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From theory to Reality; Climate Change as a Health Hazard

Challenge for the Economy and Legal System of Pakistan

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Abstract

Climate change is a real problem and whole world has started to come around and accept it. The effects of global warming are coming out with more intensity this time and it is no wonder that the main reason for this is the increasing and unjustified interference of man in the nature. No matter whether it is the movement of stars and galaxies in the vast air space, the attractive scenery of trees, mountains and rivers, the charming and melodious sound of birds, or the order and discipline in the life of different kinds of animals, it says in a very clear and concise way that the Creator of the universe has created all these thing in a very complete and comprehensive in terms of balance and order in a very flawless manner. At the same time, this merciful Lord also directed that do not disturb the balance of the nature. But what to say about the human beings, his greediness by nature, he messed up the natural arrangement of this beautiful and balanced mother earth in such a way that countless social, economic and environmental issues started appearing on daily basis. The study is an attempt to explore the unexplored health related aspect of the adverse impact of climate change on the people of Pakistan and response from the legal system.

Key Words: Natural Environment, Climate Change, Green House Effect and Labor Community.

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Introduction

The Global Warming is one of the serious problems associated with other environmental issues, the root cause of which is the Green House effect. Green House effect is the process of blocking the heat of the sun falling on the earth and due to its absence there exist clear scientific evidence that everything on this mother earth shall freeze at minus 18 degree centigrade. The bottom line of the problem is the constant increase in the emission of greenhouse gas caused by the numerous activities of the human beings. A small instance of such activities is the depletion caused in the Ozone Layer, which is actually a protective layer/cover that exists in the atmosphere with the ability to absorb up to almost 99% of the Sun's harmful ultraviolet rays. But a Greenhouse gas reach the permanent layer and chemically reacts with Ozone whereby the ozone gas breaks down into oxygen leading these harmful rays to the exposed earth and adverse effect on Human, Animated as well increasing the temperature on this mother earth.(Kurane 2010)

Purpose and Methodology of the Study

The Study under the title of "From theory to Reality, Climate Change as a Health Hazard Challenge for the Legal System of Pakistan" is an attempt to understand the very concept of Climate Change and to explore the ways in which it affects our lives. For

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meeting the minimum requirements of health climate this study is focused to and will help to create a sense of emergency not only in our lifestyles but in our discussions and voting preferences only then can we see a future generation of human beings living to its full potential on this planet. The research further aims to explore the nexus between climate change, labor community and economy of Pakistan. For the purpose achieve the above mention aims and objectives a meta-analytical research technique was adopted, both primary and secondary data was collected and carefully analyzed under various themes, headings and subheadings.

Excessive and unreasonable deforestation is also considered as one of the leading causes for the increase in the global warming, which are produced by the normal or routine household burning at large scale. Carbon Dioxide, Nitrogen Oxide, Chloro Fluoro Carbon, Methane, Ferine and Helons etc includes in the greenhouse gases.(Aptroot and Van Herk 2007) Global warming is not only causing the increased temperature on the mother earth rather the experts have warned that it result in a huge loss to a substantial portion of the world life.(Botkin, Saxe et al. 2007) There is constant increase of sea level and has reached to 18 centimeter due to the non-stop melting of glaciers and there are further bright chances of its rapid increase as well.

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1. Global Warming and Natural Calamities

Global warming is also resulting in the increased natural calamities, natural disasters and flooding frequently hits many parts of the world with an unprecedented scale. This is not enough; it has been predicted that a major portion of the world will be faced with dearth and drought and some will become flood areas in the near-future. These atmospheric changes warrants immense for the huge economic loss as well to rising heat and temperature, according to the experts, by 2050 estimably more than 25 million people will have shuffle/migrate due to global warming, and atmospheric changes as due to rise in the sea level will ultimately cover hundred and thousands of islands and people living on the coastal areas.(Gera 2013) This phenomenon is not just dangerous for human being rather it is extremely deadly and lethal for other biodiversity on the mother planet as well as due to the increased temperature, drastic changes are occurring in our ecosystem and leading difficulties for the organism in terms of their food requirements. Beside this, there is a visible change noticed in the rain-fall pattern, in the normal monsoon cycle, hot weather creates moisture and water vapor in the air, which turns into droplet of rain.(Nalinakashi and Sundareshan 2009) The warmer it is, the more vapor will accumulate in the atmosphere, resulting in more droplets and the result

