.

\textsuperscript{37} See http://www.hinduonnet.com/thehindu/2000/05/11/stories/05112523.htm - it must be noted that India wants a revision wherein certain concessions are allotted, in order to sign.
the rest of the world; it would also have important environmental and economic advantages for the developing countries themselves." Taking into account the present system, it would seem impossible for industrialized countries to revert back to the 1990s emission levels, hence providing developing nations with a business opportunity to further cutback their emissions, to sell their emission credits to developed nations.

Trade is not restrictive to emissions alone. Once developing countries meet global environmental standards, trade to western countries will function smoothly. In fact, developing countries have more to gain from complying with global emission reductions than industrialized nations. Given the apparent social and environmental benefits of fighting global warming as well as the hidden financial gains, it is confusing as to why so many developing nations have turned down offers to cap emissions.  

2. Developed Countries

The age old question of what to give someone who has everything rears its ugly face again. Developed countries will have to bear the brunt of the expenses for developing cleaner technologies. This is only to be anticipated since developed countries have a greater ability to redirect its readily available resources and facilities to fight climate change.

Developed countries have understood that and have started taking steps in the right direction. Even the United States, although still remaining skeptical of global warming, has already started a partnership involving nine countries and millions of dollars to recycle waste methane in coal plants. There are other initiatives under way which promote technological solution to climate change, such as the International Partnership for a Hydrogen Economy, Carbon Sequestration Leadership Forum, Generation IV International Forum which promotes advanced nuclear power, etc. Industrialized countries are initiating such movements and as such it would seem only fair that a certain percentage of the costs for development and implementation be deductible from the World Bank and other similar institutions in the form of write off, waivers, interest free loans, etc.

As an added bonus, developed countries will be able to patent technologies that they develop thereby being able to trade among other developed countries. It must be forewarned that forcing budding regions to pay for patents or at least pay on the same scale as the western nations will only result in deterioration of the cause, as developing countries would feel the weight of controlling emissions is unbearable and without the support of developed nations, unnecessary.

38 Aldy and Stavin (2007) – Pg.47.
40 Aldy and Stavin (2007) – Pg.123.
The Kyoto Protocol and the Bali Action Plan, being products of international politics, were never expected to expressly state the incentives. They were intended to be solemn agreements wherein particular actions were decided to be taken for the sake of mankind. These actions were to be noble in nature and the derivative benefits were to be considered collateral and nothing more. But the fact remains that the underlying effect of carbon trading in the form envisaged by the Kyoto Protocol was to create an atmosphere of interest and to capture the imaginations of developing nations. It is fair to say that the Kyoto Protocol has caught the attention of almost every nation due to the politicization of the issue.

“Every regulatory system requires technical decisions that affect interests, inevitably. Those decisions can become politicized. It is especially worrisome, however, that the first efforts to develop technical rules and procedures for monitoring are taking place just at the time when the existence of the Kyoto Protocol makes countries both aware of the huge sums at stake and especially keen to twist rules to their own advantage.”

41 This statement although being true comes as no surprise as there are always those who take advantage of laws for personal benefit; it does not reduce the gravity or importance of the situation.

If the collective will of western countries are embracive towards combating climate change, then the process of luring in budding countries in simple. But, if the current situation wherein the greatest emitter of carbons does not show enthusiasm in fighting off global warming, many developing countries will remain to be skeptical.

6. INDIVIDUALS

Although heavy industries, multinational conglomerates, and other similar lobbies are largely blamed for the present problem, this in no way means that the average individual is completely free from blame. All of humanity contributed to the problem of climate change and all of mankind is needed to rectify the situation. Tax incentives for using energy efficient products or alternate fuels are needed to sway public support. The government should provide tax incentives to the average consumer to switch to cleaner alternatives or as popular media labels it “greener” alternatives. It must be understood that there should be change at the ‘grass root’ level in order for any real outcome to arise from decades of international negotiation.

A working example of this would be the current system in place in Canada wherein a tax rebate is offered to those consumers who purchase cars which are classified as lower emission cars. Meanwhile those cars which are prone to greater emissions especially the higher end cars are levied with extra taxes. 42 This way the government ensures the promotion of environmentally friendly cars and guarantees the cycle of revenue goes unhindered.

