ROLE OF ETHICAL LEADERSHIP IN CLIMATE CHANGE: EVIDENCE FROM PAKISTAN

Nuzhat Shameem, National Defence University
Shazia Hassan, National Defence University
Muzammel Shah, Air University
Yasmine Muhammad Javaid Iqbal, National Defence University

ABSTRACT

Adapting the practice to justice are infrequent phenomena in climate change in ethical leadership context by authorities and entities but are persuaded by international platforms. Numerous studies have been carried out on climate change and its devastating impacts but in retrospective manner not in futuristic approach. In the present study, it was aimed to address the climate change scenario in scientific and anthropogenic perspective by covering scientific aspect through secondary data and anthropogenic activities by the use of primary level data collection method. In this study, preparation of questionnaire to collect data on dynamic concepts including; contributing factors of climate change, impact of climate change, global level climate change, role of stakeholders, discounting factor and ethical leadership style for climate justice was challenging and cumbersome. Three different measuring scales including ABC poll survey (USA), climate Stewardship survey and ethical leadership questionnaire was used. A hybrid model questionnaire was prepared by combination of three different questionnaires' adaptation. For testing the hybrid questionnaire, pilot study was carried out before the actual study. Necessary reliability and validity tests were run during piloting survey. Institutions working in Islamabad in climate change and its impacts were unit of analysis at first level and the experts working in these institutions and academia were unit of analysis at second level. In total 200 questionnaires was circulated through electronic way of data collection (software) and only 114 were received back. Data was transformed into SPSS and interpreted analyzed through multiple regression model and Andereo F. Hayes process to measure the mediation effect of role of stakeholders and discounting factor and to measure the moderating effect of ethical leadership's style in controlling climate change. Study results supported the hypothesis that the ethical leadership may play role of moderator in controlling the climate change and far reaching effects on next generation. The hypothesis was also supported that discounting factor and role of stakeholder can be mediator in reducing the GHG emission as reducing the using of fossil fuel by imposing taxes which will further control negative effects. The majority of the experts were of the opinion that civil societies may survey as leader in controlling climate change. Study scope was limited because of time and resources constraints and requires a future study at national level to identify the role of stakeholders and discounting factor.

Keywords: Climate Stewardship, Climate change, Ethical leadership

INTRODUCTION

"The credit crunch is about borrowing from our children; the climate crunch is about stealing from them" (Gopel & Arhlger, 2010). Future generations are right-bearing resident of tomorrow; appropriate system should protect their right through adopting strategies (Page, 2006). Climate change is emerging issue and attained global attention with its devastating effect on the environment. Scientific evidence and empirical researches agreed upon the consent that continuous emission of carbon dioxide and greenhouse gases in the atmosphere causing climate change and will persistently change the temperature more rapidly around the world than has been observed since the long before life has been started (Thornton, 2014). This is consequence of burning fossil fuels; nevertheless, industrial and agricultural activities are also associated with this (Posner & Weibach, 2010).

In the modern era, climate change is greatest threat, which has very strong impact on socio-economic sector. The impact has taken shape of global warming and extreme weather condition that has manifested in high temperature, flash floods, clouds outburst, droughts and heavy rain and floods. Consequently, world is facing approximately 400-500 natural disaster per year on average (LEAD, 2018). Greenhouse Gases (GHG) emission is natural process when fossil fuel used (carbon) and is essential to the human and other living thing's survival (Bruno et al., 1999), whereas the GHG keep some of the sun's warmth from reflecting back into space and make this world livable. Unfortunately, anthropogenic activities over the past centuries and half after industrialization, extension of agriculture and deforestation this emission rate has been increased to that extent which was not recorded in past years (UN, 2019).

This increased rate in GHG emission has linked with the rise in global earth temperature. Carbon dioxide is contributing two third of the GHG emission in the world (Zimmerman, 2010). Under the existing scenario it is prima fascia that temperature rise at global level will be substantial and global warming will affect with major disruption; for example deaths caused by floods, diseases and other hazards, which will cost in trillion dollars (Hepburn, 2007). As we shall emphasize, the impacts will probably be worst in the most vulnerable places poor people will suffer much than rich one (Posner &Weibach, 2010). Despite global efforts to reduce GHG emission this has increased to unprecedented level (IPCC, 2018). According to climate model projection outcome show that in 21st century temperature is likely rise 0.3- 1.7 for using minimum scenario of emission stringent mitigation and 2.6°C to 4.8°C of carbon emission. This results as global climate change (Chaudhery, 2017).