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will be more rain; sometimes more rain in short span of time some time contrary to it. This year the world has witnessed a serious flood hit in the eastern part of Australia and Spain. Only is berlin almost 80% of the annual rain fall per year has been exhausted while in Sydney it took on three months.(Ryazantsev, Lukyanets et al. 2017) Environmental changes are noted almost in every part of the globe with a rapid alarming increase.

1.1.Natural Disaster and Economic Loss

Economic loss from floods, drought and landslide is constantly rocketing in Asia, over the past year only, climate and water-related calamities has caused a total cost of about 35.6 million dollar, and has affected about 50 million of people.(Sari and Soytaş 2009) A research report shows that how over the past 20 years economic loss has occurred in various ways. Drought based economic damage has raised about 63 percent from flooding, 23 percent from land-sliding by 147 pc, as compared with 2001 to 2016.(Sodhi 2016) A serous water scarcity is also expected in the near future as the high mountains of Asia, even the Himalayas, Tibetan and Hindukash which contain the maximum volume of ice at polar region covering the area of about 100,000 square kilometers. Moreover, a serious melt of the glacier it noted due the exceptional increase of temperature due to the dry

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weather of past year. These are also called as the water towers of our glob and are vital for supplying fresh and potable water to the densely high populated parts of our planet. There are more than 100 of natural calamities in Asia, 80 percent of which storm, cyclone and flood based hazards. It has caused about 4,000 of fatalities and 80 percent of which comes under flooding; it has directly affected about 48.3 million people directly and resulting in more than 35.6 billion dollar loss.(Shabnam 2014).

Pakistan has been declared as Fifth of the most dangerous country which facing some serious environmental problems. According to the IPCC world must comply with the issued code otherwise they will face huge environmental consequences in terms of dearth, unprecedented heat, drought, flooding and food insecurity.(Naheed and Rasul 2010) Pakistan is faced with the mist of rising temperature on yearly basis which exposes the people of Pakistan with extreme difficulties in terms of agricultural products. Even in April 2016 we have recorded April as one of the hotter month of the year and recording 50.0 degree centigrade at Nawab Shah.(Ghaffar and Javid 2011) Special focus is given on the South Asian countries under the IPCC's report and this also a fact that despite of all these warnings the responses for solving the issue by the governments are not satisfactory.

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Here it become very that the real cause of this issue is the excessive emission of green of greenhouse gases into the atmosphere, and after all, the question is what is the reason for such a huge emission of these greenhouse gases; whether it the combustion of inorganic fuel and above all why is this happening; is this due to the instability of global economies or un-balanced consumption of natural resources. The most probable answer might be that global economy is primarily based on coal, oil and gas, perhaps all the paths of economic development and stability passes through this same path.(Campbell and Pradesh 2005) This the main reason that regardless of the fact whether it is individual, institution or a state becomes part of the same race, in the greed of getting more and more of wealth derogates from the just and unjust means and use of nature and natural resources which ultimately led to this lethal and vulnerable conditions of mother planet.

1.2.Islamic approach towards Climate Change

On the other hand Islam preaches for a balanced approach towards any sphere of human life, these are such attributes that are visible in every case and command and from this point we can understand how responsible approach and caution is necessary in terms of using this finite energy. The Quran, which is a source of guidance for all human beings living and human beings to come, discuss

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environment in more than 200 verses and warrants that natural environment is a great gift from Allah Almighty and all of these resources have been subjugated for us, we are free to use them not to exploit them.(Chang, Qi et al. 2012) In Quran there is categorically mention ‘Do not exceed the limit’ which in itself is very clear indication that we have abide by a limit in the use of our natural resources. Regarding the rapid deforestation which is considered as one on the major cause of global warming it is said by the Holy Prophet ﷺ if even the day of judgment occurs and one of you has a plant in his hand and he has time to plant it...he should plant it. From this we can understand the importance of trees.(Mohammed, Islam et al. 2017) Islam basically focuses on the responsible use of natural resource, in a Hadees the Holy Prophet ﷺ said that do not waste water even if you are sitting on the bank of a river.

