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Climate Change is the Revert Factor for Depletion of Natural Resources and Deprivation of Development Scenario

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Abstract – One of the most urgent issues worldwide is climate change, where its effects are extensive to the ecosystems, the health of citizens, and economic growth. The paper will examine the economic, environmental, and social impacts of climate change, and specifically, the vulnerability of India and their policy response. With access to secondary data sources, the paper analyses some of the major indicators like carbon emissions, greenhouse gas concentrations, ocean acidification, sea-level rise, and energy consumption trends. In the World Meteorological Organization evidence, record-all-time emission, and ocean stress levels, and in COP27 international negotiation, the controversial question of the vulnerable countries with the financing of the concept of Loss and Damage comes to the fore. The paper, using case studies in Joshimath, Wayanad and Tamil Nadu, explains how unsustainable urbanization, deforestation and coastal erosion contribute to the height of climate hazards. The tension between sustainability and economic growth in India can be supported by the fact that India remains dependent on coal even after the growth of renewable energy. The paper also examines the health consequences of climate change, such as spreading of vector-borne infections, respiratory diseases, and pandemic threats. The results indicate that the burden of climate change is inclined towards low-income countries and the developed world that has always been the biggest emitter has been reluctant to meet its financial obligations. The paper is a call to spread global responsibility equally, speed up the switch to low-carbon economy, resilient infrastructure to climate change, and agricultural innovation to cope with the evolving weather patterns. Finally, climate change is a crisis of the environment and economy, which should be addressed by unified international effort. The developed countries should aid the weak economies via fair-financing solutions, whereas the developing countries should strike a balance between development and sustainability where India stands to gain long-term.

Keywords: Carban emission, Eco system, Energy consumption, Economics burden of climate change, The world Meteorological organization, Ocean acidification, Greenhouse gas concentration.

1. INTRODUCTION

Climate change affects the health aspects of the people. It would positively create dangers in the growth of economy not only ours, but also in the neighbouring countries as well as around the global level. The alarming population growth mainly threaten climate change disasters and growing number of industrial wastes brings down carbon emissions. The recent conference about the climate change on the 27th conference of parties (COP 27) to the UN Framework Conventions on Climate Change (UNFCCC) The LDCs (the least developed countries) and the small island nations to set up a "Loss and Damage" find to compensate them for climate disasters. The Justification of the allotment of loss and damage find is inevitable one. For example, the cost of the recent floods in Pakistan is estimated to be over $ 46 Billion that is 13.25 Percent of the Pakistan's GDP. As the same case will reflect the loss and damage find for all over the Nations at the entire world level. The COP 27 event does not push forward India's agenda

significantly. India is one of the greatest victims of climate change country. It will be selected as a recipient of any "Loss and Damage" money. The Indian Economy is simply too big for it to be considered. Second, there is a very real fear that this financing will come at the cost of other forms of climate or development finance of which India is currently a recipient. The agreement specifies that "Existing funding arrangements" can be repurposed for loss and damage payments and this threatens flows to India. In this regard, India got out of the Sharam-El-Sheikh agreement, then it has signed with proper manner. One of the government's priorities for going into this conference was adaptation altering economies, lifestyles, and infrastructure to protect the human from the negative effects of changing climate.

2. OBJECTIVES OF THE STUDY

1. To control and regulate the rapid growth of urbanization.
2. To mitigate the Environmental disasters through the safeguard the Western Ghats up to Himalayan hills as well as seven sister states.
3. To find out the costs incurred by climate change by India and the world level.
4. The study of the correlation between climate change and Economic Development.
5. This present paper mainly focused on the policies with regard to climate change on the National and International level.

3. METHODOLOGY

This paper mainly used the secondary data sources namely newspaper articles, journals, bar diagram, tables and so on.

4. REVIEW OF RELATED LITERATURE

Amithabh Kant, India's diplomat at G20 Conferences discusses the key issues and the important themes with regard to challenges of growth jobs and climate change during the G20 term with the excerpts of Sidhartha and Surojit Gupta. The pertinent challenge will be climate change finance would be a yet another challenge because the developed world has occupied all the carbon space available. Almost 85 percent of the carbon space available for 1.5 Celcious has been occupied by the developed world. In 2009, they had committed to providing countries $ 100 billion a year. This commitment has not been adequately provided for this kind of problem will come up centre stage for discussion of the important scenario of the development with climate change effects.

The Editor of Deccan Chronicle highlights the Biodiversity facts with enormous level of welcome. In the great intensity of industrial age at the global level humans have moved up at least to the extent of wishing to do something concrete about the nature that they have been destroying for the last many decades . The big meets on climate change where the world leaders while rubbing with Hollywood and billionaire celebrities, the cop 15 UN convention on Biological diversity (CBD) held at Montreal , in Canada, brings the attracted mostly hardcore environmentalists said that humans have the root care for damaged.