Climate change is consequence of two major phenomenon; one is cosmological level, which is usually known as natural process (solar radiation, orbit and volcano) while the second one is due to anthropogenic activities (fuel usage, industrialization, energy consumption) (Christensen, 2015). It is agreed upon that in the contemporary era, global warming is occurring mainly due to man-made activities. Greenhouse gases has natural function of maintaining the atmospheric temperature to a certain level (14°C) but in case of changes in GHG concentration by manmade activities causes destruction of GHG function, as result temperature rise. However, in the absence of GHG temperature of atmosphere even at earth may drop to -19°C (Shah, 2015).

In case of controlling temperature rise by reducing the anthropogenic activities responsible for temperature rise; the GHG emission is needed to be controlled at global level however, the benefit will not go to the present people but the people living decades from now (Mathew et al., 2013). Nevertheless, GHG reduction cost or recuing the activities of GHG emission will be paid by

the present generation. Now the situation instigate and highlight the duties and responsibilities of policy maker's to deal with the future benefit and set the cost. The popular and most debated answer rose from economists' policy maker as "discounting factor" (Hepburn, 2007). The concept is based on net present value where "a dollar today is more worthy than a dollar after a year" (Grasso, 2012).

The debate of discounting approach was questioned on the basis on distribution of cost and benefits among the countries, based on time and space and who was more responsible for carbon dioxide emission. The situation also raised debate that how this approach can spread over longer period of time and to the generation not to the individual only (Page, 2006). It seems doubtful ethically to reduce the climate change for the benefit of future generation. However, it is encouraging that that global leaders at political and religious level paid attention for the reduction of global warming and seeking effective measure for its challenges; presently being discussed at united nations framework convention on climate change (UNFCC, 2005).

In the global scenario, leadership role has been taken up by the European Union (EU) and United States (USA) in managing the climate change issues. Since last 30 years, both regions remained leader in handling this issue. Interestingly in the present time, International Environment Cooperation has changed the role with introducing new actors including China, and BASIC (Brazil, South Africa, India & China) and bestowed them new role of leadership (Carin & Mehlenbacher, 2010; Christoff, 2010; Karlsson et al., 2011).

Pakistan has been listed most vulnerable country, ranked 7th most affected by this climate change and this causing serious vagaries of weather. According to the scientific research studies, Pakistan has suffered approximately 150 freaks weather events as consequence of this change during the last 20 years (Mushahid, 2019). In Pakistan, national inventory for year 2011-12, GHG total emission was 369 million tons of CO_2, when energy usage share counted 45.9%, agriculture share was 44.8% and 3.9% industry, whereas forestry (turning into town land usage) 2.6% (Chaudhery, 2017). An annual increase in surface temperature from hyper arid, coastal area, mountain ranges in Pakistan, however, 0.5%to 0.7% increase in solar radiation was noted over the southern half of the century.

With global recognition of the impact of the environment, it is sensed that there is need of ethical leadership with its dimension of legitimate leadership to play the role in reduction of GHG emission and climate change justice where discount rate will play in reduction of carbon emission. At global level, in reduction of carbon emission, some of the countries or region had played a role in controlling the usage of carbon (fossil fuel) and reduction of GHG. The same concept in reduction of GHG emission (CO_2) and discouraging usage of fossil fuel, the concept of leadership of some region or countries can be borrowed for controlling at national level. This role can be assigned to some of the institutions, civil societies or academia. Pakistan is ranked on 13th on Global climate change index which reflects that Pakistan is most effected country. Researches on climate change justice for future generation have not explored the phenomena of discount rate and ethical leadership. This study will contribute to enhance the role of leadership and discount role in reduction of GHG emission and usage fossil fuel (Nisbe & Myers, 2007).