1.3.Forest Fire incidents are increasing

The increase in the global temperature is constantly leading toward the fire break-out incidents; we have witnessed a frequent increase in forest fire incidents in DG Khan, Mansehra and other Northern parts of our country. According to the experts in these unfortunate incidents human beings are directly involved, due to the extreme hot whether wetness in trees become very less leaving very

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ideal for catching fire which spreads through the jungle in a very high velocity.(Khan, Yasmin et al. 2016) The extreme increase in temperature is also responsible for the premature fire incidents in major parts of the world. Same is the case with Canada where even in the last winter season extreme hot weather cause fire incident serious enough which resulted in pirokolonumbus clouds and created a weather system of its own. We have witnessed a serious fire outbreak in Australia as well, according to the experts report published from independent organization the Climate Central as compare to 1970 the forest fire incidents are 10 times increased.(Huber and Gullede 2011)

1.4.Rapid Increase in Climatic Calamities

According to WMO there is an increase up to 5% recorded in climatic calamities all over the globe, despite the fact that even the difference of short span of time IPCC had released a detailed report on climatic change.(Lau and Kim 2012) According to the report due to the human unnecessary intervention with weather has been changed and if the same continued in then according to the research, people will experience the worst of their lives. More than 80% increase has been recorded in the heat waves from the past 50 years and is increasing constantly.(Robock and Toon 2010) The environmental deterioration is resulting in sea storms, instant flooding and cyclone, on the other hand

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from 1850 till now more than 1.1 increased has been noted in the mother earth's temperature and by 2030 there is predicted an alarming increase which may become more and more destructive.(Wehner, Stone et al. 2016) The report further says that such changed environmental conditions are appearing day by day and the environmental experts further warned that with the rapid increase in the adverse climatic condition people will face serious drought. The decreased amount of rain in hot season will result in water shortage ultimately resulted in agricultural problems.

2. Climate Change and the Labor Community of Pakistan

The prediction of national and international experts regarding the adverse effects of climatic changes in Pakistan has proved to be useless as they predicted that Pakistan holds Seventh position in terms of climatic catastrophes. According to the recent report Pakistan faced a loss of approximately 40 million dollars due to the severe damage to agriculture and livestock completely ruined by flooding.(Ali and Erenstein 2017) The labor community of Pakistan also faced some serious issues due to the extreme heat or severe whether then it very alarming situation exactly same as standing crops were damaged due to the extreme weather. Survey shows that the average Pakistan laborer starts working at the age of 15 and works till he is 65 of his age,

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approximately we have 140 million people of the same age and by 2050 there will be 200 million which will be a substantial portion of our population and it means that a huge portion of population will be adversely effected by the climate change.(Mahmood, Jia et al. 2016)

Our labor community is faced with some serious health issues, as per the WLO report in 2012 Pakistan represent more than 73.78 million workers and this was 55% in 2010 means we have witnessed 23.38 percent increase just with the span of 11 years. From this we can calculate that in Pakistan the average increase ratio of labor community is 2 million per year and majority of them is directly connected with agricultural sector which is about 39% in 2017.(Rahman, Saboor et al. 2017) Being an agricultural land 18.5 percent comes from agriculture and visible decrease has been witnessed in the recent years. In 1992, 45 % of the community was connected with agriculture, by 2017 it decreased to 37% and this 6% decrease is directly connected with the extreme heat problem during working hours.(Rahman, Saboor et al. 2017) Pakistan is comparatively a low importing country with majority of people connected with agriculture and industries, due to the weak industrial setup more than one third of its population resides in rural areas. Agriculture is still providing 39% to the people yet about 90% of the agriculture irrigation is done through glacier water. Statistics

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suggest that about 39% of Pakistani people lives below poverty line which directly or indirectly leaves an adverse effect on their health as well.(Abid, Scheffran et al. 2015) This adverse health issues mostly attributed to poor nutrition, contaminated water, tiredness due to extreme heat, sometime through natural phenomenon such as dengue fever resulting from water also influences the production abilities of working class.