Science has counted the millions of species of human beings have destroyed over the world and the damage to the flora and fauna has also been well recorded too. The Eco system like rain forests,

Wetlands, grass lands and oceans are equally precious, and humanity is under grave threat of rapidly losing them.

Indigenous people who have lived in difficult terrains without much assistance from governments have done so with the wisdom received from their ancestors in blending with nature and preserving the ecology. The Recognition of their rights to live undistributed is the highest of the series of agreements to protect a third of the planet of nature by 2030.

Naveen Rao and Eloise Todd both study and reveal that climate change is making us sick and adverse health effects of climate change. It concluded that as Jarring as it was straight forward human health is at the mercy of fossil fuels. Unfortunately, health remained at the bottom of the priority list at COP27. It is sure, some important health focused conversations took place at the world Health organisations' side pavilion. The present discussions were particularly timely, given the current stage of covid-19 Fuelled by the newest omicron subvariont, in Europe and the united states. Whereas beyond a blink and you miss it mention in the preamble, the COP 27 declaration makes no substantive mention of the climate health nexus.

Moreover, the connection between climate and health is deep and multifaceted. For instance, how warming temperatures and unprecedented flooding have encouraged the spread of mosquitoes-carriers of diseases like Dengue fever, Malaria, and the Zika virus well beyond their traditional breeding grounds. If nothing is done. The Zika Virus will threaten and additional 1.3 billion people by 2050, and dengue fever will affect a whopping 60% of the world's population by 2080. Similarly, climate-driven migration and shrinking animal habitats increase the risk that viruses and bacteria will jump from animal hosts to human just as SARS-COV-2, the virus that causes covid-19, likely did. This makes another pandemic increasingly likely, global warming is also worsening air pollution and in turn, chronic and non-communicable diseases like asthma and chronic obstructive pulmonary diseases.

As the impact of 1.5 Celsius is now on "Life support". Concentrated action must be taken to revive it and that starts with recognizing that climate and health are part of the same conversation. They can and must be tackled together with health and climate change at the global level.

Shivananda Shetty et al, an idea about climate for Green bonds. To set an aim of net zero emissions by 2070 in the COP 26 at Glasgow in the year 2021. India needs a regular flow of green financing to achieve its goals. The country will require an economy wide investment of morethan $ 10.1 Trillion dollar during 2022-2070. The green bonds market can potentially add impetus to the countries climate action strategies. Green insurance has grown significantly to $ 18.3 billion cumulatively with 2021 being the most successful year, presently for green bonds in the country with a record issuance of $ 7 billion. India's sovereign green bond framework has been aligned to the internationally recognized as International Capital Market Association (ICMA) by the Green Bond principles 2021. It envisages funding projects in nine categories to full fill various environmental objectives. Such as climate mitigation, adaptation, resource conservation and biodiversity conservation programmes.

Mukul Sanwal, argues that the largest carbon omitter opting out then that the key issue is the broader response from the late developers, in particular India, reframing both the design and implementation of the climate regime. India needs to take the leadership in defining an "Overarching global climate policy goal" to support the post 2030 negotiations. The Second approach should be to move away from considering emissions of carbon dioxide to the causes, or modification of activities that lead to the emissions. In this framework, the role of energy is foundational to the economy and is indispensable to modern urban society. Third, climate change is a unique problem in that, after industrialization and

infrastructure reaches saturation levels, with population shifting to cities and into the middle class, consumption, that is mobility, housing, food and small appliances, becomes the major component of gross domestic product and the driver of economic growth, energy use and cumulative emissions with a global impact. Fourth, in the accounting of emissions, the comparison between what countries are doing and what they should be doing will now be important. Fifth, the focus of the negotiations should be on long-term goals to support the post -2030 actions and address the inconsistency in the Pairs Agreement with the overemphasis on near term mitigation ambition as expressed in current intended as Nationality Determined Contributions.

CASE STUDY-1

In January 2023, Uttrakhand's Joshimath were forced to flee their rapidly crumbing houses in the period of freezing cold. This is ultimate evidence for climate change. In this regard, environmental activities scientists and residents of the general public. Once again repeatedly altered the government to the impending disaster and warned against the ever growing unsustainable urbanization in the region.

CASE STUDY-2

The wayanad landslide incident is another case for the climate change. The natural calamities is derived from the human made mistakes and misuse (or) overuse of natural resources in Western Ghats. The recent landslide disaster in Wayanad, Kerala on 30th July 2024 killed in 231 people and 119 still they are missing, leaving behind a trail of great destruction. Western Ghats have been severely affected by climate change. The increasing frequency and intensity of landslides driven by climate change affects only. In this regard we need to point out the critical need for effective adaptation and climate change strategies.

