



## Go Green with Paris Accord: A Critical Study

Dr. S.D. Moharana, Principal, LL.M., PH.D., G.M. Law College, Puri,  
Utkal University, ODISHA

**Abstract:** *The rise in carbon dioxide concentration will considerably increase the temperature of earth and its atmosphere. This increase in temperature of earth and its atmosphere is called global warming. The effect of global warming in climate change is considered a recent phenomenon and its roots are more than 150 years old. . In 1938 Guy Stewart Callender gave evidence of 0.3<sup>o</sup> C rises in global temperature over the previous 50 Years. He said that the rise of temperature due to co<sub>2</sub> release from fossil fuels, electricity generations, transportations, heating and manufacturing of cements. Due to global warming it would cause three major effects such as decline of India's GDP by 9% decrease in production of the major crops 40%, displacement of seven million people on submission of seven cities of India like Mumbai & Chennai. Inter-Governmental Panel on Climate Change (IPCC) issued a warning that if the present situation continues; average temperature of earth may rise by 4<sup>o</sup>C in near future. That would be certainly catastrophic for the earth. Consensus was reached to keep the global temperature rise to 2<sup>o</sup>C or less through global co-operating by all the countries, agreement reached at Paris. The researcher tries to focus on the major events occurred in past, climate change effects on hazards and future expectations. Almost 183 countries have submitted action plans but expert say they are not enough to achieve goal of limiting global warming to two degree Celsius. World's wealthiest investors are likely to announce an energy coalition to pool money to bring affordable clean energy to all.*

**Key Words:** - Global Warming, Green House Effect, Green Future.

### Introduction:

Global warming is an issue which is hotly debated across the world and climate change is considered a recent phenomenon and its roots are more than 150 years old. In 1820s, French Scientists Joseph Fourier was trying to understand the factors affecting Earth's temperature. Fourier realized that atmosphere was playing a crucial role. In 1861, the Irish scientist John Tyndall demonstrated that methane and carbon dioxide could trap heat within the atmosphere while Swedish, Physicist Svante Arrhenius provided numerical estimates of

temperature changes due to doubling of Co<sub>2</sub> in the atmosphere. Joseph Kinser suggested in 1933 that temperature in individual cities was rising. In 1938 Guy Stewart Callendar gave evidence of 0.3<sup>o</sup> C rises in global temperature over the previous 50 Years. He suggested that the same mainly due to co<sub>2</sub> release from fossil fuels, electricity generations, transportations, heating and manufacturing of cements. In 1961, calendar updated his estimates for global temperatures. The current understanding matches their findings.



Presently there is a consensus that human activities have been affecting the climate since 2 decades in a rapid momentum. It has been acknowledged that nations contributing least to the problem would be affected the most. It is evidenced that there were typhoons in Philippines and India, droughts in Africa, threats to Island nations from rising sea. As the sea level has risen by 15 cm since

1949. The reasons are clearly known, while on one hand the carbon dioxide emission has increased from 14.9 Gigatonnes in 1970 to 35.6 Gigatonnes in 2015, on the other hand, the forest cover (which helps in absorbing CO<sub>2</sub>) has shrunk from 4.7 billion hectares in 1949 to 714.9 million hectares in 2015. The major Global events of climate change based on NASA data is as follow:

Table 1: Major Global Events of Climate Change

Sl. No.	Major Extreme Climate Events	Country/Continent	Time	Climate Effect
1.	Shrinkage of Lake Chad	Chad, Africa	1960-2002	Persistent drought has shrink Lake Chad
2.	Shrinkage of Lake Toshka	Egypt	1984-2001	From Lake Nasser reservoir (on Nile River) to Toshka Depression in western Desert. But flow of water ceased in 2001
3.	Flood in Mississippi river	U.S.A.	28 <sup>th</sup> Jan 2011 – 3 <sup>rd</sup> May 2011	Due to snowiest winters and violent, early spring rainstorms, Mississippi and its tributaries overflowed
4.	Flood in Indus river	Pakistan	Aug 2010	More than million acres of land were flooded destroying crops, killed 1800 pers 1 Cr people lost their shelter
5.	Yellow river's course change	China	2001-2009	This river was cradle of Chinese civilization, but frequent devastating floods have changed its course- Now it is known as China's Sarrow
6.	Shrinkage of Lake Mead, Nevada/ Arizona	U.S.A.	2000-2010	Since 2010 water level is dropping due to lower snowfall.
7.	Global warming	World Over	1880-2009	Earth's Surface temperature increased by 0.7° C since 1880,



				2/3 <sup>rd</sup> of warning since 1975. 0.15 degrees Celsius to 0.20° C per decade
8.	Inja Glacier melt	Himalayas		Major retreat and collapse of the lower tongue of the glacier and formation of new melt ponds.
9.	Helheim Glacier melt	Greenland	2001-2005	This glacier is crumbling into icebergs; glacier flow to the sea has sped up.

Source, Based on NASA data.

