International Response to Climate Change: A Review

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ABSTRACT

Climate change includes the changes in temperature, precipitation, wind patterns as well as other environmental factors. Climate change has always been there but the process has been accelerated so catastrophically due to human activities that now it is nearly impossible to reverse its impacts on the environment. International treaties have joined hands long back to combat climate change, there are a number of policies introduced worldwide to reduce greenhouse gas emissions, promote cleaner productions and sustainable development. Climate change is also addressed globally by the United Nations Framework Convention on Climate Change (UNFCCC). This paper focuses on the mitigation steps and policies implemented by different countries under United Nations Intergovernmental Panel on Climate Change (IPCC).

Keywords: Climate Change, International Treaties, Mitigation, Sustainable Development, Cleaner Productions, United Nations, Policies.

I. INTRODUCTION

Since 1990, climate change has demonstrated the effects of financial operations. Increasing industrialization, urbanization and development has led to massive emissions of greenhouse gas, leading to climate change which is already threatening development in poor and climate-changing countries. If there's no checking, it could lead to drastic changes in climate seen by future generations and the fluctuations maybe very rarely seen in millions of years. Emission levels continued to increase, despite policies and legal actions taken in various countries, only since 2006, following publication of Stern Climate Change Economics Review. One reason for that has been the reaction of a clique of economists to the concerns and calls for action by climate researchers since the publishing of the first IPCC report in 1990. The answer was the misapplication of an instrument for prescriptive strategy created by equilibrium economists: the cost-benefit assessment.

This article discusses the issue of how and why the focus of climate change economy shift from the single discipline cost-effectiveness analysis as shown by the 1995 IPCC Second Assessment Report to the subsequent IPCC 2001 and 2007 multidisciplinary unsafe assessment and radically distinct policy requirements for the 2006 Stern Review.

Applying the traditional cost-benefit analysis, with certain exceptions, has produced policy requirements for insignificant carbon taxes and postponed actions until further data on the issue is accessible and R&D is performed to reduce the cost of any reaction. The fresh mainstream uncertainty analysis, however, indicates that a worldwide political choice on objectives to prevent dangerous climate change should be made as a matter of urgency, while cost-effective and equitable policies and measures should be put in place immediately and strongly to speed up progress towards full worldwide economic decarbonisation. A social and political job is to define...
hazardous in this context. Implicit progress has been made towards the 2 ° C target of the European governments for average worldwide long-term temperatures above pre-industrial concentrations, the G8 50 per cent reduction of worldwide GHG emissions below 1990 concentrations by 2050 in line with the June of 2007 conference in Heiligendamm, Germany and the "profound cuts" in UNFCCC Bali’s December 2007 action plan. The summary for policymakers for AR4 WG3 indicates the depth of the reductions. It shows six literature scenarios on the necessary scale. For a possibility to be below 50:50, models indicate that worldwide CO2 emissions should be 50 to 85% below the level of 2000 by 2050 and that they will be harmful (by sequestration and retention) by 2070. Therefore, the world should strive for complete decarbonisation by 2050 or earlier, if dangerous climate change is to be prevented, defined as a 2 ° C or lower increase. All industries in every single country should aim to prevent the atmosphere from emitting GHGs at the earliest feasible price. The AR4 WG2 Summary offers "excellence" trust in extensive mortality of coral reefs without urging intervention and appears to be important in hazards of loss of coral reefs and intact tropical rainforests.

II. METHODS AND MATERIAL

Climate change agreements across the globe

According to the IPCC, worldwide warming must be kept below 2 ° C, methane and other greenhouse gases must be reduced in order to solve worldwide warming and decrease pollution by a quarter as opposed to 1990 and up to 2050, to decrease global warming by 2025. The countries in global terms unite in the fight against climate change with the Stockholm Declaration, the Rio Declaration, the Kyoto Protocol, the Montreal Protocol and the Paris Agreement. Global conventions and meetings such as Globally have been implemented by policymakers in their respective nations to remedy the damage already caused to an ecosystem.

