Launch of Climate Change Youth Forum With Teacher's Day Celebration

4th September 2020





गुरुर्बह्या गुरुर्विष्णुः गुरुर्देवो महेश्वरः । गुरुः साक्षात् परं ब्रह्म तस्मै श्री गुरवे नमः ॥



Climate Change Research Institute

invite you all to join a Webinar on

COVID-19 and 3Es for Atmnirbhar Bharat

Meet the Panelists

Key Note Speakers



Prof. D. P. Agrawal Chairman GC, CCRI Former Chairman, UPSC



Prof. G. D. Sharma, Former Secretary UGC Ex-Director CEC, India



Dr. (Mrs) Malti Goel Chief Executive, CCRI Former Emeritus Scientist

Other Speakers



Mrs Maya Gupta, Director Principal, Universal Public School, Preet Vihar



Register here: https://forms.gle/RZPLZhZViBsXioaz5

Dr. Bhawana Awasthi, Chief Medical and Clinical Oncology, Indian Spinal Injuries Centre



Dr. Neha Tripathi, Assistant Professor, SPA

Climate Change Research Institute Climate Change Research Institute

LAUNCH OF CLIMATE CHANGE YOUTH FORUM

Virtual Workshop on

COVID-19 and Challenges of 3Es for Atmanirbhar Bharat with Teacher's Day Celebration

4th September 2020

CLIMATE CHANGE RESEARCH INSTITUTE

COVID-19 AND CHALLENGES OF 3ES FOR ATMANIRBHAR BHARAT

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Preface



On 4th September 2020, Climate Change Research Institute (CCRI) conducted a virtual workshop on "COVID-19 and Challenges of 3Es for *Atamnirbhar Bharat*" on the occasion of Teachers Day. Our organization has been actively working in the field of environment and climate with a mission to inform youth in schools and colleges about the environment, ecosystem changes and consequences of climate change through awareness and capacity building on topics of scientific & societal interest.

The Institute with the support from Government of India, industry and also on its own has held competitions for school students, inviting short essays & presentations or making Posters. In 2020, with the association and support from India International Centre three Awareness Campaigns were proposed. However, due to nationwide lockdown from March 25th, 2020 we had to change the plan; but have continued to connect with the society.

On the occasion of *World Earth Day*, we issued messages on April 25th 2020 and prepared short awareness videos for school teachers to take precautions about COVID-19. Engagements like recycling/reusing waste and in planting saplings during stay at home were incorporated. On the *World Environment day*, 5th June 2020 the CCRI organised video lectures on 'Post-COVID-19 and Future of Biodiversity', in collaboration with the India International Centre (IIC). This was hosted for one week on the IIC Website.

COVID-19 has posed many challenges in the way we live and the idea is to discuss the impact on 3Es; as Education, Environment and Economy of health for *Atmanirbhar Bharat*. Prime Minister Narendra Modi introduced it as India's COVID-19 pandemic related recovery package on 12thMay 2020, having its five pillars as; economy, infrastructure, technology-driven systems, vibrant demography and demand. *Atmnirbhar Bharat Abhiyan* (self-reliant India movement) has begun and aims to pursue policies that are efficient, competitive and resilient, and being self-sustaining and self-generating.

I am happy that the Webinar has received overwhelming response. Universal Public School is our joint partner. The programme began with the beautiful *sholaks* recited by the young students of Universal Public School with background music and divine note.

I present the workshop deliberations as below.

Dr. (Mrs.) Malti Goel Chief Executive and President Climate Change Research Institute

WELCOME ADDRESS

<u>Prof. D. P. Agrawal, Chairman Governing Council, CCRI and Former Chairman, UPSC.</u>

Prof. D.P. Agrawal, Chairman GC, CCRI extended warm welcome to all the teachers, students and participants on the auspicious Teacher Day. He said it is important for teachers to create continued awareness among students and parents about safety from corona virus and the Challenges of 3Es are being faced at the national level. He recalled contributions made by the great teachers across the country and their significant involvement in nation building.

What has changed due to corona virus in university education? Corona virus has created a fear psychosis amongst all. He further explained how school teachers can play a role by creating continued awareness amongst the students about corona virus/ COVID-19 and tell them if we change our lifestyle and willing to accept some discipline, we will be safe.

He quoted the UN data that about 250 million children aren't going to school and this impacts our objectivity related to sustainability. They have calculated the impacts, and the immediate findings is whatever the government has, it has to be used to fight out COVID-19 and creating conditions for patient caring in hospitals, for medicines etc. Across the globe the budget of education is reducing. Therefore a new model of education will be needed, where cost is reduced, but quality not compromised.



Welcome Address by Prof. D.P. Agrawal

Can online education be a substitute for face-to-face education? Prof. Agrawal said that during the lockdown, he has been reading and catching up with the online journals & articles and he

came across this question "online education being a substitute for face to face education". He noticed that the students are becoming quite well-versed with online education and it is working well for children and students who have become self-sufficient and looking themselves as self-learner. But the same model may not work at the primary level. It is difficult to grab the attention of kids as computer is a device in which they want to play games and explore in addition to what's being taught to them. He shared an incidence of a fifth standard girl who told him that she is not missing the class, but surely missing the laughter of her friends, running around the corridor in the school and doing things by hand or play with clay. She doesn't like the fact that she has to do the same thing in front of a computer.

Parents are currently under pressure that they have to supervise the children when they are being taught at home. He showed his concern on how because of pandemic, children are missing "not to study but to learn when you play" which is also mentioned in the New Education Policy, He quoted from the New Education Policy 2020 that teaching-learning of the subjects starts later, you have to make them play and do exercises. He suggested that parents should encourage their children during free time to take up some creative activities till the schools open. He requested the teachers and policymakers to not to pressurize the children up to 5th standard.

The second 'E' is for environment and it reminds us that despite the good reports that came during lockdown about environment, we tend to forget that the budgets of sustainable development have been laid off. He quoted that according the latest estimates, whatever is the budget for sustainable development, two times of that would be required. He said we need to accept this new 'normal' of frugalness, cutting your demands, needs and wants and try to innovate at the same time.

Third 'E' is economy; our Gross Domestic Product (GDP) growth has reduced by 26%. We may need three more years post COVID-19 to regain it. Prof. Agrawal said our dependence on agriculture would continue to grow. He also mentioned about the articles published on schools laying off teachers, which is making life difficult for the teachers. He pointed out "While internet is a place for education, while internet is a place for information dissemination, but 90% of internet of last four months have been dogmatic, have been filth and have been something one must not be exposed". In this context he suggested teachers to create a group, where right information is disseminated.

Prof. Agrawal complimented Dr. Malti Goel for conducting the webinar and creating greater awareness. He quoted "When there are difficulties, we develop capacity to fight it all". He suggested to all to develop capacity to fight COVID-19 and plan to live simple and frugal life and take a vow to not waste.