Table :2. Implication of climate change effects on hazards and vulnerability

Climate Change Impacts	Hydrometer disaster	Ecological Disasters	Chemical Disasters	Geophysical Disaster	Biological Disaster
Aggravating hazards	Flooding, Drought, Cyclone, Windstorms, Heat wave etc	Forest fire Mass movement, Landslide coastal erosion etc	Fire, explosion, Toxic release, Radioactive release	Earthquake can trigger landslides, erosion, GLOF, LLOF etc.	Vector Borne, Water Borne and allergic diseases, epidemic, pandemic.
Increasing Vulnerability	Degraded ecosystems, Altered hydrology, Poor natural defence, Lost Socio, economic resilience	Loss of Moisture, increase fire weather, Green cover loss	Shift in safety and process threshold, Climate stress	Change in vegetation regime, in melting, change drainage	Loss of Socio-economic resilience and health resources
Disaster Impacts/ Relief phase	Shelter, water, sanitization, waste and environmental health	Soil contamination, Risk of Pests, diseases	Local Climate Changes, Effects on ecosystem services and community livelihood.	Landscape change, Effects on ecosystems, geo systems and natural resource	Loss of human capital for natural resources, etc.



**Present initiatives:**

Prior to the Conference, 146 national climate panels publicly presented draft national climate contributions (called "Intended Nationally Determined Contributions" INDCs). These suggested commitments were estimated to limit global warming to 2.7 degree Celsius by 2100. For example, the EU suggested INDC is a commitment to a 40 percent reduction in emission 2030 compared to 1990. The agreement establishes a "global stocktake" which revisits the national goals to "update & enhance" them every 5 Years beginning 2023. However no detailed time table was incorporated into the Paris agreement as opposed to the previous Kyoto Protocol. A number of meetings took place in the preparation for COP 21, including the **Bonn Climate Change Conference**, 19 to 23 October 2015, which produced a draft agreement.

As you are aware that in 1988 Inter Governmental Panel on Climate Change (IPCC) was setup by the World Meteorological Organization (WMO) & United Nations Environment Programme (UNEP) to prepare Assessment reports<sup>1</sup>. The Conference negotiated the Paris agreement, a global agreement on the reduction of climate change, the text of which represented a consensus of the representatives of the 196 parties attending it.

Initially, there were differences among the participating countries. However on 12<sup>th</sup> December 2015, 196 nations reached a landmark accord. Nearly every country has committed to lower the emissions of green house gases to control the most drastic climate change. Initial demand was that only developed economies could take action to

on Climate Change & its impact based on scientific information. Five Assessment reports have been presented by IPCC. Leaving few aberrations, the IPCC reports have by & large established the role of human activities in bringing about Climate Change. Various meetings & conferences have been held to resolve the issue without any success. Later a warning was issued that if the present situation continues, average temperature of earth may rise by 4<sup>o</sup>C in near future. That would be certainly catastrophic for the earth. Consensus was reached to keep the global temperature rise to 2<sup>o</sup>C or less through global co-operation by all the countries. In this backdrop, the 21<sup>st</sup> Conference of parties started in Paris.

**Paris Development:**

The 2015 United Nations Climate Change Conference, COP 21 or CMP11 was held in Paris, France, from 30 November to 12 December 2015. It was the 21<sup>st</sup> yearly session of the Conference of the parties (COP) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and the 11<sup>th</sup> Session of the meeting of the parties to the 1997 Kyoto Protocol reduce green house gas emissions was sacrificed. The present accord requires action in some form from every country. United Nations Secretary General, Ban Ki-moon, said "This is truly a historic moment". For the first time, we have a truly Universal agreement on climate change.

The UN convention Climate Change has followed the principle of common but differentiated responsibility (CBDR), reflected in the Kyoto Protocol & reinforced Last Year at Lima. Under this, poor countries were not required to cut emissions. India is emphasizing this



again, informed sources in the Ministry of Environment & Forest said the demanding that the developing nations be allowed greater room in cutting emissions by 2020 as they seek to eliminate poverty through fast-paced economic growth India's National Per Capita emissions are very low at 1056 tones carbon dioxide equivalent (about a tenth of some developed nations) and India's share or cumulative global share emission on 3 percent<sup>2</sup>.

In Paris USA President **Barak Obama** said the specific targets each country is setting to reduce green house gasses emissions may not have the force of treating, but it's crucial that "Periodic Reviews" of these commitments is legally binding. He is referring to a mechanism so tight by negotiators under which countries would ratchet up their commitments every five years<sup>3</sup>. USA embraces its responsibility to stop global warming. **Obama & Xi** (Chinese President) made a firm commitment at the conference at Paris to work for change, called for an agreement that would cut carbon paves the way for global transition to a green economy. French President **Fracois Hollande** called for progressive tax on carbon to reflect its true price & send to message that there is a cost to emitting green gases damaging environment. Hundreds of billions of dollars were waiting to be deployed internationally to foster green innovation, he said, calling for right rules & incentives to put in place to under leash the creative potential of scientists & technologists. A large number of new jobs & new opportunities were waiting to be created.