2.1 United Nations Conference on the Human Environment (Stockholm, 1972)

In 1968-1969, the General Assembly adopted resolutions 2398 (XXIII) and 2581 (XXIV), which were designed to encourage and guide the worldwide conference in Stockholm, in 1972. "Preventing and protecting the human environment" (Resolution 2581 (XXIV) of the General Assembly: "The General Assembly, in 1972, decided to convene a Global Conference in Stockholm in order to act as a practical tool for promoting and providing guidance, in 1968-69, in Resolution 2398 (XXIII) and 2581 (XXIV)." In 1972. Protecting and improving the human environment and preventing its impairment "(Resolution 2581 (XXVI) of the General Assembly.31 Stockholm has been a first study of the global human impact on the ecosystem to build a fundamental common perspective of how the task of preserving and enhancing the human environment can be tackled. The Stockholm Declaration therefore mainly includes broad environmental policy objectives and objectives, rather than full normative positions. However, after Stockholm, there has been a dramatic increase in worldwide knowledge of environmental issues, as has adequate international environmental legislation. At the same moment, international environmental activism's focus on media-specific and cross-sectoral regulation and the synthesis of financial and growth factors in environmental decision-making has gradually extended beyond transboundary and global commons problems. The international community thus faced the challenge of systematizing and restoring current environmental normative standards, as well as the courageous posing
of legal and political foundations for sustainable development at the time of the Rio Conference. In this vein, UNCED was expected to draw up the "earth charter," a solemn declaration on legal rights and obligations concerning the environment, as part of the 1982 UN General Assembly World Nature Charter (General Assembly Resolution 37/7). Although the consensus text that arose at Rio was not the initially envisaged lofty paper, the Rio Declaration, which reaffirms and builds on the Stockholm Declaration, has nevertheless demonstrated to be a significant economic legal landmark.31

This meeting lifted consciousness of a hitherto little talked about problem from a generation, the worldwide environment. The Stockholm Conference has unified the environment worldwide and helped establish the United Nations Environment Program (UNEP). The meeting and its aftermath produced the global nature of the atmosphere recognized and brought the concept of the development-environment partnership. It has been said that the only way to join the world’s nations is to confront a common foe; perhaps that obstacle will be environmental degradation.33

2.1.1 Implementation of the Stockholm Declaration

Implementing the treaty at all stages of the population (municipal, national, national) is a great chance to promote improvements in economic, occupational, government health and food strategies. But there are huge difficulties.

Although some nations were originally unwilling to agree, the treaty was lastly developed as a vibrant legal tool; for example, it provides for potential inclusion of fresh drugs with POP features. A precautionary' strategy' is also introduced in Annexes A, B or C to cover additional POPs. Calls for the inclusion of polybrominated biphenyls (PBBs), hexachlorocyclohexanes, hexabromobiphenyl and PAHs in the treatise, amongst others, were issued. In order to take effective action, developed countries will have to provide financing and technical support in the least developed countries.41

The European Commission appears committed to supporting transforming markets with technical and economic support for emerging countries and nations. In order to reduce use and dispersion of POPs to China, Canada has developed a contribution of $200,000. DDT is still produced by China and India. The pace with which they will implement it is unsure, even if they ratify the Treaty. Note also the need to develop a national implementation plan (NIP) for each Party to the Stockholm Convention describing the way it fulfils the contract’s obligations. The authorities need to develop NIPs within two years of their entry into force. The NIP should provide a framework for the systematic and participatory implementation of main policy and regulatory reform, capability building and investment programmes.

Developing nations and nations with transitional economies are qualified for NIP execution capacity building assistance. The Global Environment Facility provides funding for these projects. In order to strengthen the domestic ability to handle POPs and to implement the Convention, the GEF has laid out certain rules for activities which permit the Stockholm Convention and has endorsed the project "Developing National Implementation Plans for POP Management."41
2.2 The Montreal Protocol (1987)

