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CLIMATE CHANGE: AHEADS**S. Chandrashekhar**

Assistant Professor, Sidhartha Law College Gulbarga

Abstract: Climate change is currently a hotly debated topic and one of the major challenges for society, economy and environment today.

As a result of climate change, and in an effort to adapt to a changing world situation, people will need to moodily the ways in which. They live and behave, and these aspects are fundamentally related to people's perception of the climate change phenomenon. This study assesses levels of awareness and concern in relation to climate change and its impacts within the Maltese population.

Climate change has become a commonly debated topic in the news media and in every day political discourse. It is now almost impossible to pick up a news paper without reading about a new climate- related study or initiative, whether from political, business, nongovernmental or policy making communities. The public interest in climate change is not surprising, given that, notwithstanding controversy and uncertainty about the causes and extent, it is increasingly clear that impacts may be for-reaching and could affect all sectors of society, with potential effects on various aspects of human welfare.

Keyword: Climate Change, Global Warming, Causes, Effects,.

INTRODUCTION:

Global warming is the increase in the average temperature of the Earth's near-surface air and oceans since the mid-20th century and its projected continuation. Global surface temperature increased 0.74 ± 0.18 °C (1.33 ± 0.32 °F) during the last century. The Intergovernmental Panel on Climate Change (IPCC) concludes that increasing greenhouse gas concentrations resulting from human activity such as fossil fuel burning and deforestation caused most of the observed temperature increase since the middle of the 20th century. The IPCC also concludes that variations in natural Phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward.

These basic conclusions have been endorsed by more than 40 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. A small number of scientists dispute the consensus view.

Climate model projections summarized in the latest IPCC report indicate that the global surface temperature will probably rise a further 1.1 to 6.4 °C (2.0 to 11.5 °F) during the twenty-first century. The uncertainty in this estimate arises from the use of models with differing sensitivity to greenhouse gas concentrations and the use of differing estimates of future greenhouse gas emissions. Some other uncertainties include how warming and related changes will vary from region to region around the globe. Most studies focus on the period up to the year 2100. However, warming is expected to continue beyond 2100 even if emissions stop, because of the large heat capacity of the oceans and the long lifetime of carbon dioxide in the atmosphere.

An increase in global temperature will cause sea levels to rise and will change the amount and pattern of precipitation, probably including expansion of subtropical deserts. The continuing retreat of glaciers, permafrost and sea ice is expected, with warming being strongest in the Arctic. Other likely effects include increases in the intensity of extreme weather events, species extinctions, and changes in agricultural yields.

Political and public debate continues regarding climate change, and what actions (if any) to take in response. The available options are mitigation to reduce further emissions; adaptation to reduce the damage caused by warming; and, more speculatively, geoengineering to reverse global warming. Most national governments have signed and ratified the Kyoto Protocol aimed at reducing greenhouse gas emissions.

Meaning of climate:

Climate is the average weather conditions of a place for a long period of time; for a number of years.

Climate Change;

Climate Change (That, Change of Climate) is an normal process. Climate change is brought about by a number of factors, such as the latitude of a place, attitude of the place, distance from the sea, Ocean currents, position of mountains direction of prevailing winds, nature of soil, etc.

But some of the important factors responsible for climate change are greenhouse effect and global warming acid rain, and Ozone layer depletion,.

**GREENHOUSE EFFECT AND GLOBAL WARMING
GREEN HOUSE EFFECT:**

Due to trapping of heat in the earth's atmosphere by carbon dioxide (CO₂), chlorofluoro Carbons (CFCs) and other gases, the earth gets warmed up, and the result will be rise in the mean temperature of the earth's surface. This phenomenon is called Green house effect.

The gases which act as a trap and cause greenhouse effect are Carbon dioxides, methane etc.

Methane traps 20 times more heat than Carbon dioxide Nitrous oxide traps 300 times more heat than Carbon dioxide burning of agricultural wastes and ploughed form soil releases nitrous oxide.

Methane it is emitted during the production and transportation of coal, oil and natural gas.

Causes:

The major causes for the increase, in greenhouse gases and the resulting global Warming are the following.

- a) Increase in CO₂ is mainly due to burning of fossil fuels, industrial smoke and automobiles. Decrease in global forest Caner also increases in atmosphere.
- b) CFCs are released mainly from refrigerators, air conditioners, cosmetic sprays, aerosols etc.
- c) Methane is produced mainly by paddy fields and methanogenic bacteria found in the body of cattle's.