5. COASTAL CLIMATE CHANGE: A CASE STUDY IN TAMILNADU

In Tamil Nadu, The total coastal line 423 KM is eroding, it is an alarming situation. For the Past two decades the TamilNadu government efforts to address the problem of coastal erosion by building hundreds of hard structures like groynes sea walls and breakwaters have not yielded desired result as the latest shoreline changes assessment report released. This report reveals that, out of the 991.47Km of TamilNadu's Mapped Coastline, a whopping the 422.94 KM of (42.7 percent) continues to experience erosion and how the state policy makers are grappling for more nature based soft or hybrid solutions.
This kind of damage happened during the period of 1990-2018. TamilNadu has lost 1,802 hectares of land due to erosion. The worst affected district is Ramanathapuram which lost 413.27 hectare followed by Nagapattinam 283.69 hectare and Kancheepuram 186.06 hectare. One of the interesting fact is 5.03 hectare erosion in Chennai coastal Area.

The Coastal Regulation Zone of the Union environment ministry says that, the hard structures due to their negative impacts are discouraged, instead "soft" alternatives like beach nourishment are becoming favourable Hybrid solutions with a combination of hard and soft solutions are implemented to minimize the impact of these man-made structures. The artificial reef project, which brought back the pudhucherry beach to life, is a distinct example.

TamilNadu has obtained the ranks fourth in India experiencing worst coastal erosion after West Bengal (60.5 percent), Pudhucherry (56.2 percent) and kerala 4.4 percent. TamilNadu has already build the 251 hard anti-erosion structures in 134 Km which is 13.5 percent of its total coastline. Thus, we understand the problem of coastal line erosion is real and going to aggravate due to projected sea level rise and climate change.

6. THE TRENDS OF ENERGY CONSUMPTION IN INDIA

The United Nations Climate Change conference started at Egypt, aimed at restrain emission and limiting the rise of temperatures to 1.5 degree centigrade by 2030, with this Indian policy makers extolled by virtues and necessity of burning coal of events last week reflecting India's evolving, someone stance towards carbon emissions. The reflection of Ukraine war has much to do with an about turn. About Climate Change the previous November 3, 2022, India's Finance Minister, Nirmala Sitharaman, at the sixth round of coal mine auction, she said that a fast -growing economy like India the world's third biggest polluter after china and the U.S. needs greater investment in coal production and gas projects. The offer of 141 mines, the biggest auction ever undertaken after 64 mines were in the first five branches, would benefit 12 states. The Finance Minister has extended 6,000 crore as an incentive for coal gasification and 250 crore for exploration. The government expects coal production at 900 million tonnes this fiscal year 2022-2023 when compared 16 percent higher from 2021-2022.

India's Coal Minister said that per capita power consumption of our country is tenth of developed economies will double by 2040, for which coal is needed. Coal accounts for more than 51 percent of the country's primary energy requirement and around 73 percent of power generation. Coal demand in the country is yet to peak and will continue to play an important role in the energy mix till 2040 and beyond, and thus, no transition away from coal is happening in the foreseeable future in India. Mckinsey has forecast the coal consumption to grow at around 4 percent a year, while Arthur D.Little estimates India's electricity consumption grow at an annual rates of 5.4 percent over the next decade that is 2022 to 2032.

The Present Union Government main aim is to become a net zero carbon emission. Whereas it is not possible, even though to adopt better technologies to mine and fire it. In fact, the government has envisaged incentives for the latest auction round including reduction in the payment of the upfront amount and bid security amount permission to relinquish part of the coal mine in the case of partially explored coal mines and the introduction of a National coal Index and National Lignite index and full flexibility in coal utilization and others. The Union Coal Minister, speaking at an event in Madhya Pradesh the transition from a carbon intensive energy source should not be harsh on the people dependent on that source and such people should be adequately compensated.

7. INDIA'S CLIMATE STANDING POSITION PRESENT AND FUTURE

The ever increasing the level of carbon emission in the year 2022 when compared to the previous years. The failure of Copenhagen UN climate conference in the year 2010, had agreed to channel of $ 100 billion a year by the wealthy nations to less wealthy ones by 2020. Therefore, they can adapt to climate change for reduce carbon emission. Presently a very little movement on the pressing demand for the phasing out of fossil fuels, India is the major contributor to carbon emission and global warming.

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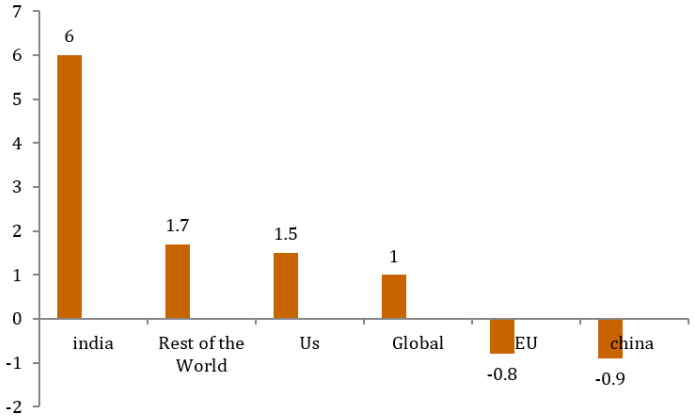

Chart -1: **The Ever Increasing Record, a Higher Rise in Emissions in 2022**
(The percentage Change in fossil carbon dioxide emissions compared to 2021)
Source: Global carbon Budget 2022.

