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CLIMATE CHANGE AND COLLECTIVE ACTION: WHY CLIMATE CHANGE COLLECTIVE HAS FAILED AND WHAT NEEDS TO BE DONE?

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ABSTRACT

Amongst the various global problems of our times and the one that human beings are facing today such as poverty, hunger, migration, global warming, climate change is the serious and contentious of them all. It is the most serious global problem because of the severity of harms that it might bring. Both the normative and empirical dimensions of human life are conditioned by the environment and so it carries global concerns. Almost all the aspects of an individual's life such as food, clothing, shelter and what we do to earn them depends on the climatic conditions or broadly on our environment. Although this dependence has been substituted in the modern industrial societies by different possible alternatives created by money and technology but this threatens to establish a harmful impact on our environment. It is not only proving dangerous for the present generation, but likely to be detrimental for the future generations as well. It poses a normative question on the technological advancement of the modern civilization. Somewhere down the line we have to rethink and reorient our understanding of the ecology as such for the reason that where are we heading for?

INTRODUCTION

Global climate change causes many harms some of which are drought and crop failure; infectious disease such as malaria, cholera and dengue; flooding and destruction of house and infrastructure; enforced relocation; rapid unpredictable and dramatic changes to the natural, social and economic world, melting of glaciers, rising sea level, tropical cyclones such as Katrina, Rita, Tsunami. It is important to understand the term very well before we address this at length. The term 'climate change' has often been used synonymously with global warming and ozone depletion. However, the term climate change must not be confused with the two because they connote different meaning and are different environmental problems. Climate Change refers to the harmful impact of the man made activities such as pollution (air, water, thermal etc.), greenhouse gases released from the factories, industries and because of their abundant accumulation in the atmosphere the weather or the climate of the whole world is changing resulting in rise of earth's temperature (becoming more hotter).

HARM AND DISTRIBUTIVE ETHICS

This idea of causal connectivity (between climate change and global warming) forces us to think about the factors that cause such harm and who should be responsible for the mitigation of these harms? However, this research does not engage with the sciences of climate change, rather deals with the responsibility factor. The answer seems quite simple at the first glance that the justice lies in the fact that those who caused the harm are morally responsible to mitigate it. There is a common consensus regarding this responsibility that the polluters must pay. But deciding any framework for sharing the responsibility cannot be located in the present context only because even the past generation of the well-off societies have also polluted the environment. So the idea of moral responsibilities to mitigate climate change is a matter of 'intergenerational justice' as well. Now the debate is

on whose shoulder should the responsibility rests, and in what form such as technology transfer, sharing of burdens, and distribution of benefits? The polluter pay principle will be discussed in the following chapters at length and its shortcomings. However, historically (over the past three centuries), we can trace that the advance industrial nations of the West has misused the earth's natural resources for their own self-interest and has hardly paid any attention to the impacts their economies and cultures were having on the environment.

This raises the issues of justice, particularly with respect to the distribution of benefits and burdens amongst the states of the global political community to combat climate change. But prior to this we must know what are the benefits and the burdens with regard to global climate change? And has the burdens been equally or unequally shared globally between the developed and developing countries and in addition what is the nature of inequality of burden sharing? In relation to climate change, the benefits are the '*entitlement*' that is the wealth or the property that the developed nations have made through over consumption and extraction of global natural resources. And the burdens in relation to climate change are the *'cost'* that the developing countries are subject to or paying in the form of Carbon Emission Cut, Phasing Out, Displacement/Migration, drought and crop failure, floods, infectious diseases etc. In order to know about the burdens and the benefits been equally or unequally shared we can look deeper into some of the major conventions and protocols that have taken place from Stockholm (1972) till COP25 (2019).

CLIMATE CHANGE AS A GLOBAL PROBLEM

Climate change is a global problem primarily because of the greenhouse gas emission that has already affected and presently affecting the human beings across the countries irrespective of geographical locations, size of economy etc. The greenhouse gases characterizes climate change a universal phenomenon associated with other moral vulnerabilities i.e. violation of human rights, global poverty, issues of migration, issues of livelihood particularly for the fishing communities and decreasing agricultural productivities etc. and therefore no state is capable of resolving this problem single-handedly.