The world has become more aware of the devastating impact that climate change can bring and even though governments remain in doubt, individual cities have started to take actions on their own. “Cities [across the world] have joined the process to create grass-roots engagement with the climate change process and to see if they can learn from other cities and adapt existing policies

42 See http://www.reuters.com/article/tnBasicIndustries-SP/idUSN2023634120070320.
to take into account climate change concerns.\textsuperscript{43} The most evident example of this is in the state of California where the Republican Governor, Arnold Schwarzenegger, broke away from the policies of the Bush administration to regulate emissions from automobiles and power plants.\textsuperscript{44}

The Kyoto Protocol and Bali Action Plan have given little emphasis to this point. Nations must come to a realization that unless the ordinary public understands and signs off on the goal that is the prevention of climate change, little can be done in terms of global efforts.

There should be very little hesitation by governments to implement a policy which promotes environmental protection for no extra economic burden. It is merely a policy change wherein a particular sector is granted extra attention. Thereby no revenue is lost to the government, companies and firms are bound to shift practices and diversify in order to exploit the incentives offered, and most importantly, the world becomes more aware and that much more closer to a cleaner and more breathable environment.

7. SIMPLE LANGUAGE

Policy makers have forgotten that when enacting legislations that the ultimate aim is the acceptance by the public. In “\textit{Keep it Simple, Stupid}\textsuperscript{45}, the author notes that the ordinary population does not care much for legal jargons and Latin Maxims. They simply want to understand what they read and that is what makes a successful legislation. When looking at what are now recognized as successful treaties, it is those treaties that are short and simple that is often proven to be the most effective. In fact, simple conventions such the Outer Space Treaty are more memorable and proverbial to the general public than the Strategic Arms Limitation treaties (SALT Treaties).\textsuperscript{46} The power of public persuasion on their respective governments should never be underestimated. It might prove one day to be the turning point in this struggle to save the milieu.

The long drawn out rules in the Kyoto Protocol have at times confused jurists, so how can it be expected to be understood by an ordinary individual? This flaw is one of the major reasons why the Kyoto Protocol has been considered a failure by many; nobody knows exactly what it says and those who are enlightened to read the news would have received data which only tells one side of the story. The Bali Action Plan has tried to address this problem by making its points relatively simple, but it is nevertheless magnanimous compared to the Kyoto Protocol. A simplified treaty is needed, much on the lines of the Moon Treaty or the Maritime Treaty.

There does not seem to be a great degree of complications involved in the implementation of this ideologue. The framers must simply try to say things which would speak volumes to the common person. In addition, if possible the release of an annexure to the convention explaining the rationale behind each article would be valuable. Of course, the majority of the population would

\textsuperscript{43} Aldy and Stavin (2007) – Pg.125.
\textsuperscript{44} See www.climatechange.ca.gov for details.
\textsuperscript{45} Title of a proposal authored by Gupta (2003). See also Aldy and Stavins (2007) - Pg.116.
\textsuperscript{46} There are numerous Strategic Arms Limitation treaties, referred to as SALT I, SALT II, etc. for information please refer http://www.nuclearfiles.org/menu/key-issues/nuclear-weapons/issues/arms-control-disarmament/index.htm.
not care what it says or why it is there, but nevertheless it provides the media and those interested a rare glimpse into the minds of the framers and perhaps lull down the volume of criticism.

**Ability to Absorb Change**

It was once said the only thing certain in life is death and taxes, and that everything else remains uncertain. From the shape of a mountain to the color of the sea nothing can be said to remain stagnant forever; the same applies to laws and regulations; “Governments cannot bind their successors. If the designers of a treaty specify a path for steep future reductions …successor governments will not likely be willing to pay the high economic costs necessary to follow through when the time comes.” Only time will tell if a particular passed legislation is successful in attaining what it set out to do, if it were to lapse before it accomplishes its goals then it can be deemed as a failure. The proposed post Kyoto architecture is flexible enough to keep up with the changing times but nevertheless rigid in its ability to retain its core values.