The Global Climate Budget 2022 reveals that India will record a higher rise in carbon emissions this year than the other major countries. Moreover, India's carbon dioxide emissions are expected to rise 6 percent in 2022 compared to last year while the US is expected to witness a 1.5 percent increase. The European Union and China, on the other hand would witness a decline. This data shows that clearly the above chart No.1. This is adequate evidence of the Global Carbon Budget.

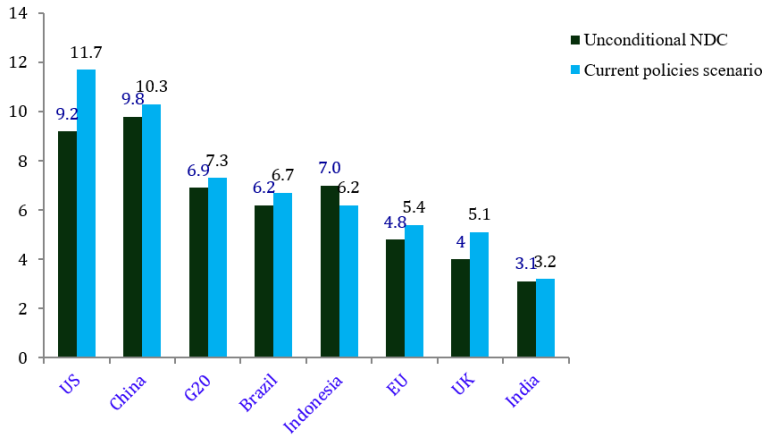

Chart -2: **The Expected level of Carbon Emission to Perform better than Most G20 Countries by 2030**
Source: Emission Gap report, 2022, UNEP

The Chart No.2 reveals that the G20 Countries, the carbon dioxide emission is expected to be 7.3 tonnes per person, against the NDC target of 6.9 tonnes per person this data shows that chart No.2. The Emissions Gap report 2022, released by the United Nations environment programme at COP 27 showed India's per capita carbon dioxide emissions in 2030 will be nearly the same as its Nationally Determined Contribution (NDC) target. All the other major G20 Economies, baring the Indonesia, are expected to breach their NDC target, of the current policies are pursued. For the G20 Countries, the Carbon Dioxide emission is expected to be 7.3 tonnes per person, against the NDC target of 6.9 tonnes per person,

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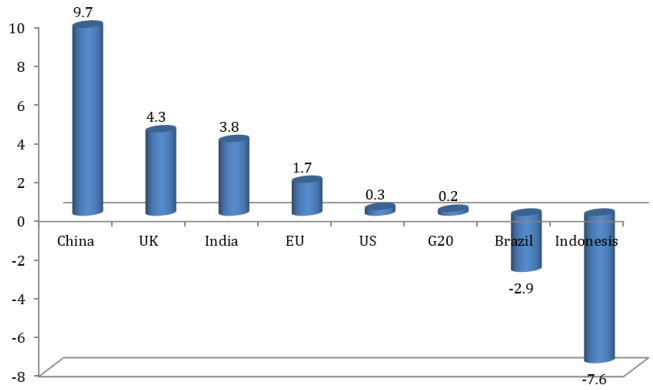

Chart -3: **Forest Cover Area**

The Percentage of Growth of the Forest Area added between 2010 and 2020

Source: CEA, BS analysis

At the same time, India's forest cover increased by 3.8 percent between 2010 and 2020, The China and the United Kingdom could be add more. This data shows chart No3. Even though, these achievements, India has set one of the great distances for net-zero emissions. India's Forest areas are higher then the ever, eventhough as the consequences of growing number of population, the carbon emission are more. In order to overcome this problem electric vehicles are given to more preference for public transport and also would provide subsidies and two incentives to users of Electric Vehicles.

Table -1: Illustration No: 4

Countries Net Zero Emissions Target (By year wise)

Sl No.	Year Wise Target	Countries
1.	2050	United States of America, United kingdom and the European -Union countries like France Belgium, Germany and Italy.
2.	2060	China
3.	2070	India

India plans to reach the net-zero goal by 2070. Whereas neighbouring China has set a deadline of same thing achievement is 2060.The European Union the US and the UK have set a 2050 deadline for net zero. This data shows from Illustration No.4 A significant step towards achieving this goal is a transition towards clean energy.