LAUNCH OF CLIMATE CHANGE YOUTH FORUM

<u>Introduction to the Theme by Dr. (Mrs) Malti Goel, President, Climate Change</u> Research Institute

- 1. Dr.(Mrs) Malti Goel began with the quote by Master Choa Kok Sui, "The Teacher provides Spiritual Energy! Just like Roots provide nutrients to flowers"
- 2. She thanked profusely Prof. D. P. Agrawal, Chairman, Governing Council for his constant guidance to the Climate Change Research institute. She extended warm welcome to all on the behalf of the 'Climate Change Youth Forum' at the Institute. In 2020, COVID-19 has not only taken us by surprise, but is unprecedented; has changed the way we live, we work, we study.
- 3. The virtual workshop of launch of Climate Change Youth Forum (CCYF) is being held in the honor of Teachers Day, which falls on 5th September to share post COVID-19 challenges of 3Es being faced by people of India and to create awareness for *Atmanirbhar Bharat* (Self Reliant India) at the national level. 3Es; Education, Environment, Economy are undergoing changes and experts will discuss ways to tackle them. It could be an opportunity as economy booster factor for health, environment and quality education, contributing to Sustainable Development Goals (SDGs) and moving toward *Atmanirbhar Bharat*. Each and every one of us should be taking lessons to sustain in difficult times. The forum is making its contribution by creating greater awareness among youth.
- 4. We have been organizing campaign mode experts' lecture series and workshops for youth for past few years. In a partnership with the Royal Society of Chemistry an Activity Based Learning Workshop in Chemistry especially for School Teachers on June 6-7, 2019 was organized, which was greatly appreciated.



5. Dr. Malti Goel then introduced Eminent Panellists and thanked them for joining the event. She launched "Climate Change Youth Forum" with the idea to have more interaction amongst youth about climate change through virtual platforms or direct participations.

Mrs. Maya Gupta, Director- Principal, Universal Public School (UPS), Preet Vihar. "LINKING COVID-19 WITH EDUCATION"

- 1. Mrs. Maya Gupta began with throwing light on how the education system in India has evolved since the ancient times and got transformed from traditional Gurukuls to Schools. Ashrams then provided total learning environment. In schools, students spend only 20-25% of the day and rest is at home. At present, the students are all the time at home and get connected to the teachers through internet with no socialization. Teaching, learning and other activities everything is now through digital platform. She recited the Shlok; "Knowledge imparts politeness, which in turn gives worthiness. From that worthiness one earns a living. That wealth leads to the part of virtue, which in turn gives happiness", meaning knowledge should be gained through minute by minute efforts, money should be earned utilising every resource, if you waste time how you can get the knowledge and if you waste the resource how you can accumulate the wealth.
- 2. During corona times there have been many challenges for School Education. The COVID-19 has changed the dynamics of schooling, but no year can be called as "zero learning year". COVID-19 has put a big responsibility in front of educational institutes, the educationalist, thinkers and intellectuals. All came together through a digital platform and then came up with online education solution. The online education has been a challenge for the schools, students, parents and teachers.
- 3. The first challenge came with the sudden announcement, schools were closed, examination almost over, results yet to be announced, promotions and re-test was put on halt. None of the schools had sound infrastructure and good internet connectivity, but all this couldn't stop. So finally, academic-teaching and learning classes started online. The challenge for students was studying without teachers, and experience physical activities through digital mode.
- 4. For parents responsibility has increased as they had to put extra efforts for children, especially for the primary and nursery class. Another challenge for them is to provide a complete infrastructure. Each household owes a mobile phone, but all may not have computer, laptop and proper connectivity. Parents need to be self-disciplined to ensure the same for the children. She mentioned about the concerns of emerging fears about health of children from more exposure to the screen and children watching movies, playing online games and chatting.
- 5. The biggest challenge was for the teachers, because they had to learn new technology to convert lectures to online teaching. They had to put more efforts to prepare PowerPoint presentations, worksheets and lesson plans, had to be more alert and conscious during online teaching. They had to also conduct online activities and celebrations, assessments and results too have to be done online. We must salute the teachers for their efforts.

ANNUAL STATUS OF EDUCATION REPORT (ASER) 2019 highlights from the surrural districts of India, only 16% of class 1 students can read and around 4_{Maya 64pta} even recognise the letters.

According to GROSS ENROLMENT RATIO (GER) report, only 26% of Indian students enrol for higher education. However, in USA this figure is 85%.

Hindustan Times Newspaper 28.8.2020 edition:



"UNICEF report says 24% households in India have internet, but connectivity is patchy across states"

At least one third of the world's schoolchildren, i.e. around 463 million, could not access remote learning since schools have been shut down because of coronavirus disease (Covid-19)

This is a serious situation for India where nearly 50% population is of less than 25 years of age.

The level of education is reducing due to the challenges in Online education, it needs to be overcome. Hope of any Nation lies in the Education of its Youth.

UNIVERSAL PUBLIC SCHOOL | A-BLOCK, PREET VIHAR, DELHI-92

- 6. She said our Universal Public School has addressed the challenge in a unique manner. Teachers are now recording the classes and uploading the videos. Parents have appreciated it. In this context, she quoted from Annual Status of Education 2019, which had reported that in some rural districts of India; only 16% of class 1 student can read. The UNICEF has reported that 24% households in India have internet, but connectivity is patchy across the States due to this. The level of education is reducing due to the challenges in online education and it needs to be overcome. In response to this she said the pandemic has provided an opportunity that we could face the challenges and do online teaching despite many difficulties.
- 7. We should not put down the spirits of the students. Mrs. Maya Gupta mentioned about the New Education Policy 2020 by quoting Dr. Ramesh Pokhriyal, HRD Minister. Our Prime Minister Narendra Modi has said "COVID-19 crisis should be turned into an opportunity to create an 'ATMANIRBHAR BHARAT'." Each calamity is an opportunity to think, to discover, to research and find new and better way to work. The combination of online and traditional classroom learning will continue, new opportunities will come.

GUEST LECTURE

Prof. G. D. Sharma, Former Secretary UGC and Ex-Director CEC

"CHALLENGES REACHING OUT TO STUDENTS DURING PANDEMIC AND POST PANDEMIC"

- 1. Prof. G. D. Sharma quoted *Mahatma Gandhi* and said that he believed basic education was integrated way of thinking for education, economy and environment. He linked 3Es through the process of psychomotor skills to be given to the students and by plantings trees and saplings for protecting environment; He shared personal experience as a student when activities to enhance psychomotor skills were pursued in schools. Prof. G.D. Sharma explained the New Education Policy 2020, in detail. There are structural changes and some of the highlights are;
 - (i) Emphasis on Continuing education
 - (ii) Integration of academics and experimental learning through vocational life coping skills,
 - (iii) Outcome based Evaluation, which would be outcome based results and
 - (iv) Language for teaching in mother tongue to give flexibility.
- 2. Outcome based learning and timely evaluation is very important. About the language he mentioned about a study conducted some time back in six different States of India on language as medium of teaching. It was noted that the States in which the children were initially taught in their mother tongue, then in regional language and then in English, they were the best performers.
- 3. Prof. G. D. Sharma gave suggestions on how to reach out the students in an imaginative manner during the corona era, to ensure that they have access to education and have social development as well. He cited the study carried out under the DST project in 1995 on the role of Coaching Classes for Medical and Engineering students. The students, who had successfully cleared the exams, said that the self-study was quite helpful to get success in the examination.
- 4. He emphasized on how important self-study is for students above 9th standards, especially in this corona era, when people are not able to interact with each other physically. He further added that students should focus on their academic courses and must be aware of high-end education beyond the courses, for example they should learn about our river systems, disaster management policies, environmental system in India all are very important. Students should develop innovative ways of learning like using both the medium; online and offline and in a small group of students.