Effects:

- a) Raising global temperature are expected to raise sea level due to the melting of polar ice caps. As a consequence, many islands and costal towns may submerge in sea. If may result in unpredicted calamities like Tsunami etc. If is difficult to predict when the global warming will show its effects.
- b) If can change rain patterns and other local climate conditions changing regional climate could alter forests, crop field and water supplies.
- c) Due to increase in water evaporation rates, soils will turn more drier.
- d) Of could also affect human health, animals and many types of ecosystems.

Climate change and global warming

Man has interfered with environment, since the beginning of his existence on earth. Throughout history whole nations have destroyed themselves by deforestation or exhaustion of soil, even climates have been changed. Nevertheless, man has always risen to new heights usually with the aid of advance in technology.

The international panel on climate change in their first assessment report concluded

That the earth's lower level temperature would increase on the average between 2 degree to 4 degree by the end of the next century with disastrous consequences.

If is the carbon dioxide, among all green house gases which plays an important role in changing the global climate. Without carbon dioxide the earth would be as cold as the moon. Rising temperature could alter climate radically.

Meaning of global warming:

From the beginning of this century it is evidenced that there has been a rise in global mean temperature. The enhancement of temperature on earth is called global warming. If is the threatening the would more than the nuclear weapons. if the warming is allowed to rise, these shall be several adverse effects upon the earth. The consumption of coal, oil, wood continue in the same manner cause global warming.

REASONS FOR GLOBAL WARMING:

- 1 Elements of the atmospheric environment
- 2 Deforestation
- 3 Effect on monsoon drought
- 4 Acid rains

Adverse effects of global warming:

Green house effect and the consequent global warming, has many adverse effects those adverse effects are:

- a. Global warming leads to climatic changes. An extreme weather condition like floods is droughts are likely to occur more often due to global warming.
- b. Global warming results in rise in sea level. An ocean is & seas will become warmer & as a result sea level will rise.
- c. Global warming contributes to melting of ice & glaciers.
- d. Global warming results in change in crop pattern.
- e. Gm results in dispersion of harmful chemicals.
- f. Global warming results in changes in hydrological cycle.
- g. Tropical diseases such as malaria dengue fever yellow fever etc will spread to other parts of the world etc.

Acid rain acid precipitation:

Acid rain refers to acid fallout in the form of rain snow fog dew & dry particles from the atmosphere that is deposited on the earth.

Acid fallout by rain snow & fog is called the wet deposition while deposition by windblown acidic gases & particles is called the dry deposition usually rain with ph below 5 or 4.5 is termed as acid rain.

Causes of acid rain:

Acid rain is a man made phenomenon. The acid rain problem has increased due to industrialization. The main causes for acid rains are:-

1. Burning of fossil fuels like coal & oil for generation of thermal power. By thermal power for the major source of acid forming pollutants.
2. Automobiles exhausts are also responsible for acid rain.
3. Volcanoes fires etc are the natural causes for acid rains.
4. Decomposing matter emitting pollutants is also a cause for acid rain.

Effects:

1. Acid rain causes extensive damage to buildings & structure materials like marbles limestone & metals etc the damage to marble by acid rain is known as the strome leprosy.
2. Damage soil microbes affecting soil fertility.
3. Damages leaves of the plants & retard their growth.
4. Causes respiratory & skin diseases in humans.
5. adversely effects aquatic like most planktons mull uses &

fishes are highly sensitive to water having pH 5.0
6. They affect crop productivity.

Climate change sustainable consumption:

The anthropogenic greenhouse gas emissions are integral components of the systems relating to climate change. Climate change & rational & justified use of natural resources are two indistinguishable factors of the problem the planet is facing seriously. The way nations & their peoples extract produce distribute consume & throw away goods & materials is causing considerable environmental catastrophe. The people in the planet have no power to eradicate the problem but they may make ensure efforts to reverse the process to cure the deteriorating situation.

The concept of sustainable consumption is the certain of 2002 world summit on sustainable development, held in Johannesburg, South Africa in the conference the developed countries committed themselves to a 10-year programme on sustainable consumption & production & joint plan for implementation based on promise of concrete action to boost international co-operation & the three components of sustainable development viz., economic development, & social development & environment protection at large.

Yes for economic crises, no for climate crisis?

France:

The world is surrounded by unprecedented sides of crises food finance fuel & flue are four dimensions of such crises these appear to be temporary crises.

The real crisis of the future is climate change. The climate change would bring global catastrophe & it has power of making the life on the planet extinct.

Water climate change & health:

Khan chit linpakarnjanarat
Who / sear:

More than 70% of the earth is covered by water but of this only a mere 2.5% is fresh water & less than 1% of the fresh water in the form of lakes, rivers, reservoirs & shallow underground water is accessible for district human use.

