



# ETHICAL DIMENSIONS IN GLOBAL CLIMATE CHANGE EXPLORING A PHILOSOPHICAL PERSPECTIVE: AN ANALYTIC APPROACH

S.K. Arun Murthi<sup>1</sup> and Muthusamy Murugan<sup>2\*</sup>

<sup>1</sup>Assistant Professor, Azim Premji University, Bangalore- 560035, India

<sup>2</sup>School of Natural and Engineering Sciences, National Institute of Advanced Studies, Indian Institute of Science Campus, Bangalore-560012, India

## Abstract

Climate change poses a global challenge that calls for solution and urgent actions that need to be formulated in policy making. These issues are loaded with ethical implications which arise in policy debates. This paper tries to analyze the ethical issues of climate change within the framework of analytic ethics of the western philosophical tradition. This paper attempts to bring metaethics and principles of normative ethics within the present context of climate change and thus provide a philosophical foundation to the ethical problems relevant to policy debates. We have proposed that the ethics of global climate change be considered a subdivision of applied ethics.

**Keywords:** Environment, Ethics, Global climate change, Metaethics, Normative, Philosophy

## 1. Introduction

Global Climate Change (henceforth GCC) is a matter of serious concern because of the consequences that follow from it that affects the human species as well as other species across all ecosystems. It has also been established that it is human actions in pursuit of human interests that has resulted in GCC having more devastating impacts on human beings, particularly of the poorer nations in the tropics. An urgent action is needed by the world community to arrest these damages in future and also ameliorate the conditions of fellow human beings who are victims of these damages. Therefore this brings issues of ethical dimension in discussions of policy making. There are different aspects of these ethical dimensions that stand in need of discussion but they have not been addressed at all. The Buenos Aires draft declaration (2004) (henceforth BDD) on the ethical dimensions of climate change makes clear that there is a large amount of scientific and economic literature on climate change but the ethical dimensions of climate change have not been sufficiently addressed. Stephen Gardiner in his survey article draws upon the authoritative Intergovernmental Panel on Climate Change (IPCC) report of 2001 and says that climate change is essentially an ethical issue and then goes on to question why there has been a neglect on the part of moral philosophers to take climate change seriously (2004, p. 555-556). Dale Jamieson contends that the problems of climate change are essentially problems of ethics and politics (1992, p.149). Gardiner's explanation for this neglect on the part of moral philosophers is that the interdisciplinary nature of the

subject crossing the boundaries of science, economics, law and international relations creates an obstacle to philosophical work. Though this may be true partly (it is not our intention here to debate on this issue) but the more important question that needs to be considered is how ethics figures in a very significant way in one of the nature's process of change. The purpose of this essay is to consider the issue of GCC within the analytical framework of ethics of the western philosophical tradition. A person engaged in analytic ethics reasons about the ultimate questions of morality. Jamieson (1996, p.324) gives an assessment of Intentional Climate change drawing upon the western tradition. But our purpose in this essay is different from that of Jamieson. We propose to embed or locate the ethical dimension of climate change within the framework of analytic ethics and thus bring analytic ethics into the present context of GCC. We would also like to state that our proposal is just one of the attempts to analyze the ethical dimension of GCC and not to claim that this is the only analysis possible but assert that this form of analysis does provide a good philosophical foundation to the ethical problems of GCC relevant for policy making. Considering the fact that ethics is a philosophical study of morals, the analytical framework of ethics for GCC will focus on the following points each of which will be discussed in sections 2, 3 and 4.

- a) What do we mean when we bring the subject of ethics to global climate change? This discussion will touch upon metaethics broadly.

\* Corresponding Author, Email: muthupeyan@gmail.com

- b) A change brings in certain consequences affecting us in different ways like environmentally, economically, socially, etc. GCC has impact on agriculture, health and comfortable settlement. So how should ethics be viewed in terms of consequences? How do we choose a set of actions that best maximizes good consequences? Discussion of this point will primarily draw from normative ethics.
- c) It is imperative to consider that ethics of GCC is an applied ethics problem and thus see it as a group forming part of applied ethics because it analyses moral issues that crop up in climate change policies. These issues are, as mentioned in the BDD: which humans, societies, communities, plants, animals, and ecosystems will survive; which persons and countries will bear the burden of climate change. These are moral issues in terms of responsibility, obligation etc. which engender controversies.