The proposed skeleton structure calls on parties to be committed to staving off global warming. Taking for granted the commitment of the global community to fight climate change, this structure provides the basics which need to be accentuated. The proposition puts great emphasis upon the economic factor of various countries. Incentives are given to both developed and developing countries in order to ensure cooperation. These incentives allow the problem of climate change to turn into a potential ‘cash cow’ for not only the government in the form of revenue, but also for the private sector, who stands to gain from added government interest. It is an unabated fact that stress upon economic motives is the best way to ensure cooperation when dealing with issues that are predominantly humanitarian in nature. The proposed architecture understands this as a fact of life and has provided more than adequate stress on economic factors so as to ensure that no matter what the economic condition of a region, the drive for environmental protection will still remain strong.

The political environment of a country forever remains uncertain. A prime example of this is the sovereign state of Ukraine which has witnessed three revolutions within the period of a decade. These drastic changes in government are unpredictable and untenable to anticipate. The put forward skeleton structure is strong and durable enough to adapt to changes in government policy due to change in administration. Globalization is the key to ensuring global cooperation in combating climate change.

By meeting demands with adequate supplies from resources across the world, prices are ensured to remain low and cooperation between countries remains high. This trend guarantees that any change in policy will have to continue to keep in mind the global community in order to ensure the survival of trade. The perfect illustration of this is the crisis faced by American automobile manufacturers who wish to export vehicles into the European market. These manufacturers have to drastically change the specifications of their cars to meet European emission standards. If these manufacturers were to engineer models which are compatible to both American and European markets, they would be able to save millions of dollars in research and other

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47 Aldy and Stavins (2007) – Pg.35.
production expenses. The underlying effect of globalization on climate change is that traders put pressure upon their respective governments to follow international norms regarding environmental protection, to ensure non-turbulent trade.

A lot remains to be said about the harmful effects of climate change. Climate change is causing immense harm to the environment in ways that one cannot even imagine. The direct effect of emissions is climate change, but this is not of predominant concern. It is the repercussions that result from climate change such as increase in storms and droughts in particular regions and wildlife extinction that is worrisome. The degree of harm mankind has caused upon the atmosphere remains unclear, thereby leaving the extent of the damages in doubt. Further research is needed to assess the extent of damage done and the needed compensatory actions.

Change in statistical data is anticipated and with the advancement in technology a better insight will be given into the true nature of harm caused. This creates a problem because governments would not want to change their law immediately after new data comes into existence; it takes great resources and time to come up with enactments which appeal to the masses while fulfilling international and humanitarian needs. To keep changing laws would result in annoyance and in most cases, the resolve to follow a particular legislation would be lost. It is perhaps best to set a time frame of ten years with the current available data to ensure cooperation and compliance by nations. Upon the completion of ten years a new convention should be drawn and account the then available data to formulate a plan for the following decade. This is the only way a law can be made to adapt to environmental change.

Cost-Benefit Analysis

It is a hard fact of life that money makes the world go around and this remains same for the highest king to the lowest peasant. It is not really of any surprise that even humanitarian missions need money to make it a success. The implementation of a successful framework which is capable of combating climate change too requires the financial backing of the global community as whole and as such should not be isolated to a particular group such as the industrialized countries. Of course, the degree of financial commitment will vary from country to country because it would be inappropriate to expect an impoverished nation to match the monetary pledge of a highly industrialized nation.

First an assessment must be made with available data as to the degree of climate change and its corresponding effect on mankind. The current weather has already made extreme heat waves two to four times more likely when compared to the 20th century and over the next 40 years it is expected to become 100 times more likely.49 Climate change is increasing the frequency and intensity of extreme weather, which are causing a sharp upswing in damages resulting from natural calamities. In 2005, natural catastrophes caused US$220 billion worth of damage worldwide.50 In addition to property damages, there are losses in income for months or years after extreme weather events cripple industries such as agriculture and tourism, the life line of many impoverished nations.