HOW DO WE REACH OUT TO STUDENTS IN THE PANDEMIC TIME WHEN THEY ARE CONFINED TO HOME OR TO STUDY FROM HOME?

- · To reach out to students -
- Academic studies on line, off line -Mohalla Schools, Society (RWA arranged) Schools, village open air schools.
- Higher end education and social development- Use telephone, TV, Radio, films and open air public address system,

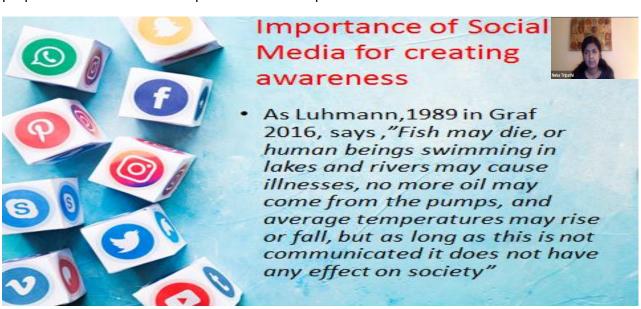
ZOOM

- 5. For high school children he outlined some useful resources for self-study like; Consortium of Education Communication (CEC) is providing innovative ways of doing things through video lectures on variety of subjects.
- 6. For middle school students in 5th to 8th standard, he suggested that they too should be more observant, get involved in sports and should be encouraged to connect with nature, flora and fauna. It is important that they should be made to express openly and given opportunity to let them talk and share with teachers and peer groups.
- 7. The new 'normal' mode of education could be mixed mode of education, digital material, applications, Study from Home (SFH) and be self-reliant. He suggested the key to **Atmanirbhar Bharat** is finding your area of interest and work for inter-dependence and creating a win-win situation, thinking and applying your ideas and thoughts, solving your own problems.

Dr. Neha Tripathi, Assistant Professor, SPA

"HOW ENVIRONMENT AWARENESS CHANGED AMONG YOUTH DURING PANDEMIC TIME"

- 1. Dr. Neha Tripathi described the environmental awareness among youth and said that corona pandemic is a biggest global health challenge of 21st century. It gave temporary positive impacts on Environment as energy consumption and carbon emissions reduced, even the oil prices went into negative. She quoted a CNN article which reported how Air Travel had dropped to 96%, which was the lowest in 75 years. The negative impact is also evident in term of increasing medical waste, as now we are using more of disposables.
- 2. Talking about environment and role of Social Media, she quoted from Lehmann that if a fish may die, or humans might start swimming, even if there's an increase in the temperature or whatever positive or negative is happening around us, until and unless it's communicated to people, there won't any action or reaction. Social media therefore has an important role by giving us information, but many of which is informative while other may be mis-informative, but still gets highlighted in public domain. We have to be careful about the quality of information. The youth is very much into social media and there is thin line between virtual and real world. A digital youth is the one who is completely engaged on the digital platform for all purpose. This research was reported before the pandemic.



3. Dr. Neha said that second point of discussion in a study conducted during April 2020 was how youth awareness got impacted by COVID-19. An online survey was administered to the young

adults in the age group of 18-29 through e-mail invitations. The participants were mainly undergraduates and graduates from a college in San Diego, California.

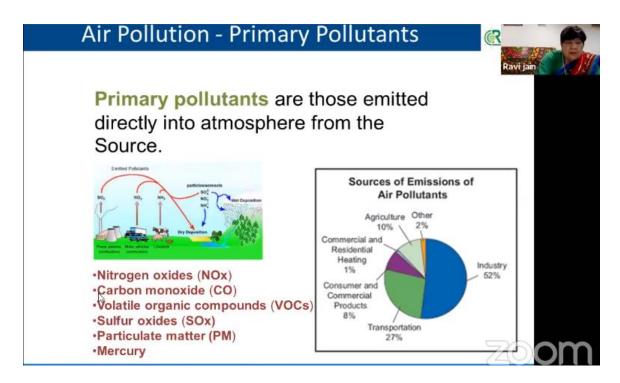
- 4. The first part of the question was, if social media platform helped them to improve their environmental awareness regarding the environmental issues and the second part was, if yes, then have they used social media to help create more awareness about it. And 57% agreed that social media platform helped them to improve their environmental awareness, while 30% agreed that they have forwarded the environmental cause helping in creating awareness.
- 5. Most important question was then asked, if they believe whether their sensitivity has increased for environmental issues and global crises like climate change and air pollution. It was great to listen to the responses that 74% had given positive response. Further, the survey had another question if your sensitivity has increased then in what way has it increased. Some responded that the earth is healing, while some said, there's a need to change our life style's while a significant number responded that they could actually feel the physical impact of global crises.
- 6. COVID-19 has highlighted beyond our comprehension as how fragile and interconnected, precious life is; and about the relationship between environment and people. The role of science is important. We should be guided by the science to avoid misguidance. In the end she quoted "A good education is one the most valuable tool to create sustainable tomorrow" and so Barbara Woods has said that "we have only one earth and one life".

Dr. (Mrs) Malti Goel, President CCRI and Former Senior Adviser DST.

"CHALLENGES IN NATURE'S HEALING: CLIMATE CHANGE AND COVID-19"

- 1. Dr. Malti Goel began by discussing linkages between climate change, COVID-19 and air pollution. The information about corona virus COVID-19 rapid spread and its social impacts was shared. Coronavirus has been affecting each and every country and no one is spared, rich or poor. The COVID-19 has thrown greatest challenge to our economy, education and environment. We have learnt how the challenges are being faced in Education. Key issues in school education are discussed. Besides Teachers and parents, students are also facing the challenge by being at home and missing the school environment, which is the first lesson in socialising.
- 2. Talking about environment, the big question is how you relate to air pollution which is the greatest threat to human health and wellbeing? Air pollution in cities is leading to millions of deaths every year. Not only cities but rural areas also suffer from air pollution, though from different sources. The guidelines now also appear for air quality in rural areas.
- 3. Dr. Malti Goel explained the composition of atmosphere and role of all pollutants for the benefit of students. The atmosphere vertically extends up to few hundreds or thousands of kilometres and comprises of Troposphere, Stratosphere, Mesosphere, Thermosphere and Exosphere. Air pollution is not a local phenomenon but a global phenomenon. Air in our atmosphere comprises of 78% Nitrogen and 21% Oxygen. The remaining 1% has different gases, which are very small in quantity and have low share by volume, but their impact is quite amplified. All development activities give rise to air pollution and it can be understood in different categories.
- 4. Primary Pollutants are those directly emitted from the source such as; NOx, PM_{10} , $PM_{2.5}$, SOx, VOCs, CO etc. Different sources of pollution are; agriculture, transportation, industry, construction and others. Particulate matter is PM_{10} (10 μ diameter), $PM_{2.5}$ (2.5 μ diameter) and now 1 μ diameter particles are also being detected in the atmosphere with the advent of nanotechnology. These affect not only lungs but also go into heart and cause serious impacts.
- 5. Secondary pollutants are those formed by chemical reactions taking place between primary pollutants with other chemicals present in the atmosphere in the presence of sunlight. Secondary pollutants give rise to ozone, smog and are as harmful as primary pollutants or more.