This will enable us to place the ethical problems of GCC on firm philosophical foundations. The moral philosophers can very well take their role seriously, the neglect of which is a concern for Gardiner mentioned above, in pointing to philosophical foundations in the ethical debates arising in policy formulations.

We will not touch upon the anthropocentric ecocentric debate which has occupied much attention in recent times. We feel that even within the ambit of anthropocentric view of ethics we can develop a firm philosophical foundation relevant for policy debates. It is not our contention that such debates are of not much of philosophical interest, but that they call upon a totally different metaethics- of emotivism- of the type advocated by positivists like A J Ayer and C L Stevenson and its philosophical foundations may not be of much relevance to policy making.

## 2. Ethics, Metaethics and GCC

The application of ethics to GCC can be viewed within a causal background. When we talk of change there is change that is being produced in some phenomenon and that, in the present context, is the climate. For a change to happen there are causal factors that operate. The natural phenomenon that undergoes change can be caused exclusively due to nature. But in other cases there are human actions and activities which form part of this causal chain in a significant way to effect a change. For example earthquakes tsunamis are natural disasters whose causal factors are exclusively natural (plate tectonics etc...). But global environmental problems and the associated climate change are effected where human

activities are very much part of the causal chain. In fact the United Nations Framework Convention on Climate Change uses the term in connection with human activities as the cause and makes a distinction with the term 'climate variability' attributable to natural causes. The emission of greenhouse gases due to industrialization-a human activity – has caused global warming. Drawing upon the Third Assessment Report of IPCC 2001 Peter Singer says how much of climate change is produced by human activity is stated thus: "new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities" ([2002a] 2004, p.16). Since human actions are part of the causal chain, in any way the operation of the causal chain can be blocked, so far as activities of human beings are concerned, so that the change which takes place can be checked keeping the larger interests of the community. There are two issues that need to be addressed when we consider human activity as part of a causal chain that has caused GCC. They are

- 1) the emissions that have already occurred putting quite a large section of humanity in a precarious survival situation.

- 2) the role that is expected to be played by different nations in impeding these human activities in a bid to control future emissions, considering the fact that different nations are placed in widely different stages of economic development.

In addressing the above two issues we are led to the question: what are the options available in terms of choice of actions and what are the effects of exercising those actions? The nations of the world need to play a meaningful role in addressing the above two issues and very delicate and controversial concerns will arise particularly in discussions of policy making which consist in questions like who should do what and why should he be doing that. These are precisely ethical concerns where one needs to exercise *moral judgments*. This touches upon issues of consequentialism in ethics. Our argument is that since we have a choice of actions, which choice we need to exercise keeping in view the best consequences- a consequentialist view- it is very significant to talk about ethics of GCC. The question of responsibility which very much figures in discussions about climate change is also connected with cause. Gardiner brings this question of responsibility of past actions in his article. We will take up this in sections 2 and 3, when discussing about normative ethics.

It is philosophically important to reflect that, when we refer to moral judgments above, we need to clarify what are these moral judgments of GCC. What are the philosophical underpinnings on which our moral actions