Global climate change raises some of the ethical issues that violate human rights of the powerless and poor people of the developing countries. They are the primary sufferer of the luxury emission of the well-offs of the developed countries. Various cosmopolitan philosophers argue that the debate regarding the greenhouse gases emission is connected to the larger moral issues of human rights. Paul G. Harris also talks about it in his book, "*World Ethics and Climate Change: From International to Global Justice*" where he distinguishes subsistence emission from luxury emission to reflect upon the gravity of the issues. He argues that most of the poor people emit greenhouse gas for their livelihood and most of the well-offs of the developed countries have done it for their luxury. He also highlights what moral crisis the emergence of 'new consumerism' has brought to the developing countries as well and the newly emergent middle class of the developing countries are also responsible for it.[1] He further reflects on normative issues of the affluence and consumption that differentiate developed and developing countries as far as the per capita emissions of the greenhouse gases are concerned. Quoting Sachs he also highlights the 'affluent countries of the South such as Singapore, China and its 'new consumerist class'. Empirically, he cites example of China and argues that the top hundred million consumers and polluters in China have lives that are utterly unrecognizable when compared to the others who lives in acute poverty.[2]

Harris relates the per capita emission of the greenhouse gases with the idea of individual obligation and Thomas Pogge's negative duty. This connectivity places obligations on the shoulders of privileged individuals to share the burdens and benefits. Various cosmopolitan philosophers such as Paul G. Harris, Gillian Brock, and Darrel Moellendorf supports Poggean idea of negative duties and advocate its application in dealing with the issues of climate change.

To quote Gillian Brock and Darrel Moellendorf (2005:2)

[1] Harris, Paul G. (2010), "*World Ethics and Climate Change: From International to Global Justice*", Edinburgh University Press, pp. 10-11

[2] Ibid, pp. 128-29

A widely held percept of justice, indeed morality in general, is that we should refrain from foreseeably and avoidably harming others. But if the massive and desperate poor of the world….. is the foreseeable and avoidable consequences of social conditions shaped and enforced by us, the advantaged citizens of the affluent countries, then, according to Pogge, citizens of the rich countries are participating in the largest, although not the gravest, crime against humanity in the history of the world. Pogge seeks to defend the thesis that advantaged citizens of the affluent world harm the world's poor…..[emphasis added][3]

Being a cosmopolitan philosopher Pogge argues that we must not support those institutions that violate the human rights of the world poor. If applied to the climate change as duty then he argues that the affluent people of the rich countries should refrain from supporting those institutions that are contributing to massive emission of greenhouse gases to the climate. If they support these kinds of institutions then it will force the powerless people of the global south to live in vulnerable conditions. This negative duty is a kind of moral obligation on the well-off of the developed nations not to favour those unjust institutions that treat people unequally and create moral deprivation in the global south.[4]

COLLECTIVE INSTITUTIONAL EFFORT AT THE GLOBAL LEVEL

It is important here to enquire into the institutional response of the world society to combat the problem of climate change. The first institutional effort at the global level to deal with the problems of human environment held at the Stockholm in 1972. The United Nations Conference on Human Environment (held at Stockholm) changed the focus of the global politics from nation- state to the planet Earth. It focused on the issue of conservation and management of natural resources. During that conference, no one could have predicted or even imagined that time about the various crucial environment problems that would arise by the 20th century. The problems like ozone depletion, climate change and trading hazardous material. This was the first conference on environment that led the foundation for the Global Environmental Governance. The positive outcome was that it led to the establishment of the United Nations Environment Program (UNEP). The Conference called upon both the government and the people to exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity (coming generations). This conference arrived upon 26 principles that to be followed by the governments of the nation-state. During the conference, many of the third world and socialist countries criticized the anthropocentric views of the capitalist countries and they say that environmental problem is the problem of capitalism. And due to the ideological differences, many of the socialist countries walked out of the Conference as a mark of protest.