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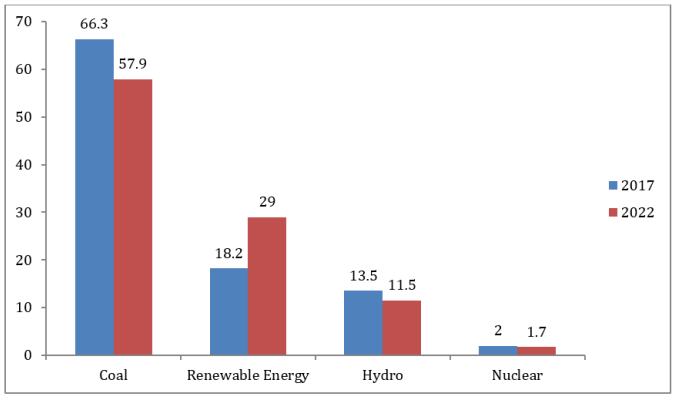

Chart -5: **Energy Use Pattern 2017 to 2022**
Source : BEA -BS analysis

The government, earlier this year had set a target of having 50 percent installed capacity from renewable sources by 2030. It seems to have done well in this regard. The installed capacity in renewables was 29 percent as of September 30, 2022. This data shows chart No.5 five years ago, that is 2022,

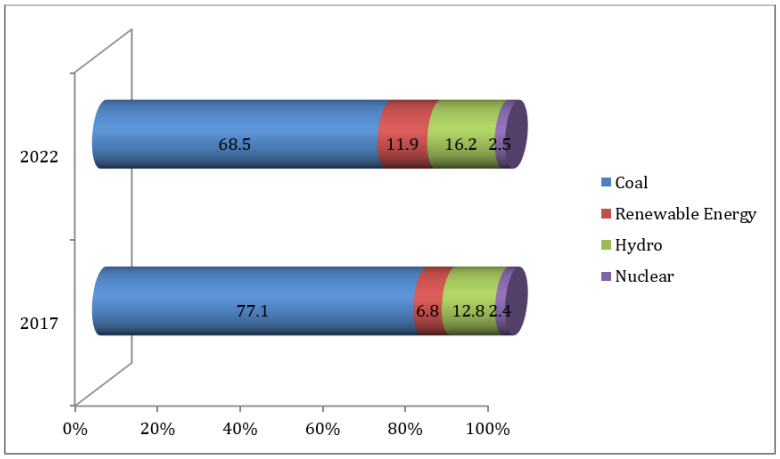

Chart -6: **Power Generation is Still Largely on Coal Dependent**
Source : CEA, BS analysis

Chart No.6 shows that that disproportion level of renewable energy and coal using pattern. India's installed capacity in renewables was half of what it is today. However, despite an increasing share in installed capacity, India's power generation remains largely coal- dependent. Renewable sources contributed only 11.9 percent to the total generation whereas coal's share was 68.5 percent respectively.

The Structure of compensation fund

In the wee hours on November 20, 2022 countries agreed to set up a new funding window to pay for loss and damage, whereas the many warnings attached to this fund.

- The Fund will only support countries most vulnerable to climate change.
- It might not include India.
- Funding will come from both developed countries and a "Mosaic" of sources, including the private

sector and philanthropies.

In this regard, the wealthy countries have never met their financial commitment, one is sceptical of this fund's ability to help developing countries.

Despite that, it is a big deal that the principle of compensating countries for climate disasters has been recognized. Presently, a certain liability will be put on big polluters, and they will be under a moral, if not, legal obligation to support vulnerable countries.

The Long term Low Emission Strategy through a Just Transition

The Just transition, the socio-economic impact of phasing down fossil fuels, has emerged as an important agenda at COP27, mid-way through the COP, a $ 20 Billion deal was struck between Indonesia and G7 countries at the G20 meeting in bali to Phase down coal use in Indonesia in a just manner.

The Just Energy Transition Partnership (JET-P), a similar deal worth $8.5 billion was signed between South Africa and G7 last year. A JET-P deal was offered to India, which is rightly postponed for future negotiations.

Overall, the outcomes of COP27 is not so much in words as it is in the direction the international negotiations are moving in force. For India, it is important to recognize these decisive shifts and develop a negotiating strategy that is good for the country and the planet whereas in the case of India did quite well at Sharam EI-Sheikh by proposing the phasing down of all fossil fuels. In this connection, supporting the developing countries on loss and damage and releasing their long-term low emission development strategy.

Reverse Globalization is a major Climate Threat

The reverse globalization or deglobalisation is being accelerated through a combination of old fashioned protectionism, newfangled "friend shoring" (limiting trade to countries with shared values). In fact, if it is climate change, the global response is to consider the three categories of climate action. 1.Mitigation of carbon emissions 2.Adaptation of environmental strategy. Migration to better conditions. The sequence of the above events are very important. Practically if where do too little on mitigation then we will need more adaptation and if we to too little on adaptation we will get (or) obtain climate refugees fleeing their increasingly unsuitable for living in homelands.