on the GCC are based? This discussion will marginally touch upon questions on metaethics. Metaethics concerns itself primarily with the discussion about what is morality and on what are moral judgments based. As Gensler has stated, morality can be based upon social conventions, personal feelings, or God's will as viewed by the common people. But philosophers base morality on self-evident truths, emotional exclamations, or rational imperatives (Gensler, 1998 p.5). As far as the ethics of GCC are concerned we would like to claim that it is "rational imperatives" on which moral principles regarding climate change are based. Policy formulations touching upon ethical dimensions are couched in value words. To take simple illustrations to make this point clear we make statements like "You ought to bring down emissions," "It is obligatory to assist the lesser developed nations for the harm caused" etc. We employ here a moral language with value words like 'ought' 'obligation' and the likes of it. These value words are making judgments of a moral kind and these moral judgments are a prescription or an imperative. Drawing upon Gensler's view on prescriptivism, it is very important that the ethical theory on which the policy formulations are based allows two things i) freedom to form ones belief ii) how to be rational in forming ones belief (1998, pp.73-74). According to Hare it is through moral language by understanding terms like "ought" that we form moral beliefs in a free and rational way. Another important feature of Hare as noted by Singer (2002b, p.310) is to bring reason to play a role in his metaethics. It is these aspects of freedom and rationality in metaethics that become very important for policy debates. With the metaethics of Hare one can reason about morality. It is this aspect which the earlier metaethics like emotivism lacked<sup>1</sup>. The "ought" that is captured in moral beliefs has logical rules of use based on its meaning which is equivalent to "Do this and let everyone do the same". There are certain consistency rules that can be based on this meaning which is well captured by Gensler in the following way:

Rule U. To be logically consistent, we must make similar evaluations about similar cases.

Rule P. To be logically consistent, we must keep our moral beliefs in harmony with how we live and want others to live.

These are consistency rules and should not be confused with the moral imperatives, which give the necessary framework for policy debates touching upon ethical issues. However, we need certain other

components like factual information etc for the formation of moral judgments. As Gensler says "To think rationally about ethics, we need to be informed, imaginative, and consistent."(1998, p.76) There are three key components in taking up this metaethical basis. These are the a) the informed component reflecting the knowledge aspect b) the imaginative component and c) the consistency component to evaluate the consistency in our action under similar situations. The reason why 'rational imperatives' metaethical approach is adopted is 'we need to *know* the effect of actions on the lives of others". As mentioned above in exercising the choice of actions we need to know the consequences of those actions on GCC. That there is sufficient informed component in the form of expertise documentation is mentioned by Singer ([2002a] 2004, p.16). Then we need to place ourselves in other person's situation at the receiving end of the action and this is the imaginative component. The actions one takes are evaluated in terms of consistency one maintains in desiring that the same kind of act in all similar cases. Sometimes inconsistencies get revealed in our policy making. Kristin Shrader-Frechete brings this point while remarking on the analysis of 'value systems undergirding policies relevant to human and environmental well-being.' "Such analysis would reveal that we often pay lip service to ethical values, such as equal opportunity, but follow policies that logically presuppose denial of those same values, or that we laud particular ethical goals but sanction decisions that preclude achievement of those goals" ([1985] 1991, pp.97-98) The consistency condition often called the golden rule should very much be a part of the policy making activity not as an imperative but as rules of ethical debate. How these components are relevant for the metaethics of GCC will be discussed in section 4.

### 3. Normative ethics of GCC

That morality is based on rational imperative is a plausible metaethical basis provides a method to arrive at what moral principles we ought to have for global climate change. We human beings have evolved due to certain environmental conditions prevailing but now our very actions are threatening to upset global environments. In such a situation various questions bearing on moral dimensions crop up. How are we to live along with nature? What should be our relationship with it? What are our obligations towards nature and other human societies having an intimate relationship with nature? This is a domain of normative ethics and there are two basic approaches. They are a) Consequentialism and b) Nonconsequentialism. Consequentialism propounds that our action should be such as to maximize good consequences but non consequentialism propounds that there is something intrinsic in the action itself that makes it right or wrong

<sup>1</sup> It is in this context we contend that the present ethnocentric view which extends morality to other beings rests on the metaethical view of emotivism- a view where moral judgments are simply a matter of expressing our positive and negative feelings and therefore would not be of much relevance in policy debates