6. Third category is *Criteria Pollutants*. Criteria pollutants are those air pollutants that are regulated because of their health impacts. Air Quality Index (AQI) at a place is health impact parameter. Criteria pollutants for India are PM₁₀, PM_{2.5}, SO₂, NO₂, CO, O₃, NH₃. There are a few studies showing the impact of COVID-19 lockdown on Criteria Pollutants. It was seen that integrated impact suggests overall improvements in air quality. She quoted from a study carried out over Delhi which reported decrease in all criteria pollutants, except ozone.



- 7. There is another category of pollutants as *Greenhouse gases* (GHG_S) and the six main GHG_S are Nitrous Oxide, Methane, Carbon Dioxide, CFCs (HCFCs), SF₆ and PFCs. These gases stay in the atmosphere for a long time without reacting chemically. The Greenhouse gases are also called long-lived gases. Some of these are natural while others are both natural and manmade. Anthropogenic CO2 is being added from fossil fuel consumption. New entrants like CFCs, SF6 and PFCs as manmade gases. Solar heat reflected from the earth is trapped into atmosphere as a result of the blanket of greenhouse gases. These gases give rise to global warming.
- 8. Our earth is a dynamic system, comprising of Atmosphere, Hydrosphere, Lithosphere and Biosphere. Due to constant interactions among these, global warming results in climate change. Climate change has become the greatest threat of current century impacting adversely on the life on earth. Is there a relationship between COVID-19 and Climate Change; is a topic of many scientific studies. There is a highly complex relationship. Climate change impacts are; rising sea levels, extreme weather calamities, meteorological phenomena, and fresh water short supply, shrinking productivity and disease spread etc. Impact of meteorological parameters on the

transmission, variations in pollutants and impact on COVID-19 related deaths are other investigations, being carried out at present.

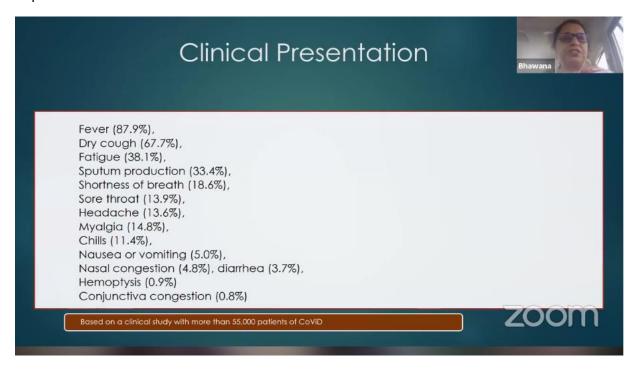
- 9. As September 16, 2020 is approaching, we are reminded of World Ozone Day. Ozone molecule, which is three atoms of oxygen, exits in the Stratosphere and also in the Troposphere. Ozone is a secondary pollutant in the Troposphere and impacts human health and crop productivity. But same ozone in the Stratosphere occurs naturally, forms a thin layer and protect the earth from harmful ultraviolet solar radiation. The 90% of ozone is in Stratosphere. The ozone layer has however been destroyed by the chemicals of plastic era. The pollutants like CFCs, HCFC's and many others, also known as ozone depleting substances (ODS), break ozone molecules, thereby forming ozone hole in the Stratosphere. This could lead to adverse impact like skin cancers due to harmful solar radiation reaching the earth. An International Treaty on Montreal Protocol came into force in 1987 to prohibit use of ODS. From the collaborative actions taken by all countries the treaty has completed 32 years in 2019. It was noted that ozone layer in the stratosphere is healing.
- 10. Different categories of air pollutants are giving rise to various health concerns, global warming and ozone depletion. While addressing these challenges, how we can contribute for Atmanirbhar Bharat. In climate change and atmospheric pollution we are dealing with a number of uncertainties. Here are a few suggestions where you can take action and help minimising the climate change impacts. If you look around you and observe, you will find that road side trees are growing fast as air quality improved and have gained height by up to 2-5% in past 5 months. I noted that tree leaves on roadside and in parks are greener unlike the previous years; when they used to be laden with dust or PM_{10} . Trees as they grow absorb more CO_2 and act as carbon sinks. In this manner they could help to mitigate impacts of climate change. But as our mobility regains we have to ensure that air remains clean. Our excess consumption of energy as well materials has given rise to increasing pollution, we must learn to conserve both.
- 11. The important take away from COVID-19 is that by keeping our automobile mobility to zero during lockdown, the air became clean and blue sky was observed, a rare scene in Delhi. We should minimize automobiles use to save fuel, save energy by using more efficient household appliances and reduce consumption of material resources. We should be using Solar Energy. The waste generated from fossil fuel combustion should be recycled, reused and reduced. Planting of saplings and saving water are other sustaining activities. Long-term solutions are needed for a sustainable future.

Earth from the surface of Moon looks beautiful and we should preserve the Mother Earth; as it is said that the earth is what we all have in common.

<u>Dr. Bhawana Awasthi, Chief Medical & Clinical Oncology, Indian Spinal Injuries</u> <u>Centre</u>

"HOW TO RECOVER FROM COVID-19: ECONOMIC PACKAGES FROM HOSPITALS"

- 1. Dr. Bhawana Awasthi took her session in the moving car due to her busy schedule being a medical doctor. She shared many challenges faced by the doctors during corona times. Elaborating on the risk factors responsible for spread of the virus, she gave a detailed introduction on COVID-19 transmission; like close contacts of COVID-19 positive patients, large gatherings within close environment, occupational-health care workers etc. She said something which was a way of life until few months ago, has now become a risk factor.
- 2. She explained clinical symptoms which weren't easy to catch, and easy to identify like myalgia, diarrhoea or abdominal pain also being the corona symptoms. It took some time to learn about the disease, tests and treatment. She said "it's equally important to identify the disease as it is to prevent and to manage the disease". She threw light on the diagnostic approaches like different assays namely; NAAT (Nucleic Acid Application Tests), Antibody based immunoassay, anybody based immunoassay, clinical tests and doctors are still learning the different approaches to diagnose COVID-19. With the rising number of COVID-19 cases, even in cumulative cases; it clearly shows our country has been badly impacted by the pandemic. So, we need to be educated about our health and healthcare and it has now become more important than before.