Water resources are threatened due to various factors such as economic development & rapid population growth & the threat will be aggravated with global warming & climate change. This will directly have an impact on the drinking water supplies & sanitation thereby making people more vulnerable to various water & sanitation related diseases.

Climate change water supply & sanitation:

Problems of water stress are already prevalent in the region driven by the increasing demands of domestic agriculture industry & the growing population. Climate change is one of the threats among several others impacting water resources.

On the other hand the drinking water & sanitation facilities are vulnerable to extreme weather events such as floods but these systems also have an impact on climate change. The carbon footprint of water supply & sanitation through energy used in water treatment & distribution &

sewerage treatment plants contribute to climate change.

Climate change also threatens to disrupt earth's life support well being after all human health & well being basically depend on the health of crop systems forests other animals & material life health is the final common pathway for environmental & social conditions.

Carbon Emission and Climate Change India:

Carbon emissions related problem has been pre occupied with danger ever since the international treaty – The United Nations Framework Convention on Climate Change (UNFCCC) came into existence in 1992 to establish international legal framework to tackle the most important issue of climate change.

An expert provided first a comprehensive estimate of the climate change impacts avoided by greenhouse gas emission reduction. The model used has several advantages it includes many climate change impacts on agriculture, forestry, water resources, sea level rise, energy consumption, human health and Eco system.

Climate Change and Consumer Justice:

1. There are significant divisions emerge in popular attitudes at local levels of climate change.
2. 79% of consumers would prefer to buy from companies having clear climate change policies.
3. 89% of people are likely to buy more green goods in the next 12 months whereas 35% are willing to pay a premium for green goods.
4. 74% of consumers feel that they can actively contribute to solving climate change. However this figure is higher in developing countries, but lower in developed countries.
5. The Consumers are shaky about the state's intervention as only 11% of respondents strongly feel their respective government is doing enough to tackle climate change.

Warming killing Three Hundred Thousand people every year:

Death due to hunger, sickness and weather disasters to rise to half a million by 2030 Report.

Climate change kills about 3,15,000 people a year though hunger, sickness and weather disasters, and the annual death toll is expected to rise to half a million by 2030, a report said. Trains can harm climate more than cars: A fully occupied sedan emits less greenhouse gas per km per person than a quarter –full train. We worry a lot about the environment and do everything we can reduce your carbon footprint- the emissions of greenhouse gases that drive dangerous climate change.

An exploration of climate change perceptions in the Maltese island Louise Refalo Elisabeth Conrad Malta, Mediterranean.

Climate Change

It is aptly said that: Europe's summers to get latter... The Arctic's ominous than... study shows warming trend in Alaskan streams ... Lake Tahoe warming twice as fast as oceans. Global Warming seen as security Threat ... Global Warming a bigger threat to poor ... Tibet's glacier's heading for melt down ... Climate change affects deep sea

life... UK; climate change is costing millions.

These are the few hard realities of the serious problems of the planet. Climate change or global warming is the result of a build up of greenhouse gases (GHG), chiefly carbon dioxide, in the atmosphere. Earth's temperature is highly variable, with year-to-year changes of ten making the overall rise of approximately 0.7 C that has occurred since 1860, but the 20th century trend is obvious.

The Kyoto climate change protocol

The objective of the Kyoto Protocol, which is the second international mechanism adopted in 1997 and came into force in 2005, was to establish a legally binding international agreement, whereby all the participating nations commit themselves to tackling the issue of global warming and greenhouse gas emissions.

The Kyoto Protocol was adopted under (UNFCCC), an international environmental treaty with the goal of achieving in stabilization of greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

Climate Change and Global Warming. Impact on crop Production and food security William D. Dar India: Climate and agriculture are inextricably linked. While agriculture is highly vulnerable to changes in climate, it also contributes to climate change through release of greenhouse gases (GHG) such as carbon di-oxide, methane, and nitrous oxide.

The role of agriculture in combating climate change is of utmost importance and must be recognized as such developing countries are constrained by their vulnerability of the impacts of global warming and climate change in terms of crop production and food security. The poor in the countries are also at higher risk, both to the current and future climate change impacts, given their high dependence on agriculture, strong reliance on ecosystem, and rapid population growth.

Nearly 99% of the casualties due to the vagaries of Climate occur in the developing world. As a result of global Warming, the type, frequency, and intensity of extreme events such as tropical cyclones, heavy rainfall floods and droughts are expected to rise even with small increase in temperature.