and not because they have bad consequences.<sup>2</sup> In the context of GCC it is consequentialism that we take as the basic approach about principles of ethical action. The choice of action that we exercise has certain consequences and policy making reflects the actions that one undertakes. As policy prescriptions are well thought out action plans, it therefore, becomes very important that the environment in which policy thinking is conducted is ethically enriched. This is what Shrader- Frechette terms it as conceptual environment ([1985] 1991, p.97) where ethics or moral philosophy plays a major role. But in this we have to take a rather broader consequentialist approach and not the popular consequentialism of the utilitarian kind. The popular utilitarian kind focuses on the balance of pleasure over pain. The basic tenet of classical utilitarianism runs as follows: "We ought to do whatever maximizes the balance of pleasure over pain for everyone affected by our action" (Gensler 1998, p.140). The pleasure of hunting of blackbucks or tigers may outweigh the pain caused to these animals and therefore they may lead to the extinction of the species. To avoid these kinds of situations, the consequentialism of the utilitarian kind is to be eschewed.<sup>3</sup> The basic problem here is with equating utility to pleasure which just indicates a kind of crass hedonism or physical pleasures. In the context of climate change the utility has a different connotation which to a great extent has been quantified in terms of standards of sustenance. In the principle of general utilitarianism (GU) one is to ask "what would happen if everyone were to do so and so in such cases?" This fits in with the metaethics that we have adopted in this context (consistency condition). Enough data is available on this to answer this question. The impact of climate change on dry land agriculture (rain fed agriculture in both semi arid and arid tropics) human health etc is well documented. We propose that principle of utility as part of the normative ethics for GCC considering the fact that agriculture, human health and conduciveness of settlements are all utilities for human beings. But at the same time the principle of utility cannot be the sole standard for moral action in the context of climate change. The responsibility of past actions which has caused significant damage to the climate affecting sections of a human race—both intergenerational and intragenerational— has occupied the attention of policy makers. Drawing upon IPCC, 1995 with regard to costs imposed due to emissions, Gardiner points that the developed countries are more responsible for historical emissions. Therefore in

addition to principle of utility we contend that another principle that guides the distribution of good and evil is very much a part of normative ethics of global change. This is the principle of justice. This principle becomes important in the context of cost sharing of global greenhouse gas emissions. On the issue of allocating costs of greenhouse gas emissions, Gardiner notes that there is surprising convergence among philosophical writers. In his footnote (2004, p.580), he says that philosophers like Singer account for this convergence because of the traditional lines of thought about justice. We will again come up with this issue when dealing with the principle of normative ethics that we need to appeal to, in the next section.

#### 4. GCC – An applied ethics issue

We further propose that ethics of climate change be accorded the separate status of a subdivision of applied ethics. This is because there are certain moral issues on climate change and these are controversial issues which are being debated in policy making. We here again draw upon the BDD where the urgency of ethical dimensions to policy making is voiced for the following reasons

1. The possibility of the international community to respond in ethically unjust and unsupportable ways in the absence of ethical dimensions
2. Policy proposals containing scientific and economic arguments hide ethical questions
3. There are certain barriers that are blocking the progress of international negotiations. We need an equitable approach to overcome these barriers.
4. The rich poor gap can be prevented from further widening if an ethically based global consensus is worked out. Our earth is endowed with a limited capacity to absorb greenhouse gas emissions. Therefore considering it as a common resource or sink, we need to work out an equitable use of the same.

Further the draft also points to an issue that has impact on the discussions on the ethical dimension of climate change. This is the issue concerning human activities in one part of the world affecting other people who are far removed in space and (also time) to bear the disastrous consequences of ecosystem damage. Jamieson (1992, p.149) mentions that the causes in such cases become diffuse. The BDD remarks that the developed world should bear a fair share of such responsibility. But Jamieson feels that in such kind of situations, since the causes are diffuse, it is very difficult to hold anyone responsible within the conventional framework of ethics and, therefore,

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<sup>2</sup> Moral judgments based on intrinsic value of an action will rest on the metaethics of emotivism

<sup>3</sup> Of course we can still argue within this approach that the pleasure of preserving the blackbuck or tiger will exceed the pleasure of hunting keeping the larger community in mind. But this is a fact dependent on the specific situation where this may not be the case. Therefore better to avoid this approach.

advocates a paradigm shift in values and conceptions of responsibility in the case of human-induced GCC.