To reaffirm the declaration of the United Nations Conference on the Human Environment the world Community met at Rio de Janeiro from 3-14 June 1992. In this Conference, they decided to establish a new and equitable global partnership though the creation of new levels of cooperation among states. The Rio summit produced both Agenda 21 and UNFCCC. The UNFCCC is a framework document setting the rules and procedures for further action. But as such it states no emission reduction targets for party countries. Rather the UNFCCC states commitment to the principle of 'Common but Differentiated Responsibilities' in tackling climate change. After 1992, the idea of Global Environmental Governance entered into the active politics of both the developed and developing countries. In 1997 the world leaders met in Kyoto in Japan and signed an international agreement linked to the UNFCCC. It amended many provisions of UNFCCC and for the first time it came up with legal binding to be followed by the industrialized countries. The Protocol was signed in December 1997 and entered into force in February 2005. The countries that ratified the Kyoto Protocol agreed to reduce emission of six Green House Gases (CO2, CH4, NO, SF6, HFC and PFCs) that contribute to global warming and thus climate change. The Kyoto Protocol sets specific emission reduction targets for each industrialized nations. At the insistence of USA, the Protocol also

[3] Harris, Paul G. (2010), "*World Ethics and Climate Change: From International to Global Justice*", Edinburgh University Press, p.136

[4] Ibid, pp.136-37

includes 'flexibility' mechanism to meet their targets through other means than domestic reductions: for example, to buy and sell emission permits and the Clean Development Mechanism that enables developed countries to get emission reduction credit for investing in emission reduction projects in developing nations. However, the protocol did not put any mandatory targets for the developing countries. This feature of the protocol offended USA on the grounds of its unfairness to the USA, despite the fact that USA remains the highest per capita emitter. This led to the withdrawal of USA from the Kyoto Protocol in 2001. However, until date, actions have fallen short and there is hardly any state that abides to it.

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THE STOCKHOLM CONFERENCE

The United Nations Conference on the Human Environment held in Stockholm, 1972 was the world's first organized effort with the majority of the states and governments participating in it to address the environmental problems endangering humanity. Prior to this conference, most international environmental meetings focused on scientific issues. It focused on the conservation and management of natural resources. However, the Stockholm conference for the first time threw light on the economic differences between the rich and the poor countries with regard to mitigate the problem of human environment. In this conference, the leaders of the developed countries emphasized on the adverse impacts of human induced environmental problems, while developing-country participants focused mainly on the social and economic development. Developing countries laid the blame for much of the poverty and pollution in the developing world because of their practices that exploited poor countries. They feared that agreements coming out of the conference might have adverse effects on their own development. They worried that stricter environmental standards in the developed countries would raise the price of manufactured products, exacerbating already unfavourable terms of trade.

During the conference, the developing countries demanded sovereignty over their biological resources, technology transfers from rich to poor countries, and access to additional financial resources. The most divisive topic of deliberation was the first demand: that developing countries should be allowed to share in the economic benefits of biotechnology, such as pharmaceuticals, derived from biological resources taken from their territories. The developing countries began to connect their demands for technology transfer to access to biological diversity by developed countries. As a result, diplomats agreed at the conference that all states should have sovereignty over their biological resources.

In the Stockholm Declaration (United Nations 1972) number of principles related to international justice appeared. Paragraph 4 of the declaration stated that environmental problems in the developing counties are caused primarily by underdevelopment, that millions of people there live 'far below minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation', and therefore the industrialized countries should make efforts to reduce the gap between themselves and the developing countries. Principle 9 stated that 'environmental deficiencies generated by the conditions of underdevelopment and natural disasters pose grave problems and can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance'. Principle 12 called on the developed countries to take into account the particular requirements of the developing countries and any costs which may emanate from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose'. Principle 21 declared that countries have the 'sovereign right' to exploit their own resources as they choose, and the 'responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment' of other countries.

It is said that these statements were the early steps towards incorporation of international justice into environmental agreements among states.

Without developing country efforts at the Stockholm conference, the meeting would have focused on the environmental agenda of developed states, including pollution, population growth, resource conservation, limits to growth and the like, rather than relationships between environment and economic development. Overall, the Stockholm conference demonstrated a greater awareness of international justice as it relates to the environment.

THE VIENNA CONVENTION AND THE OZONE DIPLOMACY

The Vienna convention was an important negotiation to regulate the production and consumption of substances that deplete ozone layer for an international convention started in 1981. However initially, the efforts were progressively slow. Two broad stances could be observed during initial negotiations with the US and its allies favouring control on CFC consumption and the EC arguing more in favour of production control. The Vienna convention agreed in 1985 contained only pledges for cooperation and did not include any firm reduction targets for ODS. Subsequent negotiations however moved faster with active work by UNEP and Montreal Protocol was agreed by the world nations in 1987.