James, an economist (2010) extended the idea of intergenerational justice while discussing the distribution of investment return is divided between the present and future generation at equitable level (ED, 2010) in the landscape of climate change (Nordhaus & Tobin, 1972; Tobin, 1974; John & Rawl, 1971) presented theory based on fairness and justice named "A theory on

Justice". This theory explains the phenomena how normative principle for socially justice distribution of good between the generations. However, this idea was presented by Wiess (1989) in the environment term more concretely redefined rather than financial or economic basis. Justice for future generation is based on the principle that "all human beings have common sharing in natural and cultural environment of the universe including this generation and the next" past generation and next (Weiss, 1989). The theory is in support of justice for future generation in term of climate change and natural resource (summer & Smith, 2014). Weiss (1989) extended this concept of justice premise on scientific legal framework of justice for human rights with ethical imperative. She connected the ethical discourse of intergenerational justice to climate justice through conserving environment in global justice context (Collins, 2007; Gardiner, 2011).

MATERIALS AND METHODS

Research model encompasses different constructs to explain the research process in the present study. The methodology is the combination of various methods to conduct the study while performing research because every research has its own methods and procedures (Bernard, 2010). The study is based on explaining the issue of changing of climatic conditions due to anthropogenic activities (usage of fossil fuels including petrol, gasoline and gas) and its impacts on future generation. The locale of the study was Islamabad.

The study was an exploratory study which further leads to descriptive study. Primary data (quantitative) was collected through structured questionnaire and secondary data was collected from relevant institution to substantiate the study results. The study was performed in three phases including scale development, pilot testing and actual survey. During the first phase, scale was developed by adapting three questionnaires (climate change condition, climate justice and ethical leadership). Second phase was based on pilot testing of the adapted questionnaire for which data was collected from climate experts and was analyzed for reliability and validity. In the third stage, actual survey was carried out. Survey method was used for the collection of primary data for the present research study. Following steps were taken before actual research was accomplished.

SCALE DEVELOPMENT

Numerous researches have been carried out to measure the various aspects of climate change and its impact on different industries; however, the climate change in terms of its impact for future generation is still in its infancy stage. Therefore, in the present study, the researcher has done in-depth analysis and has taken the views of climate change experts to develop the conceptual framework and research design. In the Pilot stage, climate change experts feedback and suggestions were taken in detail for finalization of research scale.

The particular scale to measure ethical leadership for climate justice for future generation was not available. The study has adapted three questionnaires; the climate stewardship survey (Walker & McNeal, 2010) ABC NEWS survey in USA poll survey tool (Langer Research Associate, 2018) and Ethical Leadership Questionnaire (ELQ). A comprehensive questionnaire to measure the knowledge of global climate condition and perception of respondents and also gauge how well informed they were about the all aspects of climate change was developed.

Langer Research Associates (2018) is the primary news poll providers for ABC News, responsible for conducting survey in USA, and researcher used their poll survey tool of climate

change in the present study. For measuring the Ethical Leadership (ELQ) role for climate justice, ethical leadership questionnaire was adapted for this study (Badi, Alpaslan & Green, 2015).

The scale used in this study was based on three sections. The part a covered questions about demographic data of respondents. In part "B" the causes and impacts of the climate were captured whereas Part "C" was based on ethical leadership style and climate change justice. The scale was tested in a pilot study and was circulated among 60 respondents of different organizations including climate change ministry, disaster management authority, UNDP & some relevant academia institutions. However, among 60 respondents 40 respondents sent their filled questionnaires. The method of data collection was advance level, in which survey monkey software was used. In survey monkey (survey development software), a researcher can collect vast data through electronic medium without wasting time and other trafficking resource.

In the second section of the scale, global climate change model has been expounded on the precept of underlying causes of climate change, impacts of climate change, stakeholder's role as discounting factor and justice. The concept of causes of climate change was further divided into 5 items, contributing factors of climate change were divided into 7 items, role of proposed leadership was divided into 7 items and construct of global climate was divided into 5 items whereas climate change justice construct was divided into 9 items. Overall, part B covered 5 constructs and 33 items. Ethical leadership construct was divided into 12 items.