It is our contention that the 'rational imperative' metaethics with its consistency condition would be the basis of the ethical dimension touching upon the above issues of the BDD. What are the normative principles that we can appeal to in the ethical discussions of GCC? First we would like to deal with the importance of "rational imperative" as a metaethical basis. We have an extensive documentation about the impact of the human activities in the GCC both across geographical distance and its spread in future. Given such a vast scientific study it is difficult to accept Jamieson's contention that the causes of destruction are diffuse. The diffusivity may perhaps rise for Jamieson because we are not able to point out to an individual in a crime, an example he takes in his essay (1992, p.148). But that is no cause of worry. We can also hold a community or a nation or any other group for this irresponsible behavior. Inability to hold an individual responsible is no case for the diffusivity. There is quite a good amount of *informed component* - one of the components of metaethics - that is available. Also, it is easy to imagine ourselves to be in the situation of hostile global environment. It is a hypothetical situation. And if we are consistent in our behavior, we would not desire to be in that situation. There is one issue that comes up with informed component particularly with regard to historical emissions pointed out above in section 2. The argument runs as follows. It is accepted that developed countries have caused much of damage to the climate due to large emissions. But till recently they were not aware of the effects of their emissions and since the act was committed out of ignorance, they should not be held responsible. We would like to respond to this argument in two ways. The consistency condition can apply where the same nations, who have ignorantly damaged the environment, can be thought to be at the receiving end of the action. They would definitely have desired not to be in such a severe condition. Given that because of their actions they have enriched themselves and have also inflicted a severe crisis on the poorer nations, the consistency condition will impel them to bear an obligation towards these poorer nations. The issue of historical emission will again come up in the context of deciding on the normative principles to which we can appeal in the context of GCC.

We now take up the normative principles that should be applied to the ethics of GCC. As mentioned in section 3, we propose that the principle of general utility and the principle of justice are to be appealed to. We claim that with these principles the clarity of ethical dimensions to GCC can be gained. It is important to the principle of GU to ask "what would happen if everyone were to do so and so in such cases?" rather than "what would happen if I do so and so in this

case?" What would happen to utilities like agriculture health and conduciveness of settlement if everyone were to adopt the same kind of activity? The diffusivity of cause which Jamieson speaks of will also not be a problem in such cases. He says "Instead of a single cause, millions of people will have made tiny, almost imperceptible causal contributions- by driving cars, cutting trees, using electricity and so on. Many small people doing small things over a long period of time together will cause unimaginable harms" (1992, p.149). Further down he says " I cannot hope to say what new values are needed or to provide a recipe for how to bring them about...We can each reason: Since my contribution is small, outcomes are likely to be determined by the behavior of others. Reasoning in this way we can each justify driving cars while advocating bicycles or using fireplaces while favoring regulations against them."(1992, p.150) But by appealing to the normative principle of GU such reasoning will not hold good because GU reasons in terms of the summation of everyone's activities in such similar cases. This appeal to the normative principle of GU also does not require that we have to look for new system of values that requires a paradigm shift as suggested by Jamieson. The ethical dimensions of human activity as far as GCC is concerned can be bound by this normative principle which is quite strong enough and this binding is important in the policy framework to ensure that international community does not resort to unjust and unsupportable ways - a concern of the BDD mentioned above in point (1).

We have also mentioned that this principle needs to be complemented by the principle of justice. Here we can turn to points (3) and (4) of BDD mentioned above. The former points to a need for an equitable approach to climate change policy in international negotiations. What is the basis of this on which this equitable approach is grounded? In other words what is the principle of normative ethics that we can appeal to for this approach? We propose that it is the principle of justice which calls upon the distribution of good or bad (harm) not in any arbitrary manner. When two or more similar individuals or groups are in similar circumstances, but are meted out with different treatments, the principle of justice would then be said to have been violated. What is the similar circumstance of the all the individuals or the different groups or nations of the world as far as climate is concerned? It can be said that the global atmosphere as a common resource with limited capacity within which we are embedded gives a commonness in our circumstances. We are similar individuals or a group in so far as sharing this common resource is concerned. This principle then becomes all the more important in policy making particularly with regard to the costs to be allocated for the use of the this common resource. On grounds that we are all similar, this normative principle