Clinical Symptoms of COVID 19

- 3. There has been a huge economic impact. Health packages for people in the society and health care workers needed to be introduced. Various other economic risks are also attached to COVID-19. The people who are dependent on livelihood are massively hit. She highlighted the migrant workers turmoil in moving from one place to other.
- 4. Due to pandemic not only the government healthcare industry is overwhelmed but private healthcare industry with small nursing homes, dental clinics medium and small sized private hospitals are badly impacted. All of them generate employment and contribute to healthcare but due to COVID-19, some private healthcare institutes were shut down, where in some COVID-19 treatments were happening. As a result non-COVID-19 patients are being deprived of regular health care and the economic impact to healthcare facility is huge.
- 5. She highlighted challenges faced by the healthcare workers having lot of stress, not able to function the way they used to be functioning and they can't work from home as they have to be physically present at the hospitals. There was very less interaction with each other even at the hospital and with patients.
- 6. The multi-pronged approach introduced by government is; lockdown, creating containment zones, ramping up the healthcare infrastructure and supply chain, testing facilities and creating awareness. Several health packages were announced for the hospitals for health care of COVID-19 patients. She further explained how healthcare infrastructure has been enhanced like; addition of new beds, availability of PPE and masks, requisitioning portions of private hospitals and how telemedicine has emerged and many more. These have economic implications on health care system as well.
- 7. The social wellbeing is directly linked to health wellbeing of the people in the country. She ended up her session with a quote "An agile healthcare system and a healthy population are key to the economic and social wellbeing of a country. The absence of that can be psychologically debilitating and can sap the confidence of the citizen and the nations"

Q & A and Concluding

This was followed by a Question & Answers coordinated by Ms Komal Bora. Some of the reactions on the Workshop presentations are noted as below.

Mrs. Maya Gupta made the observations as below.

- "To all the teachers thank you everyone for these aspiring words, these words always motivate me to present and share my views today and also in future. We are celebrating teacher's day tomorrow, my wishes for all of you for a great and happy teacher's day for all. Thanks once again."
- "I want to express my heartiest thanks to Mrs Malti Goel and all the members of Climate Change Research Institute. This is a great session for everyone to express their views and get connected everyone in this pandemic. I, especially thank Dr. Malti Goel for extending this opportunity to us to learn many new things and share our views. Our entire UPS family is appreciating your efforts to bring everyone together on this occasion of teacher's day and motivating all and creating awareness."

Positive messages kept coming in the chat boxes, appreciating speakers for their informative presentations are as below.

- "The new education policy was a really great thought with a more involvement of practical implementations in daily life, encouraging more work life experience, confidence self-dependence. If the policy is implemented indeed, then it will be a great boon to the upcoming students"
- Figure 1. Thank you ma'am for enlightening us with such valuable information. It was great experience for us to attend such a wonderful webinar which allowed us to learn many things related to environment, economy and education".
- "Thank you ma'am for such wonderful information and we are highly motivated."
- Figure 1.2 "Thank you sir and ma'am for enlightening us with such valuable information, and spreading awareness about the environment. This workshop helped us a lot to understand our environment and nature in a better way."

In a formal vote of thanks she thanked all distinguished speakers Prof. D. P. Agrawal, Dr. G. D. Sharma, Mrs. Maya Gupta, Dr. (Mrs) Malti Goel, Dr. Bhawana Awasthi and Dr. Neha Tripathi for sharing their insights and enlightening the attendees about the 3Es challenges being faced. We need to be Vocal for Local. Ms Bora requested all participants to fill up a feedback form, so that we can come up with new activities.

Concluding Remarks

On a concluding note, Dr. (Mrs) Malti Goel said during corona breakdown we are happy that this launch event is held as part of Teachers' Day celebration and we got an opportunity to relate, but missed out face to face interaction. We have learned important lessons by hosting this online workshop, that there can be some benefits too from a meeting online. More people from schools are able to participate; we got greater gender participation, who found it convenient to join with improved online tools and could ensure better networking. The link to webinar is https://youtu.be/pFqUamigYKc

She expressed gratitude to Prof. D. P. Agrawal for his very inspiring welcome remarks; eminent speakers to share their wisdom and their valuable time. We are highly obliged to Prof G. D. Sharma for his insightful keynote address and Mrs. Maya Gupta for the support. She conveyed gratefulness to Prof. S. C. Tyagi, Executive Director, IDC Foundation for his association and involvement at a very short notice.

The CCFY at CCRI has taken this step as their contribution to create awareness about COVID-19 and *Atmanirbhar Bharat*. She thanked all the participants' for being with us viz. teachers, students, members of EC; and the CCRI staff & volunteers for a team work.

Stay Safe, Stay well!

Appendices

Appendix – 1: PRESENTATIONS

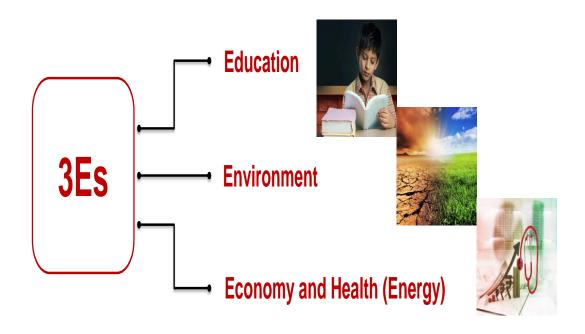
Presentation by Mrs. Maya Gupta

WEBINAR ON COVID-19 And 3Es FOR ATMNIRBHAR BHARAT

Organized by: The Climate Change Research Institute (CCRI)

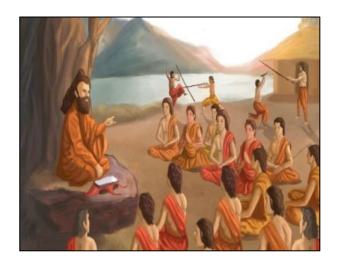
Date: Friday, 4th September,2020.

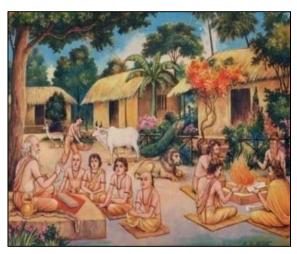
Mrs.. Maya Gupta



HOW EDUCATION TRANSFORMED OVER TIME

In ancient times, total living, learning and working was in Ashram only.





Guru - living God on Earth.





Then, Regular School Education: 25% to 30% time was spent in School and rest at home.

During Corona virus students are all the time at home

- Everything transformed from physical and face to face learning to Online mode.
- ❖ No Socialization.
- Teaching, learning and other physical activities everything is now through digital platform.







EDUCATION IN THE TIME OF COVID-19

A real challenge

With the world going in to a stand still and lockdown being imposed. Educational Institute all over the world have also been shut.

- Educationists
- Thinkers
- Intellectuals

A big responsibility

At government and private level, they thought deeply about this current problem and organized debates, conferences and discussions.

Online Education A BIG challenge for

- School
- Students
- Parents
- Teachers

CHALLENGE FOR SCHOOL

Finally, academic- teaching & learning classes started online.
these hindrances could not stop as this is the loss of student academic learning.
All the schools have no advance infrastructure and sound Internet connectivity. But
find out solution for the problem.
Then management started thinking, planning, meeting with teachers. Search ways to
everything was on hold, now what next
Exams were almost over, result yet to be announced. Students promotion, retest
With sudden announcement schools were closed for uncertain period.

CHALLENGE FOR STUDENTS

- **Study without teacher's physical interaction** as teachers are only available online.
- Daily schedule is disturbed.
- Confined to home with limited area, limited activity and limited people.
- Not much physical interaction and body movement at home.
- ❖ Waste time chatting with friends, no more concentration.
- Limited interaction and no social exposure.
- No outdoor play and sports activity, yoga and meditation. Not attentive when organized online by school.