Likert scale rating technique is considered as appropriate and suitable for measuring perceptions and response in a way to give option to select their desired numerical score, either favorable or unfavorable. The method of using numerical scaling to measure perception is not expensive and is easy to develop (Cooper & Emory, 1995). A 5 point likert scale ranging from "strongly agree" to "strongly disagree" has been used in the present study.

DATA COLLECTION

To measure the dynamic impacts of the global climate change in multi-sector multi- site organizations, various organizations and institutions were included.

SAMPLING TECHNIQUE

Sampling is a process of selection of group of people or representative from the intended universe which represents the same features of the whole population (Strydom, 2005). In this study, multi-stage sampling technique was administered for sample selection *i.e.,* Clustering, stratification and systematic random sampling were done. To make the study reliable and credible each of the steps was administered scientifically and logically. The population of the study was distributed in different categories on the basis of their qualifications, experiences and institutional background to give each segment a representation. Sample frame was taken from ministry of climate change for the selection of environment and climate experts.

First step was clustering on institutional basis, in which institutions and organizations were taken as cluster. From among the cluster, one was government authorities, which are main stakeholder of the environment and climate change in Pakistan. In the government institutions, Ministry of climate change, NDMA, PDMA, Global Change Impact Study Centre (GSISC), Pakistan Metrological Department (PMD) and Environment Protection Agency (EPA) was included. Second were civil societies mainly working on climate change and the academia.

At the second stage, segment of the population on the basis of experiences and role was identified in each cluster. It was targeted that qualified and experience experts will be selected form each organization however some fresh and young professional were also included by doing stratification.

At this stage, list of climate and environment experts was used as sample frame taken from GCISC, and experts from each organization were selected randomly. Students and faculty members were selected from the environment department of National University of Science and Technology (NUST), Quaid-e-Azam University (QAU) and Arid Agriculture University Rawalpindi (ARID).

Technically a "case" in data grid is called as unit of analysis and this is the basic object in which data is gathered (Vaus, 2002). The unit s analysis on which the data was collected in the present study was the institutions and organizations working on climate change and protection in Pakistan. On second stage, the experts in climate change and environment protection policy was the unit of analysis.

Sample frame was list of experts working in Pakistan on Climate change and environment protection related agencies. The list of the experts was provided by the GCISC. The sample frame of students in universities was provided by university for the selection of appropriate scholar to fill the study questionnaire. This sample frame was used for random sampling for the selection of experts from each organization.

Sample size for random sampling was calculated from the formula. Sample size from each cluster was allocated on the basis of population in the given sample frame. The sample size which was intended to be covered in the study was 200. Questionnaires were sent to the 200 audience through electronic media. The study received only 114 filled questionnaires. The response rate was low which depicts that institutions in Pakistan don't encourage academic research.

DATA ANALYSIS

Data collected from electronic online software converted into SPSS for analysis. Data was cleaned and missing values were addressed before running the hypothesis tests. Reliability of the data was examined by Cranach's alpha coefficient. Correlation and regression analysis was carried out to measure the associations among the variables.

MODERATION ANALYSIS

Moderation examines whether a relationship's strength and direction of two variables (independent and dependent variable) effect by the third variable (moderator). Moderating effect of moderator in the study was measured by running the regression analysis (linear regression) by using Andreo F. Hayes process macro while installing file Process v 3.3 in SPSS for mediation and moderation analysis. This method is appropriate for running meditator and mediation analysis; however, while running moderating variable model one is selected. The changes in R-square due to moderator variable depict the moderating effect of moderating variable on the association of two variables.

RESULTS

Initial data scrutiny and filtration was executed before doing actual analysis to avoid probability of error in data and to identify/adjust the missing values in data. SPSS was used to

screen the data and identify the possible missing values in each variable. Total 200 questionnaires were floated among the climate change and environment experts in various public, private organization and academia. Out of which, 114 questionnaires were received back through Google Docs. The response rate was 60% because of self-administration. During the survey, many of the respondents did not fill the questionnaire in spite of repeated reminders *via* email which revealed that targeted audience (environment /climate change experts) were least interested in academic research in Pakistan which is discouraging. Even though response rate of the respondents was very low but keeping Pakistani culture in view where promotion of research culture is at its nascent stage, it is acceptable.