The main cause of depletion of ozone layer has now been recognized in the world as chlorofluorocarbons (CFCs) and other ozone-depleting substrates (ODSs). Molina and Rowland6 first acknowledged the opportunity for stratospheric ozone depletion by CFCs in 1974, thus giving an" early warning" This science alert resulted in decreases in ODS emissions through citizen action and domestic laws7,8. A decade later it became more worrying to find the ozone holes over Antarctica9 and the subsequent distribution to ODSs10. ODSs ' significant threat to the ozone layer was formally recognized by the Montreal Protocol of 1987 and provided a structure to reduce and progressively eliminate the global production and consumption of ODSs. Significant reductions in the manufacturing, use, emissions, and atmospheric levels ofCFC-11, CFC-113, methyl chloroform, and several other ODSs4,2,3,5 have happened under the Montreal Protocol and domestic laws, and proof for regeneration of stratospheric ozone4,18 has emerged. In a" universe prevented" lacking the early alert in 1974 and the 1987 Montreal Protocol, the ozone layer's depletion would probably be much higher than it has been experienced in today's globe. ODSs and their replacement fluorocarbons are also greenhouse gasses19-24, contributing to environmental radiative pressure (RF). Actions to phase out ODSs and/or boost the use of replacement gasses under the Montreal Protocol thus have implications for climate forcing. Previous studies have recognized that continuing growth of the ODS emissions will lead to significant increases in instant radiation or climate warming19-22,24-27, even if the depletion of ODS ozone is counteracting forcing28. In particular, reductions in the ODS level in the atmosphere also assist to preserve the climate in order to protect ozone. This dual protection of ozone and climate under the Montreal Protocol requires a thorough assessment, especially as the 1997 Kyoto Protocol29 of the UN Framework Convention on Climate Change entered into force in February 2005.1

2.2.1 Implementation of the Montreal Protocol

By the end of this millennium, the ozone layer is anticipated to rebuild as the Montreal Protocol goes into full and permanent application. Without this Treaty, the deployment of ozone would have increased tenfold in comparison to current levels, leading to million additional cases of melanoma, additional cancers and eye cataracts by 2050. An estimated 2,000,000 people are saved from skin cancer every year by 2030 under the Montreal Protocol. To date, the Protocol Party's 1990 levels have phased out 98 percent of ODS globally. Because most such products are strong greenhouse gasses, an important contribution to the protection of the global climate system is also made in the Montreal Protocol. Between 1990 and 2010, the treaty control regulations plan to have 135 gigatons of CO2, or a total of 11 gigatons an annual amount, reduced greenhouse gas pollution. According to Kigali's amendment, HFC-restrictive emissions are expected to be reduced under the Montreal protocol in the form of greenhouse-gas equal exports of up to 105 million tonnes of coal dioxide, thus contributing to prevent global temperature rises of up to 0.5% Celsius in 2100. The Montreal Protocol is also a major contributor to the UN Sustainable Development Goals. Due to all these factors and more, the Montreal Protocol is considered to be one of the most efficient environmental agreements of all times. The protocol's
achievements since 1987 are unparalleled and remain an inspiring example of the achievements of worldwide co-operation.42


On the 20th anniversary of the Stockholm Conference on Human Environment, officials from 178 countries, non-governmental organizations (NGOs) and other stakeholders (about 30,000 in total including press participants) gathered in Rio de Janeiro to address worldwide environmental issues that would become essential to policy execution. The meeting attempted consensus on concrete policies to balance financial activity with planet security to guarantee a sustainable future for all individuals.37 The first UN Environment and Development Conference – short UNCED, but better known as the "Earth Summit" after three days – marked the culmination of two-and-a-half years of world collaboration showing the most responsible plans for human life.38

The United Nations Conference on Environment and Development (UNCED) was held in Rio de Janeiro from 3-14 June 1992. This meeting focused on the state of the worldwide climate and the connection in a political sense between economics, science and the environment. The meeting ended with the Earth Summit, which brought together representatives from 105 countries to show their dedication to sustainable development.33

Several global environmental agreements have existed since the 1972 convention, a range of which have been approved by Canada. These include the Great Lakes Water Quality Agreement of 1978; the Geneva Long Range Transboundary Air Pollution Convention of 1979; the Helsinki Agreement of 1985 (a 21-nation undertaking to decrease sulphur dioxide pollution); the Montreal Protocol on Substances Depleting the Ozone Layer of 1988; and the Basel Convention on Transboundary Movements of Hazardous Wastes of 1989.

