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HCFI Round Table Environment Expert Zoom Meeting on "India's Low-carbon Strategy and Outcome of COP27"

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- The 27th Conference of Parties (COP27), the UN Climate Change Conference, took place between 6th and 18th November in Sharm El-Sheikh, Egypt. One of the decisions taken there was to establish a loss and damage fund. This is a very important decision for the developing countries. Another was regarding making good on the long promised 100 billion dollars per year for climate finance for developing countries.
- The UN Secretary General called for a giant leap on climate ambition and also stressed the need to drastically reduce emissions. He said that we must not cross the red line that takes our planet over the 1.5° temperature limit. He asked not to relent in the fight for climate justice and climate ambition and said that we can and must win the battle for our lives together.
- On November 14, India released its long-term climate action strategy, the long-term low-carbon strategy called the "long-term low greenhouse gas emission development strategies" (LT-LEDS). This deals with how it will take steps such as rapidly expanding renewable energy sources and exploring greater role for nuclear energy to reach the target of zero net emissions by 2070. India is in a good position in greenhouse emissions.
- A progress on loss and damage fund is heartening to note. The issue is the conflict of interest and some things have been politicized because of which there is lack of convergence of thinking and action taken.
- Four major pillars of discussions in COP27, which have been deliberated in detail at the conference, are ending deforestation, clarity on article 6, climate adaptation that is fit for the purpose and loss and damage funding.
- Loss and damage refers to the irreparable destruction caused by disasters due to climate change.
- However, more clarity is required as to mechanisms as to how these projects or credits of carbon reduction will be traded and climate partners will implement them.
- Deforestation was also the main agenda in COP26, which as recorded by satellite is at a very high pace. Around 3.75 million hectares or 10 football pitches per minute is the disappearing rate for the forest. We have to arrest this fast pace.
- The rift between developing nations and developed nations was clearly visible at COP27 be it for finance, emissions or even fossil fuels.
- India has opposed draft text on agriculture in COP27 stating that the developed countries are blocking a

pro-poor and pro-farmer decision by insisting on expanding the scope for mitigation to agriculture, thereby compromising the very foundation of food security in the world. In most developing countries across the world, agriculture is practiced by small and marginal farmers who till hard, toil hard and brave the vagaries of extreme weather and climate variability as well as the additional stress of climate change.

- India also said that the world is facing climate crisis today because of historic excessive cumulative emissions by the developed world.
- India had proposed to phase out fossil fuel. All European countries supported it but it was omitted in the draft proposal. Use of coal will further make it difficult to achieve the targets.
- Cooperation of all stakeholders is very important for successful implementation of India's long-term low-carbon development strategy. There is a need for awareness programs.
- The cover text also does not mention when a loss and damage finance facility will be launched and what its contours will be.
- The 20-page document, described as a 'non-paper' by the UN Framework Convention on Climate Change, is 8,400 words long as compared to the Glasgow Pact, which was around 4,600 words and was in itself one of the longest cover texts in the history of UN climate summits.
- Citing the 6th Assessment Report of the Intergovernmental Panel on Climate Change, Indian negotiators had told the Egyptian COP27 presidency that meeting the long-term goal of the Paris Agreement "requires phase down of all fossil fuels".
- A national greenhouse emission inventory is required to formulate a good action plan to reduce those greenhouse gases, which are responsible for the climate change.
- The major contributor to the greenhouse gas emissions particularly the oil industries, power plant and Oil and Natural Gas Commission (ONGC) are doing pioneering strategies in this regard.
- In the transport sector many activities are going on parallelly, starting from fuel changes, electric vehicles, ethanol blended fuel, hydrogen fuel. Additionally, we have to also focus on the old traditions of bicycles and pedestrians. But in urban areas, we do not have pedestrian friendly or cycle-friendly tracks.
- If we look at the transport or trip length, normally more than 50% to 60% trip length is below 6 km. This is possible by cycle. If it is made cycle-friendly, probably 50% of the trip can be catered through cycling. Trip length impacts energy, fuel and carbon and we can go to zero emissions. This is one of the requirements not only from government but also the stakeholders. A change in mindset and behavior is the need of the hour. If public transport system like metros, buses can be further improved then probably this will sort out another 20% of the problem to an eco-friendlier one.
- With regard to private vehicles, there have been rapid changes in fuel, electric vehicle (EV) policy has been announced with the target that by 2025, 30% of vehicles must be EV. This is a very difficult target as there are existing vehicles, for which there has to be a scrapping policy as well as enforcing policy of the government. Many vehicles are not being checked for pollution under control (PUC) or are not insured. There should be a separate ministry for this so that scrapped vehicles can be managed in a proper manner.
- On carbon removal, the focus will be on economic, technical and political feasibility of carbon capture, utilization and storage (CCUS), which is highly uncertain.
- A transition to a low-carbon pathway will involve cost pertaining to the development of new technologies, new infrastructure and other transition costs. This transition will have lot of economic impact.
- Overall if we look into decarbonization of transport in urban area almost every household has one cycle even in urban and rural areas. For longer trips, a better public transport system is required. There is the metro. In many cities like Ahmedabad, there are dedicated bus corridors called Bus Rapid Transit system, which is quite equivalent to metro corridors. They have hi-tech information system, hi-tech speed and have maintained quality. If this is there in other cities also, hopefully we may be able to achieve decarbonization of transport.
- The impact of airplane transport on the environment so far has not been taken into account till date. Airplanes also generate pollution.
- Other policies like work from home can also reduce the trip length. E-commerce is another