dictates that the costs should be borne equally. But there is a problem as the current situation stands. The developed countries in their process of development have already consumed more than the fair share of this common resource and have thus reached a very high level of economic development leaving the poorer nations far behind. Therefore, in terms of development, all the nations cannot be considered similar. The policy making body therefore can establish that there is some relevant dissimilarity in these different nations. The dissimilarity lies in the levels of development which these nations have achieved. This dissimilarity is relevant because the global atmospheric resource sharing has been skewed in favor of developed nations and is one of the factors that have made them reach this level of development. It is this dissimilarity that gives rise to the question of justice. Gardiner draws upon Singer and remarks that the question of justice arises in the use of the common atmospheric resource which is limited in its capacity. He does not press into service the details of the argument that calls into question the principle of justice. We have demonstrated that by pressing the dissimilarity position of different nations, how the question of justice rises. He further continues "on this approach, the obvious argument to be made is that the developed countries have largely exhausted the capacity in the process of industrializing and so have, in effect, denied other countries the opportunity to use their shares. On this view justice seems to require that the developed countries compensate the less developed countries for this overuse." The obviousness of argument which Gardiner points out can be read differently by the developed nations. They can construe it as a crime which they have perpetrated for which an indemnity is being extracted or a punishment is being meted out similar to one Germany was forced to pay for economic reparations by signing the Treaty of Versailles after the World War I. This is the normative principle of retributive justice that is being appealed to that holds some one responsible for a wrong doing and applies sanctions for that. The obviousness that Gardiner's argument and his view of justice 'seeming to require' that developed countries compensate appears to have such a normative principle of retributive justice in the background. This creates conflict and disagreements in policy making if a semblance of such a normative principle is given. That this is the case is reflected in the US presidential debate in 2000 between Bush and Al Gore, where referring to the Kyoto Treaty Bush strongly pointed out that US would not carry the burden for cleaning up the world's air. Gore also remarks on the wording of Kyoto Treaty which says that the developing nations feel that developed nations should bear the brunt of responsibility for historical emissions. Further the response of the developed countries, if the principle of retributive justice gets reflected in policy

proposals, can also extend to justifications being offered by them of their being not accountable to past emissions due to their ignorance about the effects of their emissions. The principle of retributive justice is applicable only when an act is done intentionally and with complete knowledge. Therefore if this principle is appealed to in a form that gets reflected in policy making, one can respond to it, as the developed countries have done, by appealing to ignorance of the act at a particular point in time in the past when the act was done.<sup>4</sup> The upshot of this argument is to show that a normative principle like retributive justice that gets reflected in policy proposals will create dissensions and disagreements and this normative principle is better eschewed.

As has been mentioned in section 2, Gardiner notes that developed countries are responsible for much of past emissions. Within the normative principle of distributive justice this responsibility is to be interpreted in terms of excess use of a limited resource of earth's capacity, albeit ignorantly by developed nations. This act, although done out of ignorance, has infringed upon the rights of the poorer nations by depriving them of their share of the common resource. We need to have here a broader understanding of the principle of justice. It has to be admitted that the broad understanding of the principle of distributive justice also acknowledges a) the rights of others to a claim and b) for the fair distribution of good and evil. The former entails the rights of the poorer nations to a fair share of the environment resources of which they have been deprived. It is this right of the poorer nations that holds against the claim of the developed nations. We can reason out that corresponding to this type of right which the poorer nations have, there is a necessary duty that attaches to the developed nations. The idea of a right of someone accompanied by someone else having a necessary duty is captured by the expression correlative duties. The notion of correlative duties becomes very important in the present context because it has a role to play in identifying who the duty holder is, the identification of which Jamieson (1992, p.150) says is impossible to make in cases such as climate damage. He illustrates with an example how the current value system fixes responsibility based on locality of space and time as follows. A particular person, Jones, breaks into the house of another particular person Smith, and steals all the valuables. The individual Smith having lost the valuables suffers harm. It is clear in this case that Jones is responsible for the harm caused to Smith. This violation of norms attracts punishment to Jones or requires him to compensate Smith for the damages or harm caused by him (Jones). It is Jamieson's contention that we cannot

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<sup>4</sup> Peter Singer indicates a similar response that could be made on behalf of developed nations ([2002a] 2004 p.34).