Sekaran (2008) reported that reliability, validity and hypothesis testing is needed as an essential element for the analysis of data. SPSS were used for the data analysis. Internal consistency test is most common test to be used to test reliability (Fink, 1995). The reliability can be described as "the degree at which the items correlated collectively in one concept". Some of the rules are established by Leech, Barret & Morgan (2005) as: the data of the research is numerical, in SPSS data editors, the variable of every case must be in one column, there should be mutually exclusive coding of variables and each variable is designed to measure at optimal level.

Descriptive Statistics Means, SD and Inter-correlation for Contributing Factors of climate change (IV) and Impact of Climate Change (DV) represents the descriptive statistics of hypothesis 1 including mean, SD and inter-correlation. The score of correlation is (0.842**) less than 0.90; hence no multicollinearity found in this relation. The multicollinearity was further tested by using method of Variance Inflation Factor (VIF) which is equal to 1 and the tolerance score is also 1.00 which is found within range and acceptance level.

Data was analyzed through regression analysis to test the hypothesis and the dependent variable, Impact of Climate Change (ICC), was regressed upon Contributing Factors for Climate Change (CFCC). In testing hypothesis H1, regression test was carried out. The dependent variable Impact of Climate Change (ICC) is regressed upon predicting variable of the study CFCC. The Contributing Factor in Climate Change variable predicts impact of climate change, F (273.731), p<0.001 which explain that CFCC have significant impact on ICC as ICC level is increasing with increase in CFCC.

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This manifests that contributing factors in climate change including usage of fossil fuel plays significant role in enhancing the impact of climates change. These factors also enhance the GHG emission (Beta =0.842, p<0.01) and value of R square (0.707) also indicates that this factor is contributing 70.7% in enhancing the impact. The finding of regression analysis depicts that contributing factors of climate change positively and critically affect the impact of climate condition. The relationship is found statistically significant; hence the hypothesis is supported.

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In the moderating regression showed the two-stage multiple regression analysis in which role of "ELS" as moderating variable on controlling the relationship of CFCC and ICC by imposing ethical moral obligations on the present generation to protect rights of next people. As regression analysis for direct relationship shows β =-0.0234*, p≤0.05, ΔR2=0.0134 and F=5.5668 shows model fitness. On the basis of these values of regression hypothesis 1 ―contributing factor of GHG emission has positive relationship with Impact of Climate Change is supported. Further regression analysis for direct hypothesis 2 which is ―shows that the difference between the lower level and upper level is not equal to zero which support the hypothesis that leadership style has moderating effect and the relationship is statistically significant. In this, analysis value of ΔR2 is very low 0.0033 but it exists when there is some difference between lower and upper level. The p value do not supporting the relationship as the value is greater than 0.05.

The core objective of the research study was an attempt to unveil the moral problems of the climate change justice and fair allocation of its burden. When the issue is dealt in the ethical perspectives, it should turn into allocation of GHG increasing emission burden, research has highlighted three factors which can contribute in justice.

This research study was designed to highlight the influence of discounting factors, ethical leadership role and institutional role in GHG reduction and reducing global warming condition. The research probed the influence of ethical leadership behavior, justice practice through allocating and posing taxes on carbon emission and increasing the role of institutions and individuals in reduction of climatic condition. Hence, results testified the relationship of variables under study and found significant relationship among the proposed variables including independent, dependent, moderating and mediating like Impact of Climate Change (ICC), Contributing Factors in Climate Change (CFCC), Role of Stakeholders (RS), Justice for Future Generation (JFG) and Ethical Leadership Style (ELS).

DISCUSSIONS ON KEY FINDINGS

According to the findings of the study; opinion of climate experts extended their opinion about the main contributing factor of climate change was "deforestation" (92%) followed by usage of fossil fuels for energy production (87%) and then automobiles (82%). they gave very low ranking to ozone layer (57%) which also indicates that they are considering as impact not cause. The results clearly indicated that in Pakistan deforestation trend is high which is causing GHG emission as consequence of increased usage of carbon related fossil fuels are major contributing factors. On the other hand, study results and literature highlighted the issue of lethal persistence of carbon in GHG with long time period, which has become challenging situation to control the warming.