way to reduce our trip length. Our existing low-cost living style can help. Countries like Japan consider quality of life as the most important parameter rather than the human development index. Recycling is already in our culture. It is time to bring back our old culture and traditions into our day-to-day lifestyle.

- The COVID-19 pandemic has taught us how to increase immunity with the help of diet, lifestyle and exercise. During any adversity, a vulnerable person gets infected easily and falls sick. The weaker sections suffer more. We need to follow-up on tried things used to improve immunity and vitality.
- Crop cycle should be changed depending on the availability of water as well as the climate. We need to be alert and know which grain has to be sown. The millet program by the Government of India is a very timely and good initiative. There can be other

programs so that we are prepared for the variations in climate, which may be well-anticipated or even unanticipated. So in both situations, preparation will serve both the purposes to face the likely adversities that we may encounter.

- All six colors and seven tastes must be included in diet. Locally grown food must be consumed. This will reduce the carbon footprint.
- All the countries worldwide are putting their efforts in finding ways to minimize the effects of climate change and greenhouse gas emissions for a better environment and living conditions on this planet.

Participants: Mr Paritosh Tyagi, Dr SK Tyagi, Dr Ravindra Kumar, Dr Sanjeev Agrawal, Dr Anil Kumar, Mr PK Jain, Mr Neeraj Tyagi, Mr Pradeep Khandelwal, Mr Rajeev Sharma, Dr S Sharma



Exercise Regimen is an Important Critical Factor in Diabetes Care

Several studies have indicated that taking part in a regular workout regime can improve blood glucose control, prevent or delay the onset of type 2 diabetes and counter insulin resistance by boosting the body's sensitivity to insulin. Additionally, regular physical activity positively affects blood pressure and cardiovascular health by lowering harmful low-density lipoprotein (LDL) cholesterol and triglycerides, raising healthy high-density lipoprotein (HDL) cholesterol, strengthening muscles and bones, reducing anxiety and improving your general well-being. All forms of exercise, such as aerobic, resistance or doing both in a structured workout regime, have been shown to lower glycated hemoglobin (HbA1c) values in people with diabetes. Resistance training and aerobic exercise both help to lower insulin resistance; however, combining the two types of exercise proved more beneficial than doing either one alone. In a recent meta-analysis, aerobic, resistance and combined exercise training were found to be associated with HbA1c reductions of 0.67% after 12 or more weeks of training. Similarly, another meta-analysis involving 10 studies revealed that resistance training reduced HbA1c by 0.48% and effectively improved the lower metabolic risk factors in diabetes individuals and improve overall metabolic health. On the other hand, several studies have shown that moderate to high levels of aerobic activity are significantly linked to decreased cardiovascular and total mortality risks. According to the most recent American Diabetes Association (ADA) recommendations, individual aerobic activity sessions should preferably last at least 30 minutes each day and be carried out 3 to 7 days a week. In individuals with type 2 diabetes, aerobic exercise boosts the number of mitochondria, insulin sensitivity, oxidative enzymes, blood vessel compliance and responsiveness, immune system activity, lung function and cardiac output. (Source: <https://health.economicstimes.indiatimes.com/news/industry/the-importance-of-a-workout-regime-to-check-diabetes/95337629>)

New Genus of Fungus Discovered by BHU Botanists to Treat Cancer

According to a report published in the journal *Phytotaxa*, a new genus of fungus has been discovered from the samples collected in Uttarakhand. The discovery is considered important because new antibiotics and other important mixtures (metabolites) derived or developed using the new fungi can be used to treat different types of cancer. The new genus of fungus, called "*Neokamalomyces Indicus*", was discovered by botanists from the Banaras Hindu University (BHU) and researchers from the Agharkar Research Institute (ARI), Pune, and the Kerala Forest Research Institute (KFRI), Kerala. Dr Raghendra Singh, Senior Assistant Professor at BHU, stated that the samples of leaves of the banyan tree (with yellow and brown spots) diseased by the fungus were collected from Uttarakhand during a survey in July 2019. (Source: <https://daijiworld.com/news/newsDisplay?newsID=1017119>)