Over 130 nations ratified the UNCED Convention on Climate Change and the Convention on Biodiversity. Delegates also agreed on Agenda 21, an action plan to grow the earth in a sustained way through the 21st millennium and an extensive declaration of the values for forest safety.35 The Rio Declaration was recognized without amendment, by all the countries current, as a non-binding declaration of wide environmental policy values. New global networks for implementing and supervising contract execution have been formed, both officially and casually.

Ultimately, the UNCED discussions were in money. The industrialized nations have it and from emerging countries they want it. If the industrialized countries want environmental safety, they have to be ready to pay for it. The conflicts between wealthy and poor and the financial differences behind them were at the heart of every important debate.36

2.3.1 Implementation of United Nations Conference on Environment and Development (UNCED)

The Rio Conference gave prominence on the political agenda to environmental issues. It spelled out the questions, even though it did not have all the answers and informed about the issues a whole generation of policymakers, government officials, industry and the people. It also repeated the call for global collaboration on environmental issues first heard in 1972.

Agenda 21 is the next century’s environmental action plan. It is not legally binding, but is the foundation
for a fresh global relationship for global sustainable development and preservation of the environment.

Agenda 21 was the main general paper that came out of Rio and was designed to address some of the basic resource degradation and development aid issues. It discusses many problems relating to worldwide sustainability and contains key sections linked to funding, technology transfer execution and organizational follow-up to UNCED. The primary objective of Agenda 21 is to guarantee that growth continues in a viable way: "The scheme of rewards and penalties that motivate economic behaviour must be reoriented to become a stron..."

Another objective is eventually to eliminate poverty worldwide by improving energy and natural resource management and improving the quality of lives by securing access to housing and clean water, wastewater and strong waste therapy. Agenda 21 also seeks sustainable use of global and regional resources such as atmospheres, oceans, seas and freshwater, and marine organisms. The ultimate objective is to improve chemical and waste management. It is projected that one-third of third world fatalities are triggered by human or industrial waste contaminated meat and water.

Although UNCED’s 154 involved states’ agreed terms are well represented in the five main contracts, individual states’ positions are not. The five most important UNCED nations could sum up their behaviour as follows: Canada, "do it;" USA, "delay it;" Germany, "control it;" Japan, "fix it;" and India, "sell it."

Canada took part in all the debates, pledged to rapidly ratify the conferences, and made a real attempt to make the Earth Summit a success. In recent years, Canada has implemented numerous initiatives to support its commitment to the environment, such as the National Round Table on the Environment and Economy, the Environmental Choice Program and the National Packaging Protocol. The Green Plan launched in 1990 is a major commitment to Canada. It sets out goals and plans for a variety of operations, similar in spirit to Agenda 21.

2.4 The Kyoto Protocol (1997):

Kyoto is a global arrangement to reduce emissions of carbon dioxide, CO2, the largest greenhouse gas emissions and five other compounds, none of which is ODS. The fact that the Kyoto Protocol does not contain ODSs and that the Montreal Protocol has no formal climate variables provides reason to consider prior and new ODS emission scenarios and their substitution, as well as their importance to the anthropological RF. The entry into force of the Kyoto Protocol on 16 February 2005 was a result of international climate change concerns. This comprises legally binding emission targets for industrialized countries to be achieved during 2008-2012 (the so-called Kyoto commitment period). The proponents of the protocol greeted this as a breakthrough in global climate strategy as they committed important emission reductions to developed world commercial-as-usual emissions under the original rules and (ii) created a comprehensive worldwide structure for further expansion and further climate protection activities. The Protocol sets obligatory GHG emission targets that can be enforced. Initial emission reductions for involved countries ranged from -8 to +10 percent of the 1990 prices, whereas the overall reduction goal was 5 percent below that of 1990 from 2008 to 2012. At the time of the first engagement in 2012, the Protocol has been modified for a second commitment period; the new overall target for a decline of 18% was below 1990 levels by 2020. Three procedures for decreasing GM emissions are the focus of the Protocol, namely Joint...
Implementation (JI), the Clean Development Mechanism (CDM) and the ITC.12