THE MONTREAL PROTOCOL

Multilateral efforts to prevent the depletion of ozone layer started in 1985 with the Vienna Convention for the protection of ozone layer. This event was followed by Montreal Protocol in 1987 to limit the substances that harm the layer. The Vienna Convention was not very successful in the sense that it was believed at this point of time that participation of most countries was not required in making an agreement to be effective. It was believed that the participation of only those countries that were the major producers of greenhouse gases or ozone destroying chemicals is sufficient in making a contract to be successful. Thus, the developing countries were not the party to the shaping of the contract. Rather the developing countries took greater interest in the Montreal Protocol, an agreement to limit the production of chlorofluorocarbons and other ozone-destroying substances. In the context of restrictions of ozone-destroying chemicals, developing countries wanted concessional access to substitute chemicals and financial assistance in purchasing them. China and India opposed to suffer from any kind of efforts to fix a problem of climate change caused by the industrial countries. In the earlier negotiation of the Montreal Protocol most of the developed countries were resistant to the demands of the developing countries.[5]

However, the protocol did include certain provisions for the developing countries to join the league. They were allowed to release/emit chlorofluorocarbons for a transitional period of ten years. They were also entitled to the transfer of new technology. Nevertheless, the protocol did not include the cost incurred by poor countries to make transition to these chemicals. As a result, the protocol did not get developing countries support, and most of them refused to sign it. In the first meeting of the Montreal Protocol developed countries agreed to only modestly help developing countries acquire information, research and training and to help them in gathering funds for technology transfer and to fulfill commitments of the protocol.[6]

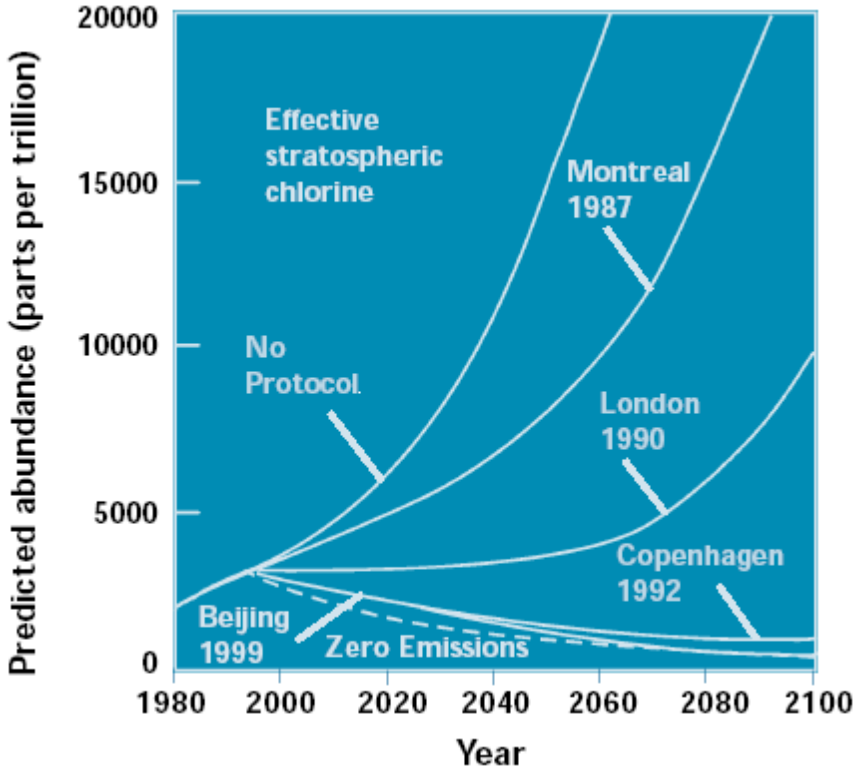
In the light of increasing scientific knowledge about the depletion of ozone layer, at the second meeting of the parties to the Montreal Protocol in London, 1990 there was a fresh emphasis on completely phasing out ozone-destroying chemicals rather than just limiting their production. It was well known that participation of all would be required. Therefore, the developed countries agreed to substantially help the developing countries in technology transfer and financial aid. The second meeting of the parties in London made several amendments to the protocol regarding provisions for international justice that were earlier absent from the 1987 agreement. It included special provisions for financial resources and access to relevant technologies. They recognized developing countries need and agreed upon funding and technology transfer from rich to the poor parties. They decided to establish a multilateral fund to help developing countries to comply with the treaty.[7]