Consequently, glaciers melting was ranked high (90%) and agriculture disruption and floods, as Pakistan has faced heavy floods in history including flash, riverine and heavy rain fall floods in past. However, increasing disruption in agriculture sector is also causing challenging situation for the future generation. On the other hand, regional environmental condition is also

changing rapidly which may be a big challenge for the future generation. GCISC (2017) projected the GHG emission in 2020 which also substantiate the study results that land usage (deforestation) has increased twice as compared to 1994 and agriculture disruption in more than three times in 2020 and would be 100 times greater than base year (1994) which is very high increase. On the other hand, energy sector with usage of fossil fuels will produce three times greater GHG as compared to base year whereas it would be 26 hundred times greater than base year in 2050 which is quite alarming situation. The GCISC projection results are supporting the study results; nonetheless the situation is very complex and alarming. The study also measured the change in temperature with the change in GHG emission in Pakistan in coming years and interestingly, both results are coincide, albeit the future generation is not seem protected.

Temperature rise and precipitation increase in the future years was projected in Pakistan with regional bifurcation. The results revealed that in coming decade in Pakistan temperature rise is projected +0.51 whereas change in precipitation over decades is +1.73 mm/decades. The rise in GHG in coming year is changing the trends in temperature and precipitation. The results show that high rise in temperature and precipitation is associated with GHG emission. The study also revealed that high GHG emission is due to deforestation, and fossil fuel usage whereas as the "discounting factor" for the GHG reduction through giving tax breaks to some industry shifting toward alternate energy and reduction in allocation and permission of GHG emission for some plants along with usage of cars with less carbon emission may be useful for GHG reduction and for cutting down lethal persistence of carbon in GHG. This "discounting factor" may cut the GHG /carbon emission and consequently temperature and precipitation fluctuation in future. With imposing the "discounting factor" we can reduce GHG emission.

The poor and those who are not responsible for GHG emission are not the only to bear the brunt but the richer (industries) are also facing the consequences, contemporary challenge of this climate condition can be considered distinctive in many ways. The ecosystem around the world is being affected, if the climate change consequences are unabated then they will cause unprecedented results at large scale and millions of vulnerable people would be unable to cope with the threatening changing climate (IPCC, 2014). This literature supports the H1 (fossil fuel burning causing climate change), infect, the richest countries are the highest GHG emitter, and they have emitted disproportionate share of the GHG in Past (Shue, 2014; Singer, 2002; Shue, 2015).

Climate change is highly complex and political mechanism albeit it is ethical as well as a principle phenomenon involved in the "radioactive forcing" of the world's atmosphere which increases GHG concentration and its natural power to capture the energy form sun increases as a result, consequently temperature rises. The effort is made to prevent the temperature rise to that level which may impose unbearable cost on human beings in future and the ecosystem. The group of scientists advocates the rise of temperature up to 1.5°C whereas the warming limit is 2°C (Moellendorf, 2014).

The devastating effects of climate change will not only be a hard hit for the alive people now but it will be felt by the next generations as well. The GHG emission affecting the climate condition will continue to influence the temperature at global level for many years ahead, perhaps many generations. If the climate change destruction continues for the generation who are not born yet, we must take some mitigation steps. If it is matter of violation of rights and injustice, then there is no option for us to threat next generation justly or unjustly (Steiner, 1994). One of the reasons behind justice is that future people cannot claim to be harmed by the present generation' action

(Parfit, 1984). Meyer reported that those who consider that this generation have stringent duties of justice for the next generation and must seek option of reconciliation of their position with the Non-identity problem. Likewise, environmental restraint motivation can be attempted by taking the obligation that we ought to reduce the contribution of carbon emission and climate change (Mazor, 2010; Gheaus, 2016).

Lippert-Rasmussen (2016) explained the egalitarian view that it is simply unjust for someone's life to go worse because he is born in that condition and it is also unjust that someone has to face because he is born later than us. Moellendorf (2015) suggested rightly if the gulf time between this and next generation in question is enough, the discounting rate for the latter can be then substantial potentially rendering permittable action that would be at risk even basic interest of next generation. However, pure time discounting is "arbitrary and even discriminatory ".