apply this paradigm of current value system to global environmental problems. He writes "There is no one whom we can identify as the cause of destruction in the way in which we can identify Jones as the cause of Smith's loss" and he continues "Despite the fact that serious, clearly identifiable harms will have occurred because of human agency, conventional morality would have trouble finding anyone to blame." (1992, p.149) We circumvent this problem by avoiding appeal to principles of retributive justice but adopting the principle of distributive justice.<sup>5</sup> The claim of the poorer nations for the fair share of the common atmospheric resource is a strong claim under the principle of distributive justice. The notion of correlative duties makes it possible to identify a duty holder to allow for this strong claim. The duty holders in the present context of GCC are the developed nations. Apart from depriving the poorer nations of their fair share of the earth's atmospheric resource the past emissions have also caused terrible damage and hardship to their survival. This brings us to the part (b) of the principle of distributive justice i.e. the fair distribution of good and evil. The evil which the poorer nations have to face in the form of damages to agriculture, health etc., and thus affecting their survival, is also skewed against them. Therefore, they have a right to extricate themselves out from the damages that have affected them and this right again enforces the correlative duties on the developed nations and identifies them as a duty holder. These arguments have implications again for policy making as it must clearly spell out who has to do by what means to the poorer nation's right claims that the principle of justice recognizes. One can then, based on this argument, incorporate a compensation action plan in the policy proposals.

At this point certain other intricate issues crop up. Since 1990 the damages caused by human activities like industrialization and land use change have been made known to all and has gained awareness. But in spite of this the damage continues to be inflicted by both developed and developing countries in pursuit of economic development and the developed countries still take the major share of the atmospheric sink. However, as the situation stands today it is predicted that the *rate of growth* of carbon emissions from developing countries (particularly China and India) would be more (Raupach *et al.* 2007, p. 24). In such a situation one cannot avoid the principle of retributive justice as the ignorance claim does not hold anymore and shared responsibilities between different nations at different stages of development become fine grained. The developing countries have a claim for further

developing their economies which would result in carbon emissions. Since they did not get a fair share of global atmospheric resource, the correlative duties demand that compensation in terms of bearing subsidies for clean technology and practices be borne by developed countries. On the other hand data indicates that land use change from the developing countries is also contributing to more carbon emission. But this land use change is caused due to population growth. Therefore the developing countries also have a fair share of responsibility in checking their population. These intricate issues have to be clearly articulated in the policy debates with the necessary pros and cons and the needed mechanisms to implement the policy within the above argued framework of ethics.

In this section we have shown that certain issues of policy making are controversial and intricate considering the fact that clash of interests of different nations come into play and all these issues have an ethical dimension to it. We have also shown the metaethics and normative ethics principles that arise in such situations and how it can be argued for. It therefore becomes important to consider the ethics of GCC as a subdivision of applied ethics.

## 5. Summary and Conclusion

Discussions on GCC have significant ethical dimension and often such moral issues become controversial issues and therefore we cannot make much headway in such debates. In this essay an attempt has been made to offer a philosophical analysis of the ethics of GCC and provide a philosophical underpinning relevant to policy debates on GCC. In this we have adopted the western analytic framework of ethics. We have argued for a metaethics of 'rational imperative' drawing from R M Hare and appealed to the normative principle of GU and distributive justice which we claim to be appropriate in policy debates. In section 4 we have discussed policy making issues having implication for immediate action with respect to GCC. But these issues have brought certain moral issues to the fore, which have been controversial. Therefore, as BDD has made clear, an urgent reflection on ethical dimensions is called for. As the issues concerned were moral and also controversial, we strongly propose that the ethics of GCC be a subdivision of applied ethics and have also argued for the philosophical underpinning in terms of metaethics and normative ethics to deal with these controversial moral issues. We strongly feel and conclude that in the context of GCC it is possible to come out with the choices of action within the framework of above analysis.

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<sup>5</sup> In the illustration given by Jamieson the principle of retributive justice is applicable as the perpetrator of the act of stealing, Jones, is having a complete knowledge of the situation and also the fact that he is causing harm to Smith. There is an element of intention in his act of causing harm.

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