[5] Harris, Paul G. (2010), 'International Environmental Justice' in "*World Ethics and Climate Change: From International to Global Justice*", Edinburgh University Press, pp. 63-64

[6] Ibid. pp.63-64

[7] Ibid, pp.64-65

The Impact of the Montreal Protocol



This graph shows the predicted impact of the Montreal Protocol on the stratosphere of the targets agreed to by successive international agreements on the ozone layer.[8]

THE EARTH SUMMIT

Almost after the two decades of the Stockholm Conference, the United Nations Conference on Environment and Development met as Earth Summit in Rio de Janeiro in 1992. The Conference was initiated by developed counties out of their concern about the environmental consequences of industrialization. Like Stockholm, the Rio earth Summit also witnessed the stark difference between the rich and the poor states. The developed countries wanted to focus on environmental problems whereas the developing countries emphasized on economic development. Developing countries stressed that environmental protection was not possible until injustices prevailed.

The theme of the Summit that is 'environmentally sustainable development' was emerged from the World Commission on Environment and Development (WCED) also known as Brundtland Commission. In its 1987 report, 'Our Common Future' the commission highlighted the link between poverty, development and environment. The concept of sustainable development talks about the incorporation of justice into international environmental diplomacy because of its link with ecology, economic development and poverty.

The provision for international social justice were made at Rio that says that poverty and environmental degradation are closely interrelated, that developing countries have special needs, and that the 'promotion of economic growth in developing countries is essential to address problems of environmental degradation'. Agenda 21, a lengthy policy statement; and Global Environmental facility are the two important products of the Rio Declaration that incorporated many of the provisions that fit

[8] *The Montreal Protocol: Partnerships Changing the World*, UNEP, UNDP, UNIDO and the World Bank, 2005. : www.unep.org/greenroom/documents/ozone.pdf accessed on 03/06/2013

conceptions of justice when compared to most international agreements in other issue areas.

The Rio Declaration on Environment and Development contains several provisions for international justice. In its principle 1, it holds that individuals are at the centre of concern for the sustainable development, and in principle 3, it states that 'the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations'. Principle 5 declares that 'all states and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world. Principle 6 affirms that governments represented at the Rio Conference declared that the 'developing countries with the least developed and those most environmentally vulnerable, shall be given special priority' and principle 7 says that states have 'common but differentiated responsibilities' which means that the developed countries have greater responsibility to take steps to protect the global environment and to help poorer countries do likewise.[9]

THE KYOTO PROTOCOL

The Kyoto Protocol emerged from the Third Conference of Parties (COP 3), with a goal to stabilize concentrations of greenhouse gases in the atmosphere by reducing/lowering global anthropogenic emissions. However, there are views from scientists, economists, and academicians that the way protocol is designed it cannot achieve the desired goal.

The Kyoto protocol set up two types of parties: Annex I, and Annex II parties. The developed countries fall into the realm of Annex I, and the developing or the less developed into the Annex II parties. The Annex I parties had legally binding emission reduction targets whereas the Annex II parties that include world's fourth largest emitters, China and India had no such obligation. The Protocol laid many articles to be abided by the countries to limit the emission of greenhouse gases. Article I, of the Protocol sets forth substantive requirements and means of achieving them. Article 2 calls on the Annex I parties to, among other things, enhance energy efficiency, promote forests and other carbon 'sinks,' research new low- or zero-carbon energy technologies, reduce subsidies to GHG producers and emitters, and cooperate with other parties in meeting the Protocol's objectives. Significantly, section 3 of Article 2 requires Annex I parties to minimize the 'adverse effects' of meeting Kyoto obligations, including effects on international trade that might have negative economic impacts for other countries.