It has been witnessed from the past couple of years that in Pakistan we have consistent environmental catastrophes such as hales storms, drought, flooding, tornadoes and land sliding. Extreme cold weather is recorded in upper areas of Baluchistan and Kashmir where in winter season there is a huge amount of rain fall, snow fall and land sliding leaves no option with the people but to flee away and destroying their standing crops and cattle. For instance in 2010, more than 160 people died from such environmental disasters; from land-slides in particular and sudden floods are becoming a common thing, which would use to occur in moon-soon season only.(Dankelman 2010) Studies suggest that the temperature in Pakistan is increasing constantly which will have a very adverse impact on the people living in *Kachi Abadi* areas and these people will be face with extreme heat waves, city flooding, storms and dust. In 2012, people living in the rural

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areas of Karachi, Lahore, Faisalabad, Quetta and Peshawar were hit by powerful winds inflicting severe health hazards and pushing them into the health swamp. Poverty gives rise to social in-equality and consequently increases economic problems to the working class of the society as animal husbandry is 53 percent of the total GDP of Pakistan and is closely related to agricultural sector also. Livestock-rearing along with agriculture is dependent on environment also as for their survival they choose grassy lands which are under real threat of serious drought, flooding and erosion. More than 30 to 35 million of farmers are directly related to livestock rearing and they are directly affected by the extreme heat causing decrease in number of milk and meat producing animals which ultimately results in extreme difficulties to the people related with this sector of life. Due to consistent rise of temperature diseases broke-out in the animals we have recently witnessed pock-disease in cows and by end of April 65 deaths were recorded in Pakistan.(Mahmood, Jia et al. 2016)

Climate change in Pakistan is directly as well indirectly causing diseases, industrial zones, auto-mobiles, effluents supported by greenhouse gases are adding fuels to the fire. Air pollution on due to national and international sources is causing lungs infection, breathing diseases, lungs cancer and many other lethal diseases is responsible for

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huge increase in the death ratio. More than 93 percent of the domestic house-hold use general fuel for cooking and a change in the temperature causes change in the behaviour, consequently it takes away the lives of 326,000 people per year.(Rasul and Ahmad 2012) Insects-borne diseases are also one of the leading factors contributing to economic issues as it creates health issue reducing the ability of manpower to work, moreover it is the environmental factors such as change in the temperature, moisture and mosquitoes born disease like dengue fever which is in operation in Pakistan for the past 3 months though initially this weather was not favorable for it and as per research this shall continue till 2070. Malaria fever is directly connected with flooding and according to Pakistan Institute of Labor Education and Research currently we have 4.65 ratio of unemployed people which means there are 10.35 million people are jobless and it is increasing with the increase in population.(Sheikh, Manzoor et al. 2009) It suggests that we have to deal with both of them; the Environmental as well as with the population and to look after that working class which is in workable condition. Keeping in view the climatic changes phenomenon, this is the appropriate time to reconsider the working hours of the labor community for the purpose to give them protection and their due rights. Nature of the work, intervals, working time and working hours may

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save laborer from extreme heat, consequently if on one hand it will save our working community on the other hand it will enhance our economy also.

2.1.Climate Change will deprive Human Beings from Adequate

Sleep

Study shows that constant rise in temperature is taking away our ability of adequate sleep as well. The University of Copen Hagen research team has collected data from 47 thousand people of 68 countries in years 2015 to 2017 by placing sleep-tracking devices on their wrists which can tell us about our future sleeping problems.(Serdeczny, Adams et al. 2017) The study shows that with the increase in temperature the sleeping duration of the people is constantly decreasing 44 percent per year which shall to 50 to 55 percent in 2099 and is estimate becomes 10 to 15 minutes of a night. (Majeed and Lee 2017)The study further shows that climate change will take majority of those people into effect which belongs to a comparatively underdeveloped states, which shall cover women and elderly people sleeping late in the night and rising very early in the morning and this go further in warm summer season causing serious mental and physical stress. The rapid rise of the global temperature is disturbing our sleep pattern as the health researchers suggest that an