49 Ackerman and Staton (2006) – Pg.II.
50 Ackerman and Staton (2006) – Pg.VI.
## EFFECTS OF CLIMATE CHANGE\(^{51}\)

<table>
<thead>
<tr>
<th>Temperature rise by 2100</th>
<th>Likelihood</th>
<th>Effects</th>
</tr>
</thead>
</table>
| 0.6°C                    | Already occurred | ➢ More frequent extreme weather events;  
➢ Slow migration of plant and animal species towards the north; inadaptable species becoming extinct; |
| 2.0°C                    | Will occur unless immediate action is taken | ➢ More tropical diseases;  
➢ Decreased crop yields in developing nations;  
➢ Widespread droughts;  
➢ A total loss of arctic ice and the extinction of many arctic species;  
➢ A near total loss of coral reefs due to “bleaching”\(^{52}\);  
➢ Unstoppable raising sea levels; |
| 3.0°C                    | Likely without any genuine efforts taken | ➢ Decreasing crop yields in the developed world;  
➢ Widespread species extinctions;  
➢ Collapse of various ecosystems; |
| 4.0°C                    | Likely with no efforts taken to reduce emissions | ➢ Entire regions will have no agricultural production in addition to increase in sea levels; |
| >4.0°C                   | Likely with no efforts taken to reduce emissions | ➢ Chance of ocean circulation system shutting down, removing the crucial currents that warm and stabilize the climate of Northern Europe; |

Source: (IPCC 2001b; IPCC 2001a; Watkiss et al. 2005). The climate change scenarios cited here are B1 (2.3° in 2100), B2 (3.0°), and A1F1 (4.8°) from IPCC 2001.

The effects of climate change have been stated above. But, what are the relevant implications of such effects on a nation’s population and resources?

### ANOTHER VIEW OF THE EFFECTS OF CLIMATE CHANGE\(^{53}\)

<table>
<thead>
<tr>
<th>Field</th>
<th>Overlying Effect</th>
</tr>
</thead>
</table>
| Agriculture                | ➢ Up to 2.0°C increase - increased yield of crops;  
➢ Expansion of weeds and disease will destroy crops;  
➢ More than 2.0°C increase, environment will be too hostile for plants to thrive; |
| Industry and Infrastructure| ➢ Increase in extreme temperature resulting in heat waves and storms which negatively affects industries; |
| Fresh Water                | ➢ Intense water evaporation will result in increased use of water or irrigation meaning higher consumption of useable water;  
➢ Eventual decrease in quality of water;  
➢ Heat waves will result in greater use of air conditioners, hence more |

\(^{51}\) Ackerman and Staton (2006) – Pg.V.  
\(^{53}\) Ackerman and Staton (2006) – Pg.vi – viii.
demand on electricity resulting in power shortages since a greater number of countries are reliant on hydroelectric power & nuclear power which require water cooling;

<table>
<thead>
<tr>
<th>Human Health</th>
<th>Warmer, wetter conditions promote the spread of mosquitoes that transmit illnesses;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Global warming will allow tropical diseases to spread farther north and to higher altitudes;</td>
</tr>
<tr>
<td></td>
<td>As recent as 2003 Europe experienced a heat wave which resulted in 5000 deaths, some observers predict temperatures in Europe has increased by 5.0°C compared to 20th century temperatures. 54</td>
</tr>
</tbody>
</table>

| Ecosystems and Extinctions | Even a single degree warmer ocean can cause fatal “bleaching”, sometimes resulting in enough coral mortality to lead to the extinction of some species; |
|                           | Animals dependent on a sea-ice habitat are similarly vulnerable to the effects of small increases in the average temperature; |

Now that the threat of climate change is fully understood; it is time to assess the cost of inaction to the global economy. Various studies have come forward with unique but equally troublesome findings.

1. The German Institute for Economic Research 55 (DIW) has found that if nothing is done to restrain greenhouse gas emissions, annual economic damages would cost 6 to 8 percent of the global economic output in 2100. The same study found that immediate adoption of active climate protection policies could limit the temperature increase to 2.0°C and eliminate more than half of the damages. This in turn would amount to a saving of about 3% of the global economic output. Thus, by 2100 US$12 trillion in annual damages could be avoided by spending US$3 trillion per year on climate protection. The catch is that immediate action is needed. If efforts do not begin by 2025 the same model estimates that it will be impossible to limit warming to 2.0°C by 2100 and hence becoming more expensive.