Article 3 commits Annex I parties not to exceed their assigned emissions limits, which in the aggregate are designed to reduce global emissions of GHGs by approximately 5% below 1990 levels with a 2012 deadline (the date on which the Kyoto Protocol expires). Because Annex I countries could not agree on a common emissions reduction goal, different countries negotiated various targets through hard bargaining. The United States agreed to reduce its emissions by 7% and Canada by 6%. The EU and its member countries agreed to reduce emissions by at least 8% below 1990 levels. EU member states acquiesced in this relatively ambitious target after the EU promised to create an 'EU Bubble,' which is specifically authorized under Article 4, to share emission reductions among member states. Within the bubble, some poorer member states such as Ireland and Portugal, are allowed to increase their emissions (despite the express limitations published in Annex B of the Kyoto Protocol), while other, wealthier member states commit to even greater emissions reductions.[10]

The Kyoto Protocol authorized some Annex I countries to increase their GHG emissions, for instance Norway by 1%, Iceland by 10%, and Australia by 8%. Russia, the Ukraine, and New Zealand committed to zero increase in 1990 emissions levels. This was, in effect, a huge subsidy for Russia and the Ukraine, which experienced substantial reductions in GHG emissions during the 1990s, while their economies struggled to transition from socialism to free markets. In effect, the zero-increase emissions standard left those two countries with tons of excess emissions allowances, which they could sell, pursuant to the Kyoto Protocol's emissions trading schemes (discussed

9 http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm accessed on 01/06/2013

10 Cole H. Daniel (2008) , 'Climate Change and Collective Action', *Current Legal Problems*, Vol. 61, No.1, p.248

below), to other countries in exchange for much-needed cash. The purchasing country, in exchange, would receive a higher emissions quota. But the trade would not reflect any actual reduction in emissions in any country. This has become known among climate change analysts as the problem of 'hot air.'[11]

All Annex I members were to 'have made demonstrable progress' toward achieving their mitigation targets by 2005. As for how the targets are to be met, Article 3 provides some flexibility. For example, sections 1, 10 and 11 of Article 3 expressly contemplate emissions trading between two or more Annex I countries. Section 3 of Article 3 expressly allows for offsetting emissions by the use of carbon sinks, including forests. On the other hand, section 7 requires that emissions from deforestation (that is, the destruction of carbon sinks) are to be included in calculating net emissions.

Cole highlights the fallacies of various institutional efforts made in the past to resolve the problems of greenhouse gases emission and other related problems of climate change. He further argues although several critical issues concerning climate change have been resolved but scientists are still questioning the modalities to predict the future problems of climate change and ways to combat it. For Cole certain issues that have not been resolved such as nature, extent and variability of socio-economic impacts of climate change, and the required policy responses to resolve the problems.[12] He argues that the one issue on which all observers agree is that the only goal with which Kyoto Protocol emerged to stabilize concentrations of greenhouse gases in the atmosphere by lowering global emissions has failed to achieve. Many philosophers argue that the way the protocol is designed is unable to achieve the goal. Even if there is a least assumption that all countries will meet their Kyoto emission reduction targets until 2012, still the average global temperatures will increase due to the global emissions from the developing countries, as they have no legal binding on them under Kyoto. As per Cole, the protocol is scheduled to expire in 2012 and until now, the international community has only begun negotiating whether to extend it replace it or completely scrap it and make a new beginning.

There is a debate regarding the kind of climate change regime we need so as to settle various issues concerning climate change such as types of regime, mitigation and adaptation strategies, policy responses to address the socio-economic impacts of climate change etc. Highlighting the differential opinion of developing and developed countries regarding climate change regime, on the basis of Kyoto Protocol, Cole argues that some countries may rationally prefer, and negotiate for, a weaker regime, while some for no regime at all and others may favor a stronger regime.[13] He further argues that climate change put forward such a complex case that demands the greatest collective action ever been faced by the global community. Cole discusses the problems related to the global collective action and argues that it cannot be solved by a single individual or member of a group rather it requires cooperation of others who carry disparate incentives and interests.[14]

