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Climate Law and International Law & Adaptations

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Abstract:
The aim of the paper is to compile all agreements and treaties in past by major world powers to protect environment and prevent much change in climate so that readers can be awaken to sensitize to plan to save their atmosphere and environment to arrest temperatures variations

INTRODUCTION

Climate law deals with the branch of legal aspects and study of those channels of climate that are changing with time and legal considerations by International Organisations and Regulatory bodies and watchdogs that over the globe each Nation is supposed to respect and rely on and comply with that minimum standard mark to maintain and protect the climate from worsening.

So Climate Law is a vast term to share with as it has in its scope included above earth whole protective cover environment, gases and temperature variations different weather conditions and seasons like Autumn, Spring, Summer, Winter in a year.

From North pole to South pole different variations in climate are there rainy season, draughts, thunderstorms, volcano eruptions on oceans , so with efforts of agreeing countries from **Kyoto Protocol to Paris Agreement in 2015 held in France** , **almost 197 Nations representatives** consented to pledge to make efforts in their states to curb Green house gases Emission and to reduce Global warming.

Letter To The Editor

Though may not be Original research per se but the Article don't contain material that will infringe upon Copy Rights of Any party. It's a simple Compilation and collection of data to make the world understand and think about how fast we are Changing our Climate rather How industrialization and Globalization has negatively impacted Climate Changes so that we should Collaborate and think once again globally to preserve and protect positive Climate.

Discussion

COPs (Conference of parties) are the main decision making body of UNFCCC (united nation framework convention on climate change). 1st COP was held in Berlin Germany in 1995 to discuss collaborative role of uniting countries to arrest global rise in temperature 1.5 C. Seat of Secretariat of United Nation Conference is located in Bonn Germany so when there is no mutual consent where to conduct COP next then its held in Bonn Germany. Main focus in all conferences was to bring net emission to Zero and all participating Nations agreed to meet this target by 2050 where India took pledge to reduce coal based fuel thermal use and meet net zero targets by 2070**. Last COP28 was held in Dubai UAE** this year only where most of representatives of partner nations met to decide and fix the next steps to be taken to protect our environment and Climate.

So major plan of COP is to curb global warming and engaging in discussions of future Climate action plans. COP meet every year unless the parties decide otherwise.
In 1997 Kyoto Protocol was made in a Conference of parties COP3 held in Kyoto Japan, which legally binds developed countries to reduce **green house gases emissions** below targets.
Then 2001 was COP7 held in **Marrakech, Morrocco that is ratification of Kyoto Protocol**.
COP8 was held in New Delhi India in 2002, where Delhi Declaration, Technology Transfer was discussed.
Then COP13 in 2007 in **Bali , Indonesia** was held where roadmap for action plan was made.
Then next COP14 **in 2008 in Poland** where Adaptation fund under Kyoto Protocol was launched.
COP15 in 2009 in Copenhagen, Denmark where developed countries pledged to share fast start finance (for 2010—2012)
COP16 in 2010 in Mexico country where **Cancun agreements, where Green climate fund** was established.
COP18 in 2012 in Doha Qatar where famous Amendment to Kyoto protocol was done where reducing GHG emission by 18 percent was agreed.
COP19, Warsaw Poland where Warsaw Framework for Redd plus , Warsaw International mechanism for loss and damage was fixed.
COP21 in 2015 which was held in Paris France where Paris Agreement replaced Kyoto protocol.
COP24 in Poland was held where Rulebook for Paris Agreement was designed.(actions to be taken as per NDCs).
COP26 in 2021 in Glasgow ,U.K. here India announced that they will achieve net zero targets by 2070. India called for phase-down of Coal based power. Glasgow breakthrough Agenda by 41 countries+ India.
COP27 in 2022 in Egypt where Loss and damage fund, plans for early warning systems, Global Shield financing Facility, Mangroove Alliance, India long term low emission development strategy.
In COP28 in Dubai Global Stocktake Text, periodic review mechanism established under the Paris Agreement in 2015. Its mainly focussed on substantially reducing non-co2 emissions, particularly, methane emissions globally by 2030.
COP28 focuses on transitioning away from fossil fuels in energy systems to achieve net zero by 2050.
GGA Global Goal on Adaptation—targets on water security, ecosystem restoration, and health.
Loss and Damage fund—aimed at compensating countries with climate change impacts.] 1

Reference- (Wikipedia 2012)
Climate Change mainly refers to long term shifts in temperatures and weather patterns , mainly caused by human activities, especially the burning of fossil fuels.
The world bank estimates that developing countries will need an average of $2.4 Trillion a year between now and 2030 to address the global challenges of climate changes adaptation conflicts pandemics. So developing countries need funding from private sector to fight climate challenges, world bank chief says.
A day after Climate pact got a massive push at **the G20 summit here in India New Delhi in September** 2023 , UK announced it will provide $2 billion to the Green Climate Fund, raising hope that developed countries collectively meet the GCF target for the first time in 2023.