THEORETICAL AND PRACTICAL IMPLICATIONS

Followings are theoretical and practical implications suggested by the study

Theoretical Implication

The study had laid the foundation for the protecting the next generation from climate change impacts by reducing usage of fossil fuel, usage of automobiles and controlling deforestation. The empirical results of the study directs toward adaptation of "Theory of Climate Justice" (TCJ) for the protection of future generation. The ethical leadership role of civil societies (57%), individual role (50%) and state (55%) responsibility for reinforcement of legislation and combination of environment theories and global theories in controlling climate change in study results support the implementation of TCJ for climate justice.

If the present generation want to pass the burden on to the next people "differing the cost" may be possible even if "differing action" is not (Caney, 2014). A first view would hold that we should seize the opportunity offered by climate change to ease global injustices in general (Gosseries, 2014; Caney, 2012). A second view would hold that our allocation of climate burdens should not make global injustice worse. For instance, it may be argued that whatever allocation of climate burdens we choose; we should not make it harder for the poor to escape from their poverty (Miller, 2008; Moellendorf, 2014). A third view would be that the allocation of burdens should not be influenced by wider concerns about global injustice. For example, Miller (2008) has argued that we should not turn climate policy into an occasion for general egalitarian redistribution (though, as we have just observed, he also argues that our division of burdens should not exacerbate global poverty).

A similar view is defended by Posner & Weisbach (2010) based on a concern for feasibility. Specifically, they argue that any politically feasible climate agreement will necessarily be one that brackets questions about wider economic injustice and disdains proposals for redistribution. It is contentious, however, whether a concern for feasibility speaks in favor of bracketing wider distributive questions. On some rival views, it might be that eliciting the cooperation of developing countries in a global climate agreement will demand that we address background injustices (Moellendorf, 2014; Caney, 2012).

At its broadest, the so-called contributor pays principle stipulates that those who are responsible for bringing some harm (or threat thereof) into being should carry any costs that it

generates. If it was applied to the burdens of mitigation, adaptation, and compensation, the principle would place greater burdens on the shoulders of those whose actions have caused greater quantities of greenhouse gases to be emitted. It is not, to be sure, the case that we can trace any instance of harm back to any specific individuals' (or even state's) emissions (Page, 2011). Some have, to be sure, thought that the contemporary descendants of high emitters ought to bear a greater share of climate burdens (Shue, 2014 & Miller, 2008). On the contrary, on some views the poor should not be required to cut their emissions, at least until the wealthy have made available to them affordable alternative sources of energy (Shue, 2014).

Study findings have indicated that leadership role and discounting factor can play a significant role in climate justice. However, ethical leadership role of individuals, institutions and civil societies in protection of next generation from climate change effects as human rights obligation under moral and ethical ground.

It is interesting to mention that majority of the climate change experts (private and public organizations) pointed out that civil societies can be awarded role of leader in climate justice. They showed their trust more on civil societies that government authorities. Civil Societies have their networks not only with communities, government departments but also with industries particular working on corporate social responsibilities. The study laid the foundation for the establishment of climate justice forum at national level.

As matter of fact, government departments have not only the power but also authority for the implementation and reinforcement of legislations, policies and recommendations made for climate change protections. Government departments have their chapter in all districts and tehsil level and can work more practically at ground level. Climate experts gave second ranking to the government department to play role of leadership (55%)

Every individual has contribution in emission of carbon and has percentage in anthropogenic causes. Study indicated that every individual can play role of leader at his place while controlling unnecessary carbon emission and creating carbon free environment at her place. Empirical results of study gave (50%) ranking to individual role as ethical leader in climate justice.

RECOMMENDATIONS

1. Present study could cover limited number of sample size for capturing opinions of scholars, researchers and experts.
2. Experts and scholar/researchers were of the opinion that civil societies and Government authorities must be given role of leader to reduce the GHG emission.
3. It was also suggested that discounting role must be imposed for the reduction of GHG by shifting the energy production on alternate and solar system.
4. It is strongly suggested that a macro level study at international level must be conducted to measure the opinion of international experts.

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