Centre for Science & Environment Institute has prepared statistics published in State of India's

Environment, 2014 that out of all the entrepreneurs total amount of 3872.5 billion of Metric Tons Co<sub>2</sub> emitting to the environment. As you know the safe level of is 30 PMs (parts per million) and as per latest World Metrological Organization by next year the Co<sub>2</sub> level will be 450 PPM & by 2050 Co<sub>2</sub> level will be 450 PPM. If this happens the temperature will raise 2°C by 2030. China unfortunately becoming the most polluted country which emitting 1047 billion tones of Co<sub>2</sub><sup>4</sup>.

The historic climate accord of Paris has paved the way for leaving out the persistent increase in carbon dioxide. Co<sub>2</sub> emission which started with Industrial Revolution. The approval of text of the agreement by 196 nations will lead to reduction in emission of green houses gasses by about 50 percent, which can further stave off increase in atmospheric temperature by 2 degree Celsius. The accord signals the global markets to shift their investments from traditional sources of energy like coal, oil & gas zero carbon dioxide energy sources like wind, solar & nuclear power. Five years ago, a similar deal was impossible. However, the situation seems to be changing. The Paris agreement after ratification by nations to be signed in April 2016 at the United Nations in New York.

Earlier, the 2009 Copenhagen climate change summit had failed as countries could not iron out their differences. Most of them believed that climate change was a problem for future generations. Now the situation is different as scientific studies have confirmed that impact of climate change has already started adding woes of the present generation itself. Flooding the Miami, droughts & water shortages in



China are some of the examples of changing climate.

The Paris accord is outcome of several factors including shifts in the domestic policies & relationship between United States & China, the two Largest Green house gas emitters. Also India has shown maturity is not sticking to its earlier stand of total exemption. The final accord did not fully satisfied everyone & some developing nations have been expressed their concerns. The poor nations wanted a legally binding provision that rich countries provide minimum of \$ 100 billion a year to help them adapt to climate change & mitigate its impact. In the final document \$ 100 billion amount finds mention in the preamble but not in the legally binding part.

#### **Paris Outcome:-**

The participating 195 countries agreed by consensus to the final global pact, the Paris agreement, to reduce emission as part of the method for reducing green house gas. In the 12 page-document the member agreed to reduce their carbon output "as soon as possible" and to do their best to keep global warming to well below 2°C. Francis Foreign Minister, Laurent Fabius, said this "ambitious & balanced" plan was "historic turning point" in the global warming.

#### **A. Non Binding Commitments, Lack of Enforcement Mechanism:-**

The agreement will not become binding on its member states until 55 parties who produce over 55 % of the world's green house gas have ratified the agreement. There is doubt whether some countries, especially the United States will agree to do so. Each country that

ratifies the agreement will be required to set a target for emission reduction but the amount will be voluntary. There will be neither a mechanism to force a country to set target by a specific date nor enforcement measures if a set target is not met.

#### **B. Institutional Investors Contribution to Limited Fossil Fuel:-**

Earth Institute Director Jeffery Sachs argued that institutional investors would eventually divert from carbon reliant firms if they could not react to political and regulatory efforts to halt climate change.

#### **C. Solar Alliance:-**

Indian Prime Minister Narendra Modi announced at the 2015 G-20 summit that he along with French President Francois Hollande, intends propose creating an alliance of solar- rich countries similar to the Organization of Petroleum Exporting Countries (OPEC). Ahead of the climate submit, the two leaders sent written invitations to over 100 countries to join the coalition proposed to be called the International Agency for solar policy & application. U.S. President Barack Obama said he held discussion with Prime Minister Narendra Modi on measures to bring the land mark Paris Climate Change agreement into force quickly as possible. While meeting at Oval Office on dues day i.e. 07.06.2016 Obama said they also discussed financing of India's ambitious Plans to expand solar and clean energy (The Hindu, 7<sup>TH</sup> June 2016 Kolkata at P-1).

#### **Future Expectations:**

It is expected that emissions will get reduced by 50 percent if Paris Accord is implemented. However, the National





Plans will vary in scope & ambition. Although every country is required to bring a plan, there is no legal requirement saying how they will reduce the emission, there is no legal requirement saying how they will reduce the emission & by how much. The crux is that the emission levels are to be cut down by all signatories. The countries will also be required to meet every five years starting from 2020, with their updated plans to further tighten their emission levels. Every Five years from 2023 onwards, the countries will publicly report on how they are cutting emissions with reference to their plans as per their Universal accounting system. Although individual's country's plans are voluntary, these plans are legally required to be monitored, verified & reported publicly. This will ensure that suitable environment is created & implemented of the Paris accord.

Mr. Prakash Javedkar, the Minister of State for environment, said "What we have adopted is not only an agreement, but we have written a new chapter of hope in lives of seven billion people on the planet". He praised the Accord was based on the Principles of Climate Justice & common but differentiated responsibilities. Sharp differences among the countries have been sorted out substantially at Paris. The Accord further to start new market mechanism allows CO<sub>2</sub> reduction trade between nations. India is likely to make financial gains by trading the benefits from solar plants, it is planning.

The researcher suggest that, if this **Paris Accord** is carried out by Signatory States in letter and spirit there will be a greener and greater future of the entire global .

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