The GCF was established by 194 countries following Copenhagen Accord at the 15th session of the UN climate conference(COP15) in 2009. Under the pact rich nations were expected to contribute $100 billion per year by 2020 under the GCF which is the largest global fund dedicated to supporting developing countries to reduce global emissions and helping communities adapt to the effects of climate change.] 2. Reference—**Amitabh Kant(G20 Sherpa)**

India and France leaders underlined their role as providers of solutions for Indo-Pacific through their cooperation in the framework of International Solar Alliance, launched by India and France and coalition for Disaster Resilient Infrastructure in G20 in India. A joint Investment fund of up to $1 billion to support India's efforts for faster transition through development and deployment of emerging green technology has received green light from US President Joe Biden and Prime Minister Narendra Modi.]3

Reference--(Bridging the Gap 18 Oct.2023 https:/isa.int)

India's National Investment and Infrastructure Fund and US Development Finance Corporation have exchanged letters of intent to each provide upto $500 million to anchor a Renewable Infrastructure Investment Fund, taking forward the decision taken during Modi's visit to Washington in June2023.

India has one of the largest Solar Energy Programme in the world, has of late sharpened focus on battery storage with Grid size battery storage, will allow the country to drive the benefit of rapidly expanding solar and wind energy capacities. Green Hydrogen has emerged as the other primary focus area as the government paces up its carbon mitigation plan. It has sanctioned Rs 3760 crore as viability gap funding for 4000 MWh battery storage capacity to be built by 2030-31 with a view to keep storage tariffs affordable.

In an effort policy towards protecting and cleaning environment and contributing in Climate Change India is protecting Regional Glaciers, Reducing plastic use, producing clean Cooking Fuel, and making the Railway System more sustainable.

India's decarbonisation target At COP26 in 2030 was announced. The highly ambitious goal includes Decarbonising energy to 50% and achieving 500GW of fossil fuel free generating capacity by 2030. This was a very large increase above its Paris commitments, far more than expected.

Continued Emission of Green House Gases will lead to further climate changes. Future changes are expected to include a warmer atmosphere, a warmer and more acidic ocean, higher sea levels, and larger changes in precipitation patterns.

Climate change performance index of India ranks eighth among 63 countries which account for 92% of all GHG emissions in the year 2021. Climate change is happening now, is largely due to human activities and is amenable to action to slow its pace and reduce its impacts. Climate change is a global phenomenon, but it is people and communities at the local level that experience its consequences. India has long been a key player in international climate negotiations and has begun implementing a diverse portfolio of policies nationally and within individual states to improve energy efficiency, develop clean energy sources, and prepare for the impacts of a changing climate.

India also allocated 2% increase in Green Energy In Recent Budget announced by finance minister Mrs. Nirmala Sitaraman presented on 1st February 2025. The Centre has allocated Rupees 3,412 crore to **the Ministry of Environment and Climate Change** , a meagre 2.4 per cent increase over the previous year's Budget allocation of Rs. 3,330 crore , even as it allotted greater funds for forest survey, air quality management and pollution control as well as wildlife research.

The forest survey of India received a jump in funds allotment of Rs. 54 crore for 2025-26 compared to Rs. 46 crore it had received in 2024-25.

Keeping in mind the criticality of air pollution, the Union Budget of India has increased allocation of **Commission for Air Quality Management** to more than double – from rupees 16 crore to 38 crore.

Similarly **, Central Pollution Control Board** received a hike in funds allocation of Rs. 126 crore for2025-26 from Rs.113 crore it had received in 2024-25. The Indian Council for forest research's budgetary allocation witnessed a huge spike in allocation of Rs. 354 crore for 2025-26 from Rs. 300 crore in 2024-25.

Also, the **Wildlife Institute of India** got Rs. 454 crore in 2025-26, a rise of 16 per cent from Rs. 391 crore it had received in 2024-25.] 4.