2.4.1 Implementation of the Kyoto Protocol

The United Nations Framework Convention on Climate Change (UNFCCC) Kyoto Protocol entered into effect on 16 February 2005. In the original engagement era from 2008 to 2012, the 37 most industrialized countries of the 146 nations ratifying the agreement decided to decrease their GHG emissions below 1990 rates. At the Buenos Aires Conference of the Parties in December 2004, negotiators produced little progress towards consensus on post-2012 guidelines. While big developing countries like China, India, and Brazil are emitting significant and rising quantities of worldwide GHGs, emerging nations do not presently have a duty to decrease emissions. During the last three Conferences of the Parties to the Climate Convention (COPs 8, 9 and 10), the problem of developing nation obligations was already controversial. The continuity of the Kyoto Protocol after 2012 may rely on the consensus reached on this problem between Annex I and emerging nations. Annex I countries are permitted to achieve certain emission reductions by investing in energy and tree planting projects (reforestation and forestation) through the "Clean Development Mechanism" to reduce GHG emissions in developing countries. But countries that are experiencing or at danger of large-scale deforestation, like Brazil, Indonesia, Bolivia, Peru, Columbia, and Central African nations, have no motivation to decrease or prevent deforestation emissions. There is a definite need for significant rewards for developing, ping nations to engage meaningfully in the near-term reduction of emissions while maintaining the guiding principle of "common but distinguished obligations" of the UNFCCC.31

Following years of inability to achieve global agreement on an action strategy to substitute the Kyoto pact, United Nations. Negotiators decided four years earlier in Paris that all countries would function to maintain this century’s global temperature "well below" 2 degrees Celsius above pre-industrial concentrations and to create severe attempts to maintain it rising to just 1.5 degrees.

In particular, further financing has been promised to reduce emissions to emerging nations, and new structures have chosen to report emissions and mitigation measures for national. However, President Donald Trump deleted his country, which 170 countries have since endorsed, including all major developed and economic emergent, from the Paris Agreement, leaving America the only major polluter to choose. greenhouse gases. President Donald Trump, however, removed his nation from the Paris Agreement, which has since been approved by 170 nations, including all the main advanced and emerging economies, leaving the United States as the only significant polluter to opt out.

The United States before Kyoto. Congress warned that, unless an accord was reached to force obligations to developing nations such as China and India, America would not ratify the Kyoto Protocol. The accord was scarcely reached when U.S. Congressional representatives in Kyoto, who had resisted it said it would never float. U.S. gas and petroleum lobbies pressure to scrutinize the treaty was strong in advance and announced America’s withdrawal in 2001 when George W. Bush became President.

For the other nations in February 2005 the Kyoto Protocol came into effect. Tentative attempts at reaching another arrangement including emerging nations, in particular between the US and a fast-
growing China, started to create conflict. At the end of 2012 of the first phase of the Kyoto Protocol, Doha decided to extend the duration to 2020. However, only 88 of the initial Kyoto signatories approved the Doha amendment as early as last months, which would maintain its decrease objectives for the Kyoto Protocol by 2020. At least 144 states in the Kyoto Protocol are required to make the amendment.30

2.5 The Paris Agreement (2015)

The UNFCCC Agreement to maintain global temperatures below 2 °C above pre-industrial concentrations achieved in December 2015 to a mitigation agreement on climate protection, called the Paris agreement. The agreement will be enforced 30 days after 55 countries have ratified the Treaty. The 55 countries must account for at least 55% of the world’s emissions.13 On 4 November 2016, the Paris Agreement entered into force. There were 197 signatories to the Paris Convention as of 24 July 2018, of which 179 joined the statement representing 55% of global exports.14

The Paris Agreement builds on the Convention and for the first time brings all nations into common support with greater assistance to assist the developing countries to make ambitious efforts to combat and adapt to climate change. A new path in the global climate effort has therefore been identified. By keeping the global temperature well below 2 °C above pre-industrial concentrations in this Millionth anniversary and by attempting to further reduce the temperature increase to 1.5 °C, the Paris Agreement mainly aims at reinforcing the global response to the danger of climate change. Furthermore, the agreement seeks to increase the ability of countries to deal with the impacts of climate change. To accomplish those ambitious targets, appropriate flows will be put into practice in order to foster action among emerging nations and the most vulnerable countries in line with their own internal objectives. In addition, an enhanced capacity building system will be established. The Agreement also provides for enhanced action transparency and a sounder transparency framework.