CHALLENGE FOR PARENTS

- Need to *put in extra efforts*: not as relaxed as earlier as teaching and learning from home.
- ❖ Parents need to be *more involved* and make their ward sit during the teaching hours in front of the computer.
- ❖ *Difficult to provide infrastructure* with internet connectivity.
- ❖ The daily routine life is not fixed so need to be *self discipline* and ensure the same for children.
- **t** Emerging *fear of health* as more strain on eyes and less physical movement.
- Concern about more exposure to screen as children are watching more movies, playing online/mobile games and chatting with friends.

CHALLENGE FOR TEACHERS

- Learn New Technology.
- ❖ Prepare *PPT*, assignments, worksheets and lesson plans for online Teaching.
- Need to be *more alert and conscious* during online teaching.
- Conduct online activities: dance, music, art etc.
- Conduct online celebration: Grandparents day, Earth day, Rakshabandhan, Janmashtami, Independence day etc.
- All appreciations and motivation on online platform as no physical interaction with the students.
- Planning online Sports activities: Judo, yoga, meditation etc. and be more vigilant on the health aspect of the children.

ONLINE ASSESSMENT AND RESULT

- Now, online classes are functioning on various video conferencing platform.
- A lesson is recorded on audio, video format then that is uploaded on public platform for students accessibility.
- Periodic Test are also conducted online.
- PTM are on online mode with individual login and logout assigned to each parent separately.
- With all this joint efforts by School and teachers:
- Appreciation and favorable comments are received from parents.





Parent's Feedback

First and foremost, I am delighted to say that the teaching methodology of all teachers is impeccable and exquisite, especially those who are teaching main subjects (Maths, English, ENS and Hindi). Secondly, the teachers are always ready to listen to the concerns raised by parents, which is very impressive and commendable. Lastly, I am further pleased to announce that my daughter is now a student of the Universal Public School, and simulaneously hope that she will be equipped with requisite knowledge and skills, which will help her to reach the zenith of success.

With Best Regards, Naresh Dhaundiyal & Shilpa Dhaundiyal C/o Tejaswini Dhaundiyal Class: 10 Roll No: 37

NON ACADEMIC AND HEALTH RELATED ACTIVITIES ALSO CONDUCTED ONLINE

ANNUAL STATUS OF EDUCATION REPORT (ASER) 2019 highlights from the survey of 26 rural districts of India, only 16% of class 1 students can read and around 40% cannot even recognise the letters.

According to GROSS ENROLMENT RATIO (GER) report, only 26% of Indian students enrol for higher education. However, in USA this figure is 85%.

Hindustan Times Newspaper 28.8.2020 edition:

"UNICEF report says 24% households in India have internet, but connectivity is patchy across states"

At least one third of the world's schoolchildren, i.e. around 463 million, could not access remote learning since schools have been shut down because of corona virus disease (Covid-19)

This is a serious situation for India where nearly 50% population is of less than 25 years of age.

The level of education is reducing due to the challenges in online education, it needs to be overcome. *Hope of any Nation lies in the Education of its Youth*.

Dr. Ramesh Pokhriyal (Nishank), Minister of Education said, I quote...

सरकार भारत में इ-लर्निंग के भविष्य को मजबूत करने के लिए और अधिक पर्यास कर रही है| ताकि इसे छात्रों व शिक्षकों के लिए अधिक से अधिक प्रभावशाली और रचनात्मक बनाया जा सके|"

New Education policy 2020 is also focusing on online teaching methodology.

- For teachers: Diksha an online portal is developed for learning, skill development and latest updates.
- For students: emphasis is laid on 'no heavy books' and e-books can now be downloaded from online portal or QR code.

At least, this online teaching-learning in not going to be over. It is an on going process with techno based fast learning and will continue till March 2021.

Along with the advancement in other sectors, advancement in Education is also essential.

The COVID-19 pandemic has forced institutes and universities around the world to follow an innovative approach. All meetings, discussions, career counseling is going on through webinar.

IIT Bombay also concludes virtual convocation with e-avatars of students receiving certificate

The Indian Institute of Technology (IIT) Bombay held its annual convocation ceremony using virtual reality (VR) technology.

Our Prime Minister said "COVID-19 crisis should be turned into an opportunity to create an 'ATMANIRBHAR BHARAT'."

Each calamity is an opportunity to think, to discover, to research and find new and better way to work.

Big criticism has come with regard to the health of the students due to more screen exposure. But, even then online teaching learning is fast with better techniques than regular classroom teaching.

So, we should accept and welcome it......

Special Thanks To

Dr. (Mrs.) MALTI GOEL

And

Climate Change Research Institute

MAYA GUPTA, Dir. Principal
UNIVERSAL PUBLIC SCHOOL,
A- Block, Preet Vihar, Delhi- 92

Presentation by Prof G. D. Sharma

IMPACT COVID-19 3ES AND ATMANIRBHARTA

EDUCATION, ECONOMY AND ENVIRONMENT ALL THE THREE ARE AFFECTED BY THE PANDEMIC



Dr. G. D. Sharma

Impact of Lockdown

- Conventional education system has ceased owing to lockdown to prevent the spread of infection
- Economy has come to grinding halt for the same reason
- Environment has been badly impacted even pre COVID -19 emergence by unchecked use of natural resources and interfering with nature for development projects – Heavy rains, floods, cyclones during pandemic
- The question is how do we go about education, economy and environment to became
 Atmnirbhar in and post COVID-19

Let us take Education first

- National Policy on Education, 2020 has lot of new things for school and higher education.
- First is structural change in terms 3+3+2+4 =12 +3+ Grduation+1 (4) Graduation with Honours+1 Post Graduation and Research
- Second is Integration -Academic + experiential learning through vocational and life coping skills
- Third is Evaluation Outcome based evaluation covering all aspects -360 degree
- Fourth is Language Mother tongue, Regional language and other scheduled languages

For student 9-12 k

- Academic class room on line, off line courses, allow them to learn on their own Self study
- Higher End Education- Share with them what is river systems of India, how floods are caused? What is disaster management system? How do we avoid damage to environment? And so on.
- Share With them- Epic Kedus- in Science, Arts, Architecture, Warriors and Heats,
 Women Scientist, Turning Point- a science question answer series developed by
 professor Yaspal and use NCERT and CEC video contents.

Students 5-8 K

- Academic Academic class room- on line off line courses, allow them to learn on their own - Self study
- Share with them nature fauna and flora and other natural things like mountain,
 glacier and so on
- · Local sports and games
- Make them observe, understand and write their observation and feelings of visuals and let them share with teachers and peer group
- Encourage them to be creative- flower arrangements, paper -origami, painting and expression in writing.
- It is important to make them express openly and frankly give opportunity to them to talk and share with teachers and peer groups

New Normal

- Future model of education could be mixed mode of education.
- Digital/Print material to take care of information and stored knowledge with some application the SFH
- Face to Face for discussion, problem solving, application of knowledge, laboratory experiments and so on.
- Time for more discussion, debate application and play and games
- Discuss how do we ourselves self reliant to practice self help in day to activities and learning and help other to become self reliant or become inter-dependent.

They Keys to Atmanirbharta

- Find out your areas of dependence and work for independence or work for inter –dependence- that is to say mutual benefit or win - win situation for all.
- Think and Apply your ideas and thoughts and avoid copying others to solve your problems as the problems and solutions may be different from others.