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average body demands for a comparatively cool environment for proper sleeping which is becoming difficult day by day due to the extreme hot temperature and the study suggests that for proper sleep it is necessary that the surrounding temperature must be less than our body temperature. Pakistan is constantly ranked as one of the most climate change affected country of the world and the people of Pakistan belonging to different region are faced with drastic climate change affects such as flashed flooding as a result of abrupt glacier melting, high heat-waves, rise in sea level, food shortage, people migration and water scarcity.(van Vuuren, Riahi et al. 2017) The most alarming fact is that it is not coming slow, it with further aid fuel to the fire and will result in further deterioration as Pakistan has become the 6th most climate change affected state of the world and facing further environmental risks.

3. Response the our Legal System

Pakistan is a country which has highest deforestation rate, this also a country where the area under forest is hardly three percent. We have got a mass migration going on and we have a huge population which would get at risk when climate strikes as we have 20 to 30 million people which are in harm way when floods happen.(Khan, Khan et al. 2016) So adapting to climate change has got economic cost,

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has got social cost, and has got political cost and cause national security cost for Pakistan. To turn those costs into gain Pakistan has expanded its commitment of reforestation.

The vehicular emission is the number one cause of poor air quality in places like Lahore, Karachi, Faisalabad, Peshawar and other major cities of the country. Same is the case with industrial setups, brick-kilns and burning of crops or wild fire as they emit a huge amount of obnoxious gases in the air.(Abid, Schilling et al. 2016) If the reasons are so obvious then why the government of Pakistan has not done anything; the answer to it is very simple as to be very honest climate was not in the priority list of our government till very late and history shows that even it was not considered as primary issue.

In 2000 the government stroked to ban Rickshaws and ironically that government is now obsolete but that Rickshaw is still going strong on the road. The 1997 Pakistan Environmental Protection Act later on adopted by all the provinces provides for the regulation of vehicle emission and the legislature follow-up failed on these regulations.(Khan, Khan et al. 2016)

Though Pakistan has very rich history of environmental legislation, starting from 90s but the thing is, these are going to be useless in a weak institutional set up as when the state doesn't have the

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capacity to implement these things.(Akram and Hamid 2015) Even if a state has the strongest of regulations on paper with a weak implementation set up, that state is unable to make any head way in terms of meaningful gains. The Government imposed ban on the burning of trash and crops but the experts showed serious concerns on the implementation of the law.(Rasul and Ahmad 2012) A lot of mitigation is not going to happen by the plantation of trees, is will happen by making sure the polluters are not polluting anymore.

Major energy sector firms and production industries are largely responsible for the carbon emission, the scale of the emission they release these materials is considerably larger than the normal human beings. If the government institutions and companies cannot act upon the set laws and regulations and if they are not ready to adopt change, then why does the onus of responsibility lie on the common man. If the people's priority is the climate; a politician will automatically have to put that on their agenda and when they are held accountable for their agenda then the companies and the institutions will have to become complacent to the revived legislation. There is a strong case for public policy or even private stake-holders, like us to help the people to understand the problem so that they can adapt better.

4. Conclusion

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To be aware is the first step of creating a discourse and while it might be a little late to address this problem, it is never too late. Pakistani government, even though it has been late to the party is not oblivious to the problem. We need to create a sense of emergency not only in our lifestyles but in our discussions and voting preferences only then can we see a future generation of human beings living to its full potential on this planet.

- Pakistan needs to embark a mega solution climate change project and to shift its energy towards clean energy, zero carbon energy, 60 percent of our mix by 2030 and to shift our 30 percent of transport towards electric vehicles.
- If Pakistan has to survive climate change, we need forests in Pakistan. Pakistan needs to head in the right direction to restore its forests and to add new forests into its mix, mangroves are also important as they produce four times the oxygen of a normal tree and absorb carbon dioxide four times.
- The government must mobilize the private sector and local communities to grow, plant and protect the saplings they needed to reforest the country and at the same time, offer workers opportunity for further good work.

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