The Agriculture sector is mostly affected through climate change. The prevailing higher temperatures and changing weather patterns will make traditional agriculture unviable in the present and future period also. The new crops and technologies can help, but these will require innovation, investment and financing in the field of Agriculture, especially countries like India and other developing countries with this drawback, many developing countries outside major regional blocs will be shut out from such flows. The most serious efforts at adaptation will not preserve (or) safeguard the agriculture's viability in the tropical areas. In this regard, many formers will have to look for new livelihood.

The Trend of Emissions at the Global Level

Chart No: Number 7, 8 and 9 respectively reveals that the trend emissions at the global scenario. The Emission level are increasing manner at the global countries namely china, U.S.A, European Union 27, India, Russia, Japan and Iran. The global fossil carbon emissions are projected to rise one percent this year compared to 2021, slightly above the 2019 pre-covid levels. The data among major emitters is mixed.

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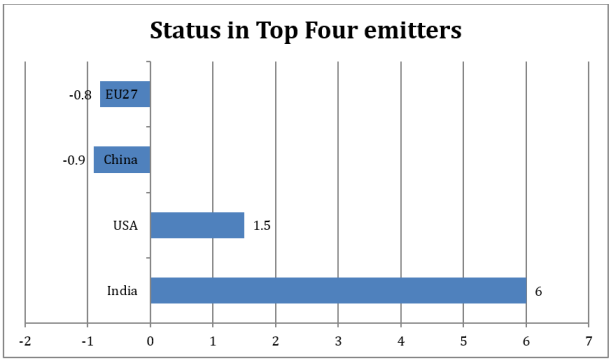

Chart -7: **Status in Top Four Emitters**
Source: The Global fossil fuel report by COP 27 Conference November 2022.

At the same time are projected to fall in China is -0.9 percent and the European Union is -0.8 percent, on the other hand, it is projected to increase in the U.S 1.5 percent and the India is 6 percent in the year 2022, when compared to 2021. Even though, India's per capita emission, however, continues to be quite low as compared to other current big emitters such as U.S, China and EU27.

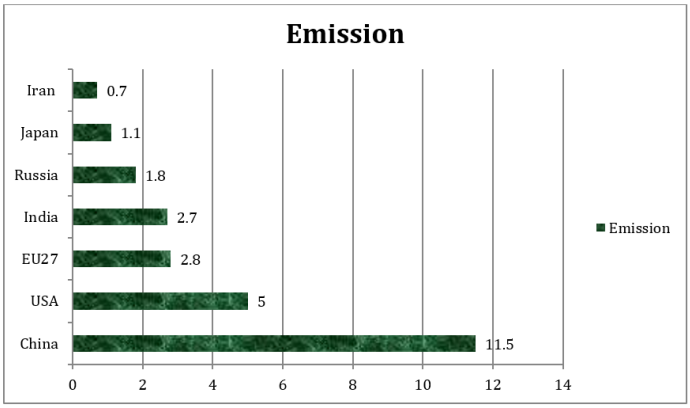

Chart -8: **Top Seven Fossil Co2 emitters in 2021**
Source: The Global fossil fuel report by COP 27 Conference November 2022.

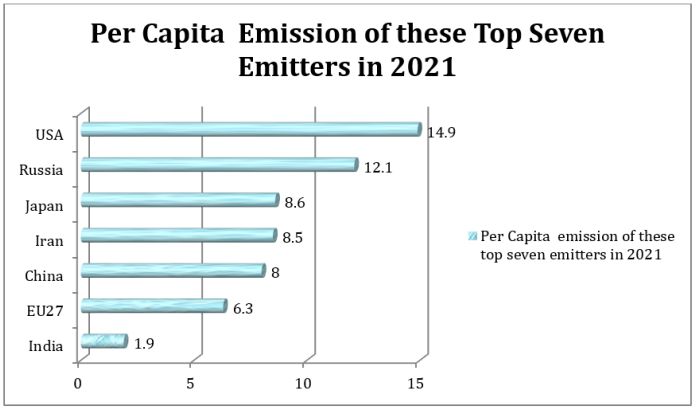

Chart -9: **Per Capita Emission of these Top Seven Emitters in 2021**
Source: The Global fossil fuel report by COP 27 Conference November 2022.

According to Ulkar Kelkar director of Climate Programme World Resource Institute India said that "At the current rate, in less than 10 years the world could blow through its chances of staying within 1.5 degree Celsius of global warming. The more than half of this damage was done before 1990, when economies like India started to develop. Even now India's emissions are rising from a low base compared to other large economies and the average India's emissions are a fraction of the European or American. Moreover, India has fortunately to have abundant renewable energy to fuel its growth, whereas it needs timely finance to build the infrastructure to store and transmit this energy. Adoption of clean technologies by India will not just cut carbon but can also prevent millions of premature deaths due to air pollution, added the message of Ulkar Kelkar.

