**Assignment 1**

 **Social Impact of Population Growth**

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Date

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**Introduction**

Population is this has increased rapidly between 1900 and 2000 and this increase is considered to be three times greater than the growth rate in entire human history. According to report of UN population has grown up to seven billion which is six times greater than the rate of one million; just two hundred years ago. This human growth has impacted all the globe in terms of water scarcity, increased pollution and carbon foot print. This increase in pollution has contributed to destruction of forests, burning of fossil fuels and factory pollutions, which have increased the emission of harmful gases that have become cause of depletion of ozone layer and increase in earth’s temperature. This issue of global warming has become matter of serious concern for the whole world.

According to predictions temperature of earth will increase from 1.5 to 4.5 by 2050; which is alarming. This increase will affect the all the natural resources and impact the humans life directly. Increased diseases, famine, drought meltdown of glaciers will be the major impacts of global warming. Developing countries will be hugely effected by this issue than developed countries(“Global Water Resources: Vulnerability from Climate Change and Population Growth | Science,” n.d.).

1. **What are greenhouse gases? How do they contribute to global warming?**

Greenhouse gasses refer to the harmful gasses that cause the greenhouse effect. This effect is considered as the number one cause of the global warming. Greenhouse effect originates from the bombardment of radiations on sun on the earth’s surface. These ultraviolet and infrared rays hit the earth surface and are reflected back out in the space by clouds and ice. Around 70% of this radiation is absorbed by the oceans and about 30 % reflects back. This 70% of radiation heats up the oceans and whole planet. Rocks, air and seas get warmed up and start to radiate thermal infrared radiation. This energy gets absorbed by the greenhouse gasses; carbon di oxide and methane. After absorbing this energy molecules of these gasses lit up and start to radiate heat energy in the lower atmosphere.

With the increase in population emission of greenhouse gasses has increased through deforestation, burning of fossil fuels and emission of gasses by the industries.

 These greenhouse gasses GHG include hydro fluorocarbons, sulpher hexafluoride, per fluorocarbons, methane, nitrous oxide and CO2. Some scientists add water molecules to the list of gasses that contribute to the greenhouse effect. Emission of these gasses have skyrocketed in the recent history(Lashof & Ahuja, 1990).

Production of gasses:

 Fact is that carbon dioxide is minor component in the atmosphere. Carbon dioxide is released through process of eruption of volcanos, respirations. Activities like deforestation, fossil feels and land changes. This minor component has contributed hugely to the climate change. Methane is a hydrocarbon that results from landfills, rice cultivation, animal manure, ruminant digestion and agricultural practices like use of pesticides. On molecular basis methane is more active in causing greenhouse effect in comparison to carbon dioxide.

Another gas nitrous oxide is produced from cultivation practices regarding the use of organic and commercial fertilizers, combustion, biomass, and nitric acid production.

Consequences:

Greenhouse gasses have always existed on this planet but due to over population, production of gasses has reached new abnormal level. Burning of coal and oil has increased the amount of CO2 in the atmosphere because these processes combine carbon with atmospheric oxygen and contributes to CO2. These gasses are increasing the temperature of earth.

 Warmer conditions of earth lead to more evaporation and participation, as a result of which certain parts of the earth are becoming dryer and other warmer.

According to Fifth Assessment Report of the Intergovernmental Panel on Climate Change, 95% of human activity over the past 50 years have caused the global warming.

1. **What kinds of economic, security, political, and other challenges do these emissions pose to the people of the developing world, and who are the biggest offenders?**

Climate change will affect the all the countries, but developing poor countries will be its biggest victims. Around 60% of the world population is based in developing countries where temperature change will result in disastrous effects, not just economically but also in terms of scarcity of natural resources and natural calamities. According to report of World economic outlook, this climate change will create winner countries and loser countries in terms of economy. Continuous emission o GHGs have raised serious concerns in emerging economies as climate change will directly hit their economies. Effects and impacts of the climate change will not distribute equally among the countries. Poorest the country, more will be the suffering due to natural calamities. Major reason for this is their vulnerability to the negative impacts on natural resources, like waters, ecosystem, human health, fisheries and crop production.

Populations in these countries rely heavily on natural climatic conditions for their crops growth and survival. As they are already struggling economically they have low adaptive capacity for the development and implementation of such strategies. Developing countries have very low contribution to the climate change and in causing pollution but the will get effected at huge level.

 One of the noticeable developing country of this list is Pakistan. It is number 7 on the list, on most vulnerable country to climate change, with a death toll 523.1 lives per year. Already Pakistan has suffered greatly due 141 extreme weather events i.e. floods, cyclones, storms, glacier outbursts and heat waves. In 2005 earth quake occurred that resulted in huge loss of human lives. In 2010 country faced horrendous devastation due to floods. These events forced their government to form National Disaster management authority to deal with the calamities that result from climate change. All these calamities effected the country hugely in terms of economy and scarcity of resources.

According to report of UNEP climate change in Pakistan has resulted in increased temperature and low levels of participation rates. It is predicted that likelihood of occurrence of major weather related events has increased, in terms of flooding. Considering the fact that it is developing country infrastructure is not adequate to deal with the climatic events. According to GCISC around 14 crops are already effected in country due to heat stress. And rainfall capacity has decreased that has resulted in 29 % increase in the requirement of water for irrigation purposes. Wheat yield has also decreased due to climate change. Coastal areas of city Baddin was flooded due to sea water, which has resulted in soil salinity. In areas of Rajhanpur cultivation and harvesting time has shifted backwards, that has resulted in the shortage of growing seasons for the farmers. Health issues like gastrointestinal, skin diseases have also increased in various poor regions of country. Desert areas of country are facing water shortage issues that has resulted in death of citizens and security issues due to scarcity.(Akram & Hamid, 2014)

1. **Is there any way to control the growth of population on a global level?**

Over population is the major issue that is contributed to the global warming. Thus measures need to be taken to control the population at global level. Lack of women empowerment has contributed greatly to the over population. Reproductive health should be provided to women all across the globe to control the birth rate. The UN population fund is already contributing to tackle the issue but these efforts are still not adequate. Knowledge about family planning should distributed freely. In the past Iran has introduced the family planning that has reduced the birth rate to 2.6 from 5.6 in period on one decade. Thus other countries should also introduce this plan to their public.

In general educating the public and introduction of incentives at governmental level can help in controlling the population.

Also developing countries lack structure and resources to implement these plans at their national level, so developed countries, understanding the severity of issue, should contribute to these developing countries in implementing birth control policies(“5 possible solutions to overpopulation,” 2017)**.**

**Conclusion**

Increase in populations has attributed to climatic change that has put eco system in danger. Significant impact of climatic change and global warming is evident in plants, animal and humans. These impacts are alarming especially in the developing countries. This damage cannot be reversed but taking measures to deal with impact can reduce the harmful effects of it in future. All countries should make policies to reduce carbon foot print. So that eco system and its species can be saved(“Fingerprints of global warming on wild animals and plants | Nature,” n.d.)**.**

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