Thanks

Welcome your questions.

Dr. GD Sharma

Presentation by Dr. Mrs. Neha Tripathi

How Awareness among youth has increased about Environment during Pandemic Times?

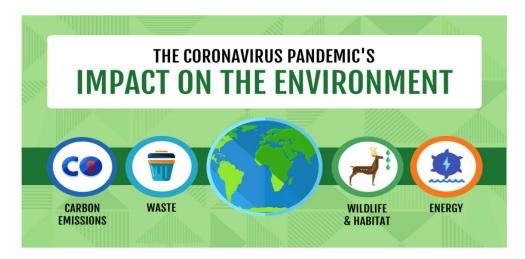
Neha Tripathi
4 September 2020
COVID-19 and 3Es for Atmnirbhar Bharat BY CCRI





Post COVID -19

- Only in a period of few months, the world drastically changed this year.
- On 13 March 2020, COVID-19 was declared as the global pandemic
- It is the biggest global health challenge in the twenty-first century.
- In response, many countries implemented lockdowns to slow the spread of the virus.
- Disruptions have led to new trends and unknown orders in the conventional world.



mage by Bronwyn Kienapple, April 14 202

Due to lockdown

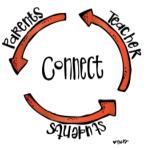
- The industrial activities shut down, work from home happened.
- Road and air transport came to halt. According to CNN, 2019 the air travelled dropped by 96% lowest in 75 years.
- Lower energy and oil demand.
- Wildlife and Habitat thrived due to less human interaction.
- Increased disposable waste generation.

How does corona virus affect young people's psyches?

This COVID-19 crisis will be one of the formative experiences of most young people's lives

It is happening at a time when **they going through pivotal life changes** and learning how **to form healthy relationships**.

Teachers and parents are also impacted.



- According to Adolfo Mora, 2014 new digital youth is intensely engaged with digital technologies for entertainment, socializing, learning, participating, creating, and storytelling.
- Use technology-based ecosystem in order to advance their protests, causes, and solutions, from virtual into real-life situations.
- Social Media: Usage and Impact Chapter 12: Social media and youth activism
- Wilson 2006, says for the youth," the online and offline 'realities' have become intrinsically intertwined"
- Virtual world is as real as offline relationships and experiences



How World handle Corona Virus

- Can the pandemic reiterate the importance of environment for the Generation?
- Greta Thurnburg, teen climate activist underscores "The coronavirus pandemic proves the world can "act with necessary force" when faced with a global emergency.
- Social Media: Usage and Impact Chapter 12: Social media and youth activism
- Wilson 2006, says for the youth," the online and offline 'realities' have become intrinsically intertwined"
- Virtual world is as real as offline relationships and experiences.

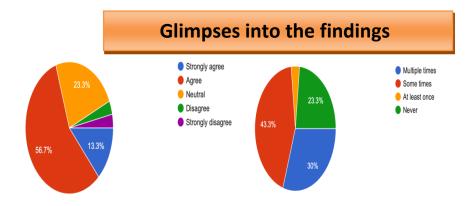
Two points of discussions

- 1. What has been the role of social media in information dissemination?
- 2. And has the information on environmental impact of the corona virus pandemic increased the youth's sensitivity to the environment?

Online Survey

- An online survey was administered to young adults (ages 18-29) through an email invitation to participate through convenience sampling method
- Respondents participated in this study were undergraduate and graduate students from the San Diego Miramar and Mesa College.

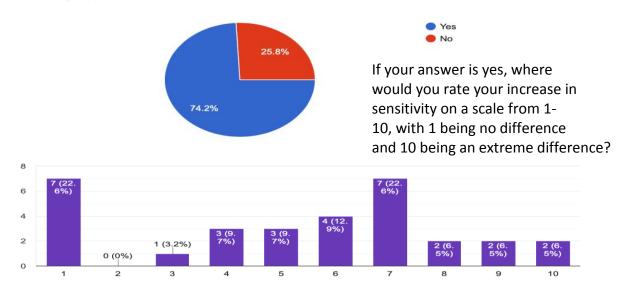




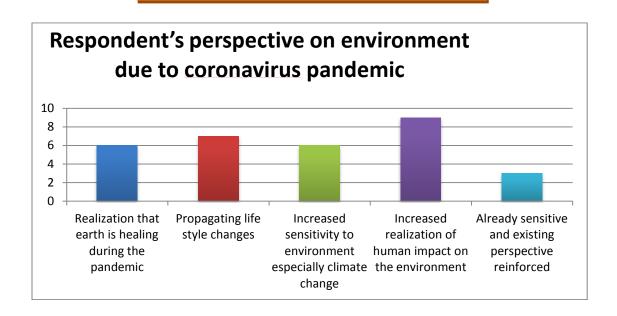
- 56.7% respondents agreed that their environmental awareness has increased due to social media platforms like YouTube, Facebook, blogs, etc.
- On being asked, if the respondents have used online platforms (e.g., YouTube, Facebook, Wikipedia) to raise awareness about environmental issues about a cause important to them, 30% reported they have multiple times, 43.3% stated that they have sometimes, followed by 23.8% stating they have never made the effort.

Do you believe that the Covid-19 pandemic has increased your sensitivity to environmental issues, especially global crises such as climate change and air pollution?

31 responses



Glimpses into the findings



Corona virus has highlighted beyond our comprehension of how fragile, interconnected and precious life is.

One of the things that we can learn from the pandemic's effects on the environment is that we CAN actually have an impact if there were a global consensus and effort to do so.

Take away from the Covid19 pandemic

- We all have a role to play
- · Use science to guide our way forward
- Keep learning for a better tomorrow

Right now the children are being most deprived of their school education, due to nationwide closures

A good education is one of the most valuable tools to create a sustainable tomorrow!

Thank you

Presentation by Dr. Mrs. Malti Goel

COVID-19 and Challenges of 3Es for Atmanirbhar Bharat, 4th September 2020



Challenges in Nature's Healing: Climate Change and COVID-19



Dr. (Mrs) Malti Goel
President
Climate Change Research Institute

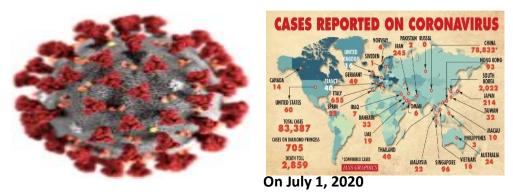
Science & technology solutions for sustainable future

COVID-19 and its Global Spread

Corona viruses are a large family of viruses which may cause illness in animals or humans. In humans, several corona viruses are known to cause respiratory infections ranging from the common cold to more severe diseases.

COVID-19 is the infectious Corona Virus Disease, a zoonotic disease caused by the new corona virus SARS-Cov2, which was never exposed to humans before 2019.

Covid-19 was declared as Pandemic on 11th March 2020, has impacted 216 countries across the world in a short period of five months.