8. THE ECONOMIC BURDEN OF CLIMATE CHANGE

The environmental loss to the global economy between 1992 and 2013 because of climate change was between $ 5 trillion and $ 29.3 trillion, according to a recent estimate by two climate scientists Christopher W.Callahan and Justin S.Mankin, from Dartmouth College, Hanover, New Hampshire, at the United States of America. From their analysis show that much of this loss was borne by low- income countries of tropical regions, which are not the prime drivers of human-induced global warming. This analysis is based on a sample that covers 66 percent of the world's population This predominant work was published in the "Science Advances" Journal October 28, 2002 issue.

Stringently, both developed and developing countries had a 6.7 percent average reduction in national income the richer nations, who are historically the greatest emitters of greenhouse gases and primarily responsible for global warming.

The present analysis assumes the significance in the context of the inclusion of compensation of loss and damage in the COP 27 Conference and the contentions negotiations that are expected to ensure in the coming days on the climate issue.

According to Christopher W.Callahan and Justin S.Mankin observed that the increased extreme heat is one of the clearest impact of global warming.

The combined extreme heat metrics measuring the temperature of the hottest five days(TX5D) each year from 1992 to 2013 and an ensemble of climate models and subnational economic data to quantify the effect of extreme heat on economic growth globally.

Christopher W.Callahan told the in the name of the journal "Nature" days that are very much hot are one of the most tangible ways that we feel climate change. He also add "We know that destroy crops, the reduce labour productivity, they cause more work place injuries.

The warmest regions of the earth which also happen to be the poorest, were the first to experience changes in extreme temperatures as a result of global warming.

The added one of the fact that warmer years also tend to be drier and so it is a combined effect of low income and drought that influences the impact of extreme heat, "Because of their warming", the climate scientists Christopher W.Challahan and Justin S.Mankin prints out the impact of climate change tropical regions are at risk to cross physiological temperature thresholds for human morbidity and mortality. Moreover, lower incomes make tropical economies less able to adapt to increase in extremes. So increased heat extremes due to warming will stress adaptive capacities in the low income regions that have contributed least to climate change". To sum up, the climate change will erode to the in all spheres of socio economic life.

9. THE CURRENT CLIMATE CARD UPDATES

Four key climate changes indicators- greenhouses gas concentrations, sea level rise. Ocean heat and ocean acidification -all set new record highs in 2021, says a UN report, warning that the global energy system was driving humanity towards catastrophe

Greenhouses gas concentrations: Levels reached a new global high in 2020 and continued to increase in 2021. Co2 concentration reached 413.2 parts per million globally, a 149% increase on pre-industrial levels.

- **Sea level rise:** Global mean sea level reached a new record high in 2021, rising an average of 4.5mm per year over the period 2013-2021.
- **Ocean temperature:** Another record high, Top 2 km of oceans continued to warm in 2021 and will do so the future. This deeply affects marine ecosystems such as coral reefs.
- **Ocean acidification:** Because of the excess CO2 the ocean is absorbing (some 23% of annual emission), its waters are increasingly acidifying, Open ocean surface PH is at a new low, impacting organisms and ecosystems, as also human food security and tourism.

9.1 The WMO statement of Climate Change distress are bad, getting worse

The World Meteorological Organisation (WMO) warned the Earth Warming Weather and rising seas are getting worse and doing so faster than before. The United Nations Secretary General Antonio Guterres delivered the message with regard to climate change. We must answer the plant's distress signal with action ambitious, credible climate action. In its annual state of the climate report, the United Nations weather agency said that sea level rise in the past decade was double what it was in the 1990s and since January 2020 has jumped at a higher rate than that. Since the decade began, seas are rising at 5 millimeters a year (.2 inches) compared to 2.1 millimeters (.08 inches) in the 1990s.The WMO provisional state of the Global Climate 2022 report says that the rate of sea level rise has doubled since 1993 and has risen by nearly 10mm since January 2020 to a new record high this year. The Past two and a half years account for 10 per cent of the overall rise in sea level since satellite measurements started nearly 30 years ago.

9.2 Climate Mitigation

In India Multiple heatwave events and temperatures touching 48-49 degree Celsius periodically means that March and April 2022 have been the hottest in the last 122 years. Climate change, induced by increased man-made greenhouse gas emission, is a critical driver of rising extreme heat. While large parts of the out nation experienced scorching temperatures, in the east, higher than normal temperatures were accompanied by cyclones, floods and landslides. The periodicity, intensity and spread of extreme weather events have increased conspicuously. It is in this climate constrained context that India will have to grow its economy. Dealing with climate change and its impacts will require more than substitution of fixes the amount. It will require a radical transformation of the way economics growth and development.