2. Next, the PAGE model 56 estimates that in the absence of new policies, the cumulative climate damages from the present to 2200 will amount to US$74 trillion. The average annual damages, from 2000 through 2200, will be US$26 trillion. Striking a coetaneous tone with the estimates of DIW, this model too finds that more than half of those damages can be avoided by immediate adoption of active climate protection policies.

COST ASSESSMENT

Out of the various points put forward in the skeleton structure only three raises eyebrows when it comes to financial sustainability. These are:

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The cost of creating a committee that monitors emission standards is expensive and revenue derived from the imposed fines will not be significant enough to offset the costs. It is here that the international community will have to pick up the tab. Based on International Atomic Energy Commissions budget,\(^{57}\) it is probable to assume, that the annual budget for setting up a committee to combat climate change will be around US$300 million.

The surge in electronic trading will reduce the price in setting up carbon trading forums. Nevertheless, offices will have to be maintained which will be inspected by the aforementioned committee. Individual countries will have to pick up the cost of creating such trading forums and maintain a certain international standard. The costs of creating such a forum in a country can be estimated to be about US$5 million annually. The aforementioned estimates are based on leases and expenses for utilities and personnel generally incurred by similar organizations.

Most of the incentives offered to developing countries are in the nature of international acceptance into certain exclusive forums. The direct costs involved are all but minimal, but resulting trading and other indirect costs are impossible to determine. In the case of developed countries, research and implementation of technology is estimated to cost around US $2 trillion. This is the biggest expense of the proposal and is rightly expected to be so. Developed countries will offset a part of this expense by offering their patent of their technologies to other developed nations for consideration. The same should be offered to developing regions but the patent should be inexpensive to ensure cooperation and dedication. In conclusion, if the proposed structure were to be implemented as of 2050, by 2500 it can be anticipated that greener technologies and techniques would have once and for all done away with the problem of climate change. This will hold true only if the growth of greener fuels catches on and expands as fast as the personal computer did in the 1980s.

As seen in the chart above, if the current trend of climate change goes unchecked the predicted damage will be in the hundreds of trillions of dollars by the year 2500. If the proposed skeleton structure were to be implemented, a significant amount of damage will be obviated, but governments have to start taking action today. Governments cannot wait until the last minute because no matter how bold and how dedicated, a late action will not be able to stave of the damages caused by global warming. With dedicated government actions and investment of money in research and implementation of technologies and techniques, by the year 2500 the threat of global warming will become defunct. There will come a time where the cost of implementation of plans will be higher than the damage done, but if the global community were to stop here, using the excuse that it is no longer feasible to fight global warming, there is chance that the threat may evolve and catch up; if they push through, global warming will be eradicated like small pox.

**Conclusion**

The Earth is extremely fragile by design. Truly its enormous size and weight hides this fact well. This in turn leaves people free to exploit her to the extent beyond recovery. No matter what view is taken of the Earth whether it is a view which advocates its delicacy or one which promotes its durability, it must be understood that if proper care is not given, it will invariably lead to its

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58 It bears no dependence on external figures. It is not numerically accurate; the intention of its inception being to show how much cheaper it is to take preventive actions rather than ruminative ones.
destruction. This is the first time in history that humankind through technology and innovations can take back a harm done.

World leaders have to look at the significance of this environmental catastrophe because if the climate becomes too warm, human life will cease to exist, and that is a possibility faced by increased emissions of greenhouse gases. Issues such as poverty, world trade, exploration, and such will no longer be of much concern as the environment will be too inhabitable to support basic human life. To a certain degree the world has acknowledged the far reaching implications of a warmer globe and it is with this in mind that the global community signed off on Article 2 of the Kyoto Protocol. The proposals puts forward, in this skeleton structure, recognizes the wishes of the global community as understood by Article 2 of the Kyoto Protocol and goes further to prescribe steps in its implementation.

Article 2 of the Kyoto Protocol advocates emission caps, development and exchange of cleaner technology, protection of sinks, waste management and sharing of information and sustainable agriculture. These subject matters are understood as being the core requirements needed in order to prevent climate change and have been given due consideration and acceptance. This article presents points which may be used to coax governments into doing the right thing and hopefully present an uncomplicated insight into a complicated problem.

“Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius - and a lot of courage - to move in the opposite direction.” - E.F. Schumacker

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59 Kyoto Protocol.


References