(20 Nov.2024 https://ccpi.org)

Climate Change denotes alterations in typical atmospheric conditions , encompassing factors like precipitation, temperature, humidity, and wind patterns. Additionally it entails modifications in the occurrence and severity of the meteorological phenomenon. The goal is to map the smallest data point to 0 and the largest to 1., with all other values being proportionately distributed within the normalised interval of 0 to 1.

Reference: Climate Change Information Resources, New York Metropolitan Region.] 5

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Evidence of Climate Change are compelling: sea levels are rising, glaciers are retreating, precipitation patterns are changing, and the world is getting warmer. According to **the Inter Governmental panel on Climate Change (IPCC)** the current rate of greenhouse gas emissions is likely to cause average temperature to rise by 0.2 degree celsius per decade, reaching by 2050 the threshold of 2'C above pre industrial levels. Recent evidence suggests even more rapid change, which will greatly, and in some cases irreversibly, affect not fast people, but also species and ecosystems**. (Elizabeth et al, 2010)]6**

Climate change indeed is real. Super typhoon Haiyan is the latest Natural Disaster that has also led credence to the reality of climate change.

This sad occurrence hit the land and devasted the Philippines. This record- breaking storm is the strongest storm in history to make landfall. It tore apart buildings and left entire provinces without power or communication. The 370-mile-wide storm packed winds, 3.5 times as strong as Hurricane Katrina. Winds reached 195mph and has gusts of up to 235 mph. Walls of water as high as fifteen feet swept over the country washing away towns and many Islands and washed ships ashore where once homes stood. The U.N. says " Around 9,20000 people were displaced by the storm and a total of 11.8 million people had been affected.]7

(The Algo, 2013).

The more direct impacts on health include those due to changes in exposure to weather extremes (heatwaves, winter cold), increase in other extreme weather events (floods, cyclones, storm-surges, draughts) and increased production of certain air pollutants and aeroallergens (spores and moulds). Decrease in winter mortality due to milder winters may compensate for increases in summer mortality due to increased frequency of heat waves.

In countries with a high level of excess winter mortality, such as United Kingdom, the beneficial impact may outweigh the detrimental.]8

(Langford & Benthem, 1995; Rooney et al 1998)

The extent of change in the frequency , intensity and location of extreme weather events due to Climate Change remains uncertain.

Climate Change acting via less direct mechanisms would affect the transmission of many infectious diseases (especially water, food and vector borne diseases) and regional food productivity (especially cereal grains) . In the larger term and with considerable variations between populations as a function of Geography and vulnerability, these indirect impacts have likely to have greater magnitude than the more direct.]9

(Mc Michaels Githeko, 2001; Epstein, 1999)

For vector borne infections, the distribution and abundance of vector organisms and intermediate hosts are affected by various physical (temperature, precipitation, humidity, surface waters and winds) and biotic factors (vegetation, host species, predators, competitors, parasites and human interventions). By reflecting the increased retention of heat energy in the lower atmosphere, global warming also affects the atmosphere heat budget so as to increase the cooling of the Stretosphere.]10

(Shindall et al, 1998)

The effects of Climate Change caused by human Global Warming are happening now, are irreversible for people alive today and will worsen as long as humans add greenhouse gases to the atmosphere.

We already see effects scientists predicted, such as loss of sea ice, melting glaciers and ice sheets, sea level rise and more intense heat waves.

Scientists predict global temperatures increases from human made green house gases will continue. Severe weather damage will also increase and intensify.

Earth will continue to warm and the effects will be profound. Global Climate Change is not a future problem. Changes to earths climate are driven by increased emissions of heat-trapping. Green house gases are already having widespread effects on the environment; glaciers and ice sheets are shrinking, river and lake ice is breaking up earlier, plant and animal geographic level are shifting, and plants and trees are blooming sooner.

Effects that scientists have long predicted would result from global climate change are now occurring, such as sea ice loss, accelerated sea level rise, and longer, more intense heat waves.

“The magnitude and rate of climate change and associated risks depend strongly on near-term mitigation and adaptation actions, and projected adverse impacts and related losses and damages escalate with every increment of global warming.

Some changes (such as droughts, wildfires and extreme rainfall) are happening faster than scientists previously assessed. In fact according to Intergovernmental Panel for Climate Change (IPCC) – The United Nation body established to assess the science related to climate change- modern human have never before seen observed changes in our global climate and some of these changes are irreversible over the next hundreds to thousands of years.

Scientists have high confidence that global temperatures will continue to rise for many decades, mainly due to greenhouse gases produced by human activities.