It is not easy task because it is necessary to adapt to higher temperatures, longer heatwave events as well as reduce and avoid runaway rise in emissions. This requires better systems focused on minimizing resource waste through increased too perfect and reduced stress on power systems. Rather than relying on air conditioners, there must be plans to build so as to reduce cooling demands, and improve energy and material efficiency. Habitations must incorporate elements to deal with heat, such as cool roofs, more green patches, improved air flow, as well as affordable, accessible and reliable integrated mass

public transport that would aggregate energy requirements. Climate change must inform to the entire sectors of the economy.

In general, the socioeconomic cost is substantial. Rising heat could lead to a loss of 2.5-4.5% of GDP annually in India. The deleterious impact on extreme heat on agricultural productivity is evident-10.15% of the wheat crop was lost this season to the recent heatwaves. Rising food inflation, as a result of this loss, will impact India's economy. Sustained high temperatures make it difficult to work, impacting productivity. India can no longer afford to ignore climate change as a defining issue while designing policy. Even though it's a global problem, it is we in the subcontinent who are suffering the consequences disproportionately and continuously maintain the climate condition not only in Indian Economy whereas entire economy of the world.

9.3 The Climate Change and adaptation technology in Agriculture sector

Climate change will affect the economic geography of the world, it will alter the entire production, GDP and welfare globally. In this regard, Low income countries and developing countries severely affected at the large level about agriculture, the adaptation is for supply chains to have more locations, where components are produced. The firms can calculate the cost of risk relative to the benefit of diverse production process. Global warms affects the particular crops, at a one political region in the National or International level .Thereafter, that regions to change their crop production and generate another kind of crops, trading with other countries to consume that crop oriented product. For example, if one country produces wheat and if faces climate change conditions, that country should have the ability to pivot producing whole grains or other crops. In this kind of ability to change it will lead to specialization of production function and export more apart from the domestic food grains need.

As the consequences of increasing temperature, the comparative advantages of the regions at the entire world. Unfortunately, certain sectors will face declining productivity, it will impact how the countries are trade adapt. Even though, in order to overcome this problem trade and migration are suitable substitute adaptation mechanisms, the adaptation measures through changes in the specialisation if trade is very more expensive one.

Moreover, the countries of the world think about imposing carbon adjustment tariffs on commodities. This kind of policy measures to increase trade cost and prevent trade related adaptation, lead to more migration, making the costs of climate change higher in and around the inter region as well as international level.

9.4 Climate Change - Govt Policy Measures

In the First week September 2024, the Union Cabinet Cleared the 2,000 Crore Mission Mausam, which primarily involves a major upgrade of instruments used by organisations such as the India Metro logical Department, the National Centre for Medium Range Weather Forecasting and the Indian Institute of Tropical Metrology (IITM). These are the organisations that form the backbone of India's Weather and climate forecasting system multiple level of time scales.

In the first tranche of the Mission Until 2026, the Ministry of Earth Sciences (MOES), the nodal body executing this exercise, hopes to cure and install up to 60 weather radars, 15 wind Profilers and 15 radiosondes. These are the instruments that give regular updates on the changing parameters of wind speeds, atmospheric pressure, humidity and temperature at various elevations of the atmosphere. India has an umbrella weather model that can be Tweaked to generate forecasts o multiple time scales from the day to day to seasonal monsoon variation predictions.

The weather forecasts more accurately and improving precision is a never ending iteration but Mission Mansam seeks to open more vistas. Instead of being a to weather, humankind tries to control it. Thus, human efforts only to mitigate the crisis of climate change. The one of the proposal associated with the new mission is to set up a cloud- simulation chamber at the IITM, which will help model rain clouds. They would then test various weather interventions such as seeding clouds and tweaking then to control the rainfall from them. The investigation in fundamental research in the atmospheric sciences is a welcome move. The complexities posed by climate change suggest that multiple fronts may have to be opened to mitigate the effects of greenhouse gas emissions. To government make an attempts at controlling the weather conditions one still in the sovereign state of uncertainty.

10. FINDINGS

The Findings and suggestion of the present article is on

- We should join at global level to fight against climate change condition.
- We prefer low carbon emission vehicles in all types.
- To protect the environment including forest and water resources.
- To control the soil and coastal line erosion.
- At the global level to transform the new innovative idea of agriculture sector and mitigation of ever increasing heated climate.

11. CONCLUSION

The climate change event has brought out clearly the responsibility of rich countries to pay their share and them intake of economic burden among themselves. According to Erich Fischer of Swiss Federal Institute of Technology Zurich as saying **"Given the unequal burden and the share of historical emissions…. The global worth needs to support the global south in terms of coping with these adverse effects"**. In other words, from the North and South countries at the global level face the sharing the amount disproportionate manner. Even though COP 27 conference to discuss the compensation to loss and damage in a well equalized manner.

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