WHERE ARE WE HEADING FOR? : POSSIBILITY OF A GLOBAL CLIMATE CHANGE REGIME

The United Nations Climate Change Conference, Durban 2011, delivered a breakthrough on the international community's response to climate change. In the second largest meeting of its kind, the negotiations advanced, in a balanced fashion, the implementation of the Convention and the Kyoto Protocol, the Bali Action Plan, and the Cancun Agreements. The outcomes included a decision by Parties to adopt a universal legal agreement on climate change as soon as possible, and no later than 2015. The President of COP17/CMP7 Maite Nkoana-Mashabane said: "What we have achieved in Durban will play a central role in saving tomorrow, today."[15] *She also said, "It may seem impossible, but working together we can all rise to our responsibilities".* In the same meeting Christiana Figueres, the Executive Secretary

[11] Ibid, p.249

[12] Cole H. Daniel (2008) , 'Climate Change and Collective Action', *Current Legal Problems*, Vol. 61, No.1, p.230

[13] Cole H. Daniel (2008) , 'Climate Change and Collective Action', *Current Legal Problems*, Vol. 61, No.1, p.232

[14] Ibid, pp. 232-233

[15] http://unfccc.int/meetings/durban_nov_2011/meeting/6245.php accessed on 02/06/2013

of the UNFCCC said that *"By mastering the challenging Durban agenda, governments can take a significant step towards a climate change regime that delivers on the ground"*.

"Rio+20" is the short name for the United Nations Conference on Sustainable Development (UNCSD), which took place in Rio de Janeiro, Brazil in June 2012 – twenty years after the landmark 1992 Earth Summit in Rio. At the Rio+20 Conference, world leaders, along with thousands of participants from the private sector, NGOs and other groups, came together to shape how we can reduce poverty, advance social equity and ensure environmental protection on an ever more crowded planet. The official discussions focused on two main themes: how to build a green economy to achieve sustainable development and lift people out of poverty; and how to improve international coordination for sustainable development. AT Rio+20, more than $513 billion was pledged to build a sustainable future. It signalled a major step forward in achieving the future we want.[16] However, the Rio+20 talks about institutionalizing a robust kind of global collective action to combat climate change and favoured sustainable development but still the global political community needs to do a lot address the issues of how to move forward and decide a framework to curb greenhouse gases emission.

The global leaderships needs to incorporate non-state actors like civil society, business cooperation, and global social movements within the ambit of global collective action to help bridging the gap between policy-makers and public in combating climate change. They can make common people aware about the threats of climate change on their lives. They can work as pressure groups on the government to achieve the desired targets, implementing environmental policies and hold them accountable.

The global collective action requires that both the developed and the developing countries must come to a consensus in order to address the problem more effectively at the earliest. However, there is a disagreement about how and when to address this problem. In addition, this disagreement over the issue of climate change is turning into a deadlock with no concrete solution when it comes to mitigating the problem. The United States being the highest per capita emitter did not ratify the treaty and walked out of the Kyoto Protocol with disagreement over 'no mandatory emission reduction targets for developing countries'. Like US, Canada too withdrew from the treaty in 2011. And the other members who signed the Kyoto protocol did not really reduce their emissions to the set target (by 2012). Since then actions have fallen short and any country hardly abides to it. Some of the points of disagreement between the developing and the developed are as follows:

- Many of the developing countries argue that the developed should show historical accountability to combat climate change because they are mostly responsible for the anthropogenic emission. In a way, they argue for intergenerational justice that is a costly affair for the developed countries.
- Most of the developing countries are not satisfied with the time framework given by any climate change regimes until the Kyoto protocol. They claim that they are technically not equipped to commit the reduction in emission until they have the required state-of-art technology.
- They claim that most of the developed countries leaderships are motivated by their self-interests only and it have been shown in the past by Russia and China.
- Most of the developed countries leaderships agree for only those regulations that cost low for their national economies.

Just Distribution of Greenhouse Gases Emission Entitlement: Locating Institutional Challenges

The biggest challenge before the international institutions is to decide the framework for greenhouse gas emission. Or which country is entitled to emit what amount of greenhouse gases? The related challenge emerges that what parameter the international institutions should adopt for the just distribution of Greenhouse gas emission entitlement.