2.5.1 Implementation of the Paris Agreement


In accordance with the Paris Convention Japan promised to cut emissions by 26% below the 2013 levels by 2030, which climate experts have criticized as insufficient to keep global temperature rises below 2° C. Under the Paris Convention, by 2030 Japan has pledged to reduce its emissions to 26 percent below 2013, which climate scientists have criticized as being insufficient to maintain a below 2-degree increase in global temperature. Ministry of the Environment figures show that Japan’s full greenhouse gas revenues fell by 2.9% in fiscal 2015 and by 6% in 2013 in Paris, but still were about 4 percent higher than the founding year of the Kyoto Protocol in 1990.30

III. RESULTS AND DISCUSSION

Politicians across the globe have come up with fresh concepts and opportunities to solve the impacts of
climate change after various statements and meetings. New policies were created and the ancient policies modified in order to further reduce climate change and its adverse effects on the environment.

With regard to the baseline scenario, fresh models were created for the future ODS regulation as the Montreal Protocol recognizes the importance of improving its dual ozone and climatic benefit. The parties first considered this in 1999 when the Kyoto Protocol was enacted, but it was not yet in effect. During international meetings and decision-making, the Parties to the Montreal Protocol have seen options to further reduce ozone depletion while reducing environmental stress incidentally. Some important cases include: (i) continue to develop the phase-out of HCFC and use of low GWP substitution; (ii) Collection and disposal of old cooling, air conditioning and heat insulation material materials discovered in antique cooling banks; and (iii) Assessment of the technical and financial feasibility of further overall reduction of ODS pollution. Emission reductions in compounds, such as CFC and HCFCs, with reducing emissions or expected phase-outs in the next several decades, are generally less effective than those with increasing concentrations of emissions or enhanced emissions.

The adoption of such an instrument under the Protocol would encourage policy-making in developing countries to monitor deforestation and allow tropical countries to take an important role in preventing dangerous climate interaction. The progress towards emission goals has been mixed since the entry into force of the Paris Accord. The Chinese authorities announced their outstanding advancement in reducing emissions of greenhouse gasses and said that China had met its commitments in 2017 for 2020. In 2018, the EU officials, for example, reported that all Member States have fallen behind when it came to attaining their targets; Sweden, Portugal and France have taken the most steps by 2018, attaining 77%, 66% and 65%, respectively, of the 2020 objectives. U.S. advances were less evident. Some surveys found that changes to U.S. climate policies impeded the country from attaining its climate goals, while others claimed that higher greenhouse gas legislation was being introduced in many of the U.S. cities and nations that allowed the country as a whole to remain on track. Despite these research, several worldwide research agencies have noticed ongoing increases in coal emissions. The Rhodium Group reported a 3.4% rise in US emissions in 2018, with a 1.6% rise in global coal dioxide, primarily flat, between 2014 and 2016, and a 2.7% rise in 2017 and 2018 respectively.

**IV. CONCLUSION**

The concept of sustainability has been modified for greener and cleaner Earth by many nations. Scientists worldwide have worked jointly to enforce these international treaties and their agreements to lower their country’s emissions. Such agreements and conventions definitely led countries to acknowledge environmental problems, address areas and mitigate initiatives in the direction of a greater future for the planet and its community together with their people.

The future of Kyoto is indefinite, but the global climatic change has no bearing on tropical deforestation. There is still time for scientists and policy-makers to exploit what definitely is one of the greatest opportunities for global carbon trading today to safeguard tropical forests before the benefit of the Kyoto Protocol rises in burn. There may be international conferences, but preventive measures are the step every country wishes to take because evasion is always larger than remedial action.
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