New climate studies have shown that extreme heat waves are very likely to become common in the tropics and subtropics by century's end added to this gloomy scenario, there are factors, such as insufficient capacity to adapt to future climate change impacts, inadequate infrastructure, meager household income is savings all contribute to the problem invariably.

Climate Change and Global Warming: Severity and impact:

Climate change is inevitable, but in the absence of robust adaptation strategies will almost certainly exacerbate food insecurity. Millions of people in countries that already have problems with food security until have to give up traditional crops and agricultural methods as they experience extreme changes in seasons, for which they have developed

coping strategies that have enabled them to survive.

The impacts of climate change on agriculture are mixed and vary geographically. It is invariably the poor and developing countries that are on the losing side.

In over 40 poor developing countries with a combined population of 2 billion, there are 450 million undernourished people. Production losses due to climate change may drastically increase their numbers, severely hindering progress against poverty and food insecurity.

Climate change also threatens poverty reduction efforts as the poor depends directly on already fragile ecosystems for their well-being.

Impact on Production and Productivity of Crops:

Despite the availability of overwhelming evidence in support of climate change, uncertainty prevails over its exact nature and consequences, especially at the local level, making it difficult to plan and develop appropriate adaptation strategies, programs and technologies.

Effect on geographical distribution of pests and pest outbreaks:

The impact of climate change on insect pests will be felt in terms of increased losses, efficacy of management strategies and geographical distribution.

Climate changes could have positive, negative or no impact on individual insect pests.

National Strategy for Climate Change:

India and other developing countries feel strongly that they are not responsible for the threat of climate change that has been created rather unsustainable consumption pattern of the rich industrialized nations in the world are responsible for it.

Yet, India and other developing country economies may be highly vulnerable to climate change. Analyses of India's emissions show that its per capita emission of Carbon is one fourth of the global average.

In equitable climate regime will focus on limiting the risks from climate change impacts to poor developing countries rather than on limiting the costs of mitigation per se.

Corporate Response to Climate Change:

It is under the background that the corporate response to climate change entails green rules and corporate governance.

Portfolios on climate change solutions provide unique opportunity for the rural transformation of India. 600 million tones of agricultural waste of India, with appropriate technology, can produce cellulosic ethanol equivalent to 80,000 mega watts of power, 60% of India's installed capacity and create 30 million new jobs.

Consumer Climate Policy:

In order to evolve an enviro-consumer friendly climate change policy. Indian people have to grapple the phenomenon of sector stretch because consumers became more enlightened in green matters capable of distinguishing between companies without resorting to sector stereotypes.

A proactive climate change policy ensures

reduction of green house gas emissions at the same time it protects small consumers' especially vulnerable working families and retirees, from losing their purchasing power or access to affordable home energy and transformation.

Climate Talks stall as west asks India, China to cut emissions.

Attempts to forge a global consensus to battle climate change suffered a serious set back as developed countries tried to wriggle out of any short-term commitment to reduce greenhouse gas emissions and instead, demanded that developing economic such as India and China accept emission reduction targets.

Tree for Peace

United nations Peacekeepers are no strangers to working in some of the world's most hazardous regions, and they are have helping out on a new battle front: Combating Climate

“As a contingent, we have resolved to join efforts with the international community” and others to ensure that the war against climate change is fought, won and our planet earth is saved”.

India Going Extra Mile on Climate

Under the existing UN Frame most cementation on climate change, developing countries are obliged to submit (national communication' report once in six years to the UN climate body. The report cannot be questioned or scrutinized.

Time Running Out for Global Climate Deal

With merely eight days of negotiations time effectively remaining before the final round of talks at Copenhagen, the future of a global climate deal has got stuck with the intransigence of industrialized countries.

Climate Change is the Pre-eminent geo political issue of our time. It recruits the global equation for development, peace and prosperity. It threatens markets, economics and development gains. It can deplete food and water supplies, provide conflict and migration, destabilize fragile societies and even topple governments.

The inter-governmental; panel on climate change says global greenhouse gas emissions need to peak within 10 years if we are to avoid unleashing powerful natural forces that the more slipping out of our control. Ten years is within the political lifetime of many attending the summit. The Climate crisis is occurring on their watch.

CONCLUSIONS:

Every time we borrow form nature. We return it with interest. We celebrate 365 World Environment Days in a year.

At Adani we constantly remind ourselves that this is the only planet we have. It has given us much that it's impossible to repay that in one life-time what we can do though, is take good care of it. For instance, we encourage the use of natural gas like ING to save the planet form the harmful effects of pollution. And we believe that each one of us can contribute in some way or other to make this world a

better place. After all, it's not just for our own benefit. It's for the generations to benefit. So let's come together and celebrate this day.

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