Being a cosmopolitan philosopher Caney tries to locate the institutional challenges dealing with the distribution of emission rights justly. Regarding the

[16] http://www.earthsummit2012.org accessed on 02/06/2018

distribution of rights to emit greenhouse gases he makes two preliminary points; firstly, he argues that the emission right has to be contextually drawn, and secondly, if there is any differential right of emission is being given or required then there must be a discussion on the framework dealing with this distribution.[17] He further discusses about three kinds of climatic responsibilities such as mitigation, adaptation and compensation. Agreeing with the IPCC's definition he defines mitigation as "an anthropogenic intervention to reduce the anthropogenic forcing of the climate system and it includes strategies to reduce the greenhouse gas emissions.

However, there is a consensus among climate scientists that mitigation alone cannot address the problems of climate change. Looking beyond the idea of adaptation suggested by climatic scientists Caney argues that even adaption cannot be easy to institutionalize due to its cost effectiveness and complexities[18]. He further says that we need compensation along with adaptation in order to address climatic responsibilities properly. He classified these responsibilities into 'atomist' and 'holist' approach in order to discuss distribution of benefits and resources. Under the 'atomist' approach he discusses the 'Per Capita Greenhouse gas Emission' in terms of right and put parity, fairness and equality at the centre of the approach.

It is now known beyond all reasonable doubt that the human consequences of climate change will substantial, on balance adverse, and will rise markedly with higher levels of global warming and sea-level rises.Those bearing the greatest disadvantages will be populations residing in the developing world (due to geographical vulnerability, limited adaptive capacity, and the reliance of developing state economies on ecosystem services) and vulnerable social groups located in all regions (due to the way the impacts of climate change compound existing social and economic inequalities).Within this context of variable vulnerability and risk, policymakers and normative theorists have become increasingly preoccupied with the concept of climate change justice, which, for the purposes of the chapter, concerns the equitable distribution of the benefits and burdens associated with anthropogenic global climate change and policies for its management.

Three key challenges arise for any plausible theory of climate change justice. First, to determine the share of the capacity of the Earth's atmosphere to assimilate carbon dioxide (CO_2) and other greenhouse gases that morally relevant agents should be able to exploit as a matter of distributive justice. According to the standard way of approaching this 'justice in emissions' problem, the task is to find the correct principle(s) of justice that should regulate the total amount of greenhouse gas that states and agents operating within their territories should be permitted to emit each year over the next century. The international legal background of this task is the 'ultimate objective' of the United Nations Framework Convention on Climate Change (UNFCCC) of 1992 to achieve 'stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system' (UNFCCC 1992: Article 2). Second, the burdens associated with managing climate change and its adverse effects should be equitably allocated amongst the relevant agents. The idea here is that an account of justice in emissions would be theoretically incomplete, as well practically useless, without an accompanying account of 'justice in burdens' that specifies the way in which agential and institutional burdens associated with effective policies of climate mitigation and adaptation should be distributed within and between generations. Third, the duties and entitlements of climate change justice, if they are to be of genuine relevance for policy makers, must be incorporated into the process whereby national, regional and global climate policies are selected. A further aspect of this 'justice in governance' problem is that, in absence of the integration of normative theory and climate policymaking, attempts to manage climate change through international cooperation have the potential to undermine established norms of global poverty reduction and political legitimacy.

Various cosmopolitan philosophers argue that the problems of climate change is also related to the violation of human rights and requires a globally

[17] Caney Simon (2012), Just Emission, *Philosophy and Public Affairs*, Vol. 40, No. 4, Wiley Periodicals, Inc., p.256

[18] A Report commissioned by the United Nations Framework Convention on Climate Change (UNFCCC) founds that the global investment needs for adaptation could amount to $49-$171 billion per annum by 2030, of which about half accrue in developing countries.

egalitarian redistributive process and duty of justice to address it at the earliest. Cosmopolitans such as Shue, Caney etc. argue that issues of climate change require moral responsibility on the part of the well off to address it properly and they must adhere to ethics of help and distribution.

To conclude we can say that climate change remains an extraordinarily difficult problem, which will not be easily or quickly solved. The global community needs to arrive upon a consensus to ensure adequate energy supplies for both developed and developing countries, while mitigating greenhouse gas emissions. Also we need to find out alternative energy sources in order to switch from fossil fuels. But we can only fight climate change when we all realize that we all share this planet in common. And there is no planet B. So all us needs to work collectively whether nation states, global institutions, local bodies, individuals in order to address this collective problem.

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