

COP26 AND DELIBERATIONS ON TO ACHIEVE THE MILESTONES IN COMING 3-4 DECADES

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The heads of state of almost all the countries of the world gathered together in Glasgow in the first week of November. They have been deliberating and negotiating a number of issues pertaining to climate and its fickle nature. The climate has become quite unpredictable and there are reasons for these “mood swings”. A couple of weeks back, India witnessed an unusual event of two cyclonic systems whirling around the subcontinental landmass in the Arabian Sea and the Bay of Bengal. This created quite a havoc and the brunt of nature’s fury was mostly borne by the southern states offshore of BoB. Climate has become spooky and ferocious.

The reasons for this climatic changes are now well known. The greenhouse gases are populating the atmosphere with an increasing ferocity and severity with the spate in industrialization. Europe witnessed the advent of industrialization with the discovery of the power of steam. The development of other contraptions to speed up the work took the mechanical work to an altogether different level. Efficiency increased and time reduced to do a particular mechanical work. It has now created a vicious circle. More the production, more is the release of heat trapping gases in the world.

The model of wealth creation and generation created over the decades is being adopted by all the countries that are lagging behind economically. The moral and ethical need to uplift the populace materialistically is beyond dispute. The achievement of this goal involves heavy usage of fossil fuels that anomalously pollute the atmosphere, affecting the natural rhythm of all the natural processes taking place on land and sea, and even below.

The realization of the man-made activities affecting the weather pattern and the consumption of unwanted gases, in kind and proportion, has been growing over the years.

The smog that engulfed London for a few days in December 1952 reportedly killed around 12,000 people. It was caused mostly by coal burning and exacerbated by the seasonal weather conditions. It was a defining moment in history which unravelled the harmful effects of our ‘progress’. It also was a wakeup call to initiate mitigation efforts to dampen, arrest or stop pollution of all sorts. Later, many parts of the world started witnessing acid rains, which forced the governments to act against this menace. The scientific community was tasked to find solutions to combat climate change.

Climatic parameters are many and their relationships with one another are very complex. We have the rotation of earth, and the variable energy that is received from the sun, that gives rise to day and night as well as different seasons. We then have different constituents of the atmosphere that come from natural as well as artificial causes.



The churning that goes on in the sea and the conductive currents that transfer the energy from one section of the ocean to another is also quite complex. There are many volcanic exhalations that take place below the sea, and also on land. The quantum of those additions is now being worked out.

The natural disasters also play a major role in global ecology. Can we control these natural processes that add gases and crust to earth? Right now, it is well-nigh impossible.

But, we can control the artificial additions to the atmosphere and the oceans. And this is what the global concerned citizens are looking for. Net-zero emission commitment has been announced by a string of countries by 2050. India aims to achieve it by 2070. What is net-zero? Emission of carbon dioxide has to be zero, or the amount of carbon dioxide (can be taken as a synonym for greenhouse gases) released should be equal to it captured. This is a Herculean task. To achieve net-zero emission will require systemic changes. The transition will depend upon the development of new technologies based on green hydrogen and carbon capture storage. How soon it comes needs to be seen. It will also entail huge expenses and the usage costs for the consumers need to come down in an affordable manner.

For this to happen, the coal mining and excavation need to be stopped progressively that is now being used for the production of electricity and other forms of energy. I don't want to give any figures here (they are easily available on net), but it is expected that coal usage will be the highest at around 2040. From this height, the coal usage is expected to come down drastically, to the tune of 99%. If, and only if, the coal usage is stopped completely will the target of zero emissions by 2070 met. Just to keep the big picture in perspective. Our country's solar energy generation capacity today is almost 50 GW. C

The share of this source has to go up to 1700 GW by 2050 and further to 5600 GW by 2070. The wind based energy generation capacity of India currently is 39 GW. This has to be increased to 550 GW by 2050 and 1800 GW by 2070. Nuclear generation capacity now is 7 GW, which need to be increased to 68 GW by 2050 and then to 225 GW by 2070. Similar targets need to be achieved by other nations as well. The percentage of non-conventional energy source has to replace the percentage usage of fossil fuel source.

The preceding, in any case, are the matters for the governments to look into and implement. What can we, the lay population, do? We also should be shifting from the conventional to the unconventional. We have to adopt a new lifestyle that is dependent on solar and aeolian forms of energy for cooking our food. The transportation module also needs overhauling. Electric vehicles are now set to replace the ones in vogue. For net zero emissions the usage of electric or battery driven vehicles has to go up to almost 80% of the total transportation. The rest of the vehicles should use green hydrogen. This will lead to concurrent decline in crude consumption.



The Need To Conserve Energy

Energy conservation is one of the most important things you can do to reduce your carbon footprint. Leaving your electricals on standby needlessly uses up energy — hit the off switch, and you could see huge improvements, most noticeably in your energy bills!

The 200 odd countries that assembled at Glasgow in the very first week of November pledged some action to the world community to achieve the goal of reining in the temperature rise. The primary goal of all the nations is to keep the global temperature rise of 1.5 0C and well below. However, the models worked out by the climate experts indicate the earth will warm by about 2.4 0C and there is every possibility of climatic uncertainties of ever-increasing magnitudes. This is a very serious matter and the world leaders are well aware about it. Maybe the next meeting at Egypt will see fresh initiatives to curb the warming.

One of the most important outcomes of the COP26 is the mention of phasing down (and not the phasing out) the usage of coal. It has been revealed that the governments give out subsidies to the tune of almost 6 trillion dollars (4500000000000000 rupees). It is proposed to cut down the subsidies. The amount spent on subsidies is quite huge. But it is necessary. In a similar vein, adaptation to new technology and new ecological scenario will need resources. The adaptation strategies will require innovation and building new technologies. This will basically be achieved by high income countries and the low income group will lag behind. Hence, the high income countries will have to come forward and help the low to medium income group countries. It was decided to help these countries by offering 100 billion dollars every year for technological upgradation and adaptability measures.

However, this is just not enough to arrest global warming. The COP26 decided to stop deforestation and bring more and more land under the shade of trees. They also have pledged to bring down the methane exhalations.

Get ready folks. Major changes are coming our way!!



Source: IndianExpress.com