The IPCC’s Sixth Assessment report, published in 2021, found that human emissions of heat-trapping gases have already warmed the climate by nearly 2 degree Fahrenheit(1.1 degrees Celsius) since 1850-1900.]11

The global average temperature is expected to reach or exceed 1.5 degrees C (about 3 degrees F) within next few decades. These changes will affect all the regions of the earth.

The severity of effects caused by Climate Change will depend on the path of future human activities. More greenhouse gas emission will lead to more climate extremes and widespread damaging effects across over planet. However these future effects depend upon the total amount of carbon dioxide we emit. So we can reduce emissions and avoid some of the worst effects.

" The scientific evidence is univocal: Climate Change is a threat to human wellbeing and the heat of the planet. Any future delay in connected global action will miss the brief, rapidly closing windows to secure a liveable future. IPCC.

Here are some of the expected effects of global Climate Change on the United States, according to *the Third and Fourth National Climate Assessment Reports*:---[15]

Future effects of global climate change in the United States:

U.S. sea level likely to rise 1 to 6.6 feet by 2100.

Global sea levels have risen about 8 inch(0.2 metres) since reliable record-keeping began in 1880. By 2100, scientists projected that it will rise atleast another feet(0.3 meters), but possibly as high as 6.6 feet (2 meters) in a high emission scenario. Sea level is rising because of added water from melting land ice and expansion of sea water as it warms.

Climate Change will continue through this century and Beyond:

Global climate is projected to continue warming over this century and beyond.

Hurricanes will become stronger and more intense. Scientists project that hurricane associates storms intensify and rainfall rates will increase as the climate continues to warm.

More Droughts and Heat Waves:--

Droughts in the Southwest and heatwaves (periods of abnormally hot weather lasting days to weeks) are projected to become more intense, and cold waves less intense and less frequent.

Longer Wildfire Season:--

Warming temperatures have extended and intensified wildfire season in the west, where long term drought in the region has heightened the risk of fires. Scientists estimate that human – caused climate change has already doubled the area of forest burned in recent decades. By around 2050, the area of land covered by wildfires in Western States is projected to further increase by two to six times. Even in traditionally rainy regions like the South West , wildfires are projected to increase by about 30 %.

Changes in Precipitation Patterns:--

Climate Change is having an uneven effect on precipitation(rain and snow) in the United States, with some locations experiencing increased precipitation and flooding, while others suffer from drought. On average more winter and spring precipitation is projected for the Northern United States and less for Southwest, over this century.

Frost-Free Season:--

The length of frost free season , and the corresponding growing season , has been increasing since 1980,s, with the largest increases occurring in Western United States. Across the Unites States the growing season is projected to continue to lengthen , which will effect the ecosystem and agriculture.

Global Temperature will Continue to Rise:--

Summer of 2023 was earths hottest summer on record, 0.41 degrees Fahrnheit (F) (0.23 degrees Celsius (C)) warmer than any other summer in NASA's record and 2.1 degree F (1.2 C) warmer than the average summer between 1951 and 1980.

Arctic is Very likely to become Ice-Free:--

Sea ice cover in the Arctic Ocean is expected to continue decreasing, and Arctic Ocean will very likely become essentially ice-free in late summer if current projections hold. This change is expected to occur before mid century.

CONCLUSION & RESULTS

To overcome climate changes—Save energy at home, much of our electricity and heat are powered by coal, oil and gas., change your home's source of energy. Walk, bike or take public transport., switch to an electric vehicle, consider your travel, reduce reuse repair and recycle,,. Eat more vegetables, throw away less food.

Abstract

of the Article is that its high time now to think, worry gather to plan something to preserve, conserve, protect environment so that drastic climate change in temperature that countries together in Paris Agreement committed to prevent rise of not more than 1.5 degree in a year. So Climate has to be protected cared by each and everyone so that we can leave a good air and atmosphere for coming generations and there is a need of National , International Laws on Adaptation Climate Change and their strict implementation.

Reference

Different law books ,National & International Journals, daily newspaper data studies, social media lectures available on Environment law & Climate Change by different Scholars, Researchers, Scientists, visionaries, Environment workers and protectors, from various coaching institutes like Unacademy, Byju's, and other Classes available, Here I cannot specify name of any one person or institute or book or Researcher from where data/information has been learnt.

Major References are mentioned below in other Reference column.

Funding

As no empirical study is involved . it's Short research Article so not much funds were required to the Author to compile this manuscript, So no funding from any external source has been taken.

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