Our Atmosphere

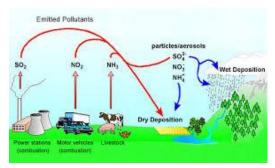
Exosphere Thermosphere Mesosphere Stratosphere Troposphere John

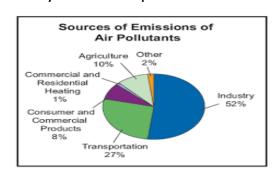
Composition of the Atmosphere

Permanent Gases of the Atmosphere			
Constituent	Percent by Volume	Concentration in Parts Per Million (PPM)	
Nitrogen (N ₂)	78.084	780,840.0	
Oxygen (O ₂)	20.946	209,460.0	
Argon (Ar)	0.934	9,340.0	
Carbon dioxide (CO ₂)	0.036	360.0	
Neon (Ne)	0.00182	18.2	
Helium (He)	0.000524	5.24	
Krypton (Kr)	0.000114	1.14	
Hydrogen (H _o)	0.00005	0.5	

Air Pollution - Primary Pollutants

Primary pollutants are those emitted directly into atmosphere from the Source.



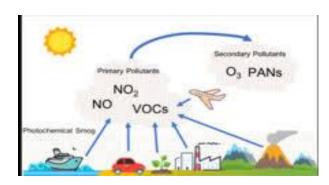


- Nitrogen oxides (NOx)
- Carbon monoxide (CO)
- Volatile organic compounds (VOCs)
- Sulfur oxides (SOx)
- Particulate matter (PM)
- Mercury

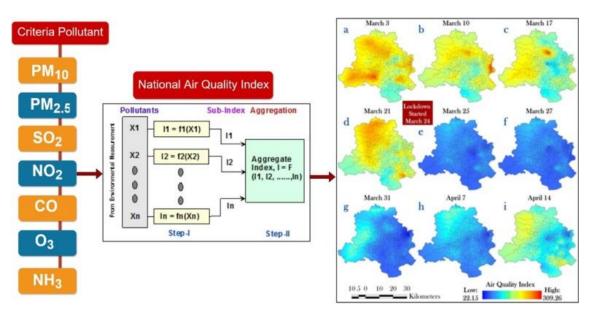
Secondary Pollutants

Secondary pollutants are formed in the atmosphere by reaction of primary pollutants with other chemicals present in the atmosphere in presence of sunlight.

- Ozone (O3)
- Sulfuric acid
- Nitric acid (acid rain)
- Nitrogen dioxide (NO2)
- Per-oxyAcyl nitrates (PANs)



Criteria Pollutants Outlook in Delhi Post Lockdown



Source-Susanta Mahato, Swades Pal, Krishna Gopal Ghosh in Science of "The Total Environment, 15August 2020"

What are Criteria Pollutants?

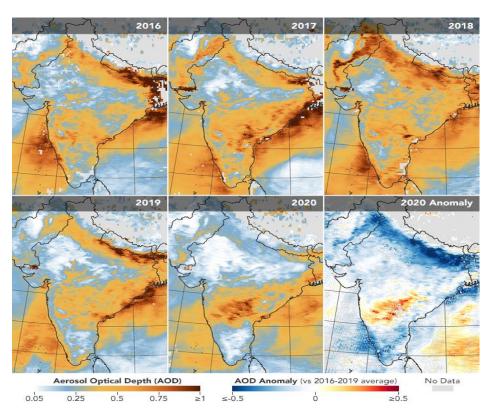
Criteria air pollutants describe air pollutants that have been regulated and are used as indicators of air quality. They may vary from country to country

- Carbon monoxide (co)
- Nitrogen Dioxide (NO2)
- Surface Ozone (O3)
- PM 2.5
- PM 10
- Sulfur dioxide (SO2)

Corona Virus and Environment

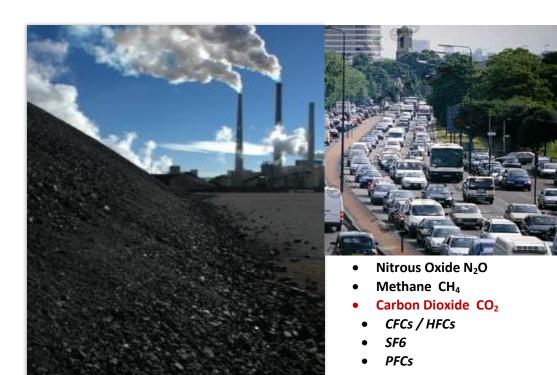


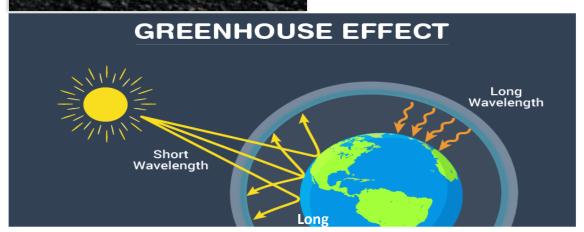
View of Hills from Punjab (TOI)



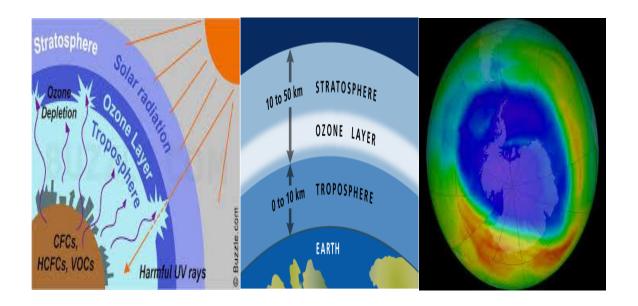
Aerosol Optical Depth Study over India as reported

Greenhouse Gases and Global Warming





Ozone in the Stratosphere



International Montreal Protocol Treaty

- Montreal Protocol was introduced in 1987 prohibiting use of CFCs and enforced on 16th September 1988.
- Deadlines were given to all signatories to gradually phase out CFCs use by 2010.
- New chemicals developed as refrigerants and the concentration of the CFCs has fallen
 by 14 percent since 2000.
- The Treaty completed 32 years in 2019 and it was noted that ozone layer in the Stratosphere is healing.

Ozone in the Troposphere is a Secondary Pollution

Earth is Dynamic System



Climate Change Impacts



It is time to act decisively. My message to governments is clear: tax pollution, end fossil fuel subsidies; and stop building new coal plants. We need a green economy not a grey economy.

- UN Secretary General

- Rising Sea Level
- Extreme Weather Calamities
- Meteorological Phenomena
- Fresh Water in Short Supply
- Shrinking Productivity
- Disease Spread



How can you fight Climate Change?

- Save Energy
- Save Resources such as Transport Fuel
- Use Solar Energy
- Use more Energy Efficient Devices to Save Fuel
- Recycle, Reuse and Reduce
- Save Water
- Avoid Unsustainable Land use
- Plant More Trees to Create CO₂ Sinks
- Avoid Loss of Biodiversity through Extinction of various wildlife species
- Protect Oceans from Plastic Waste



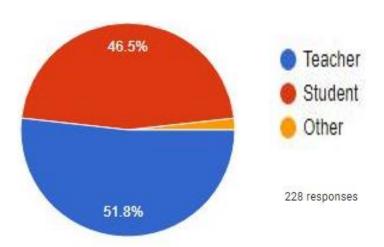




Appendix - 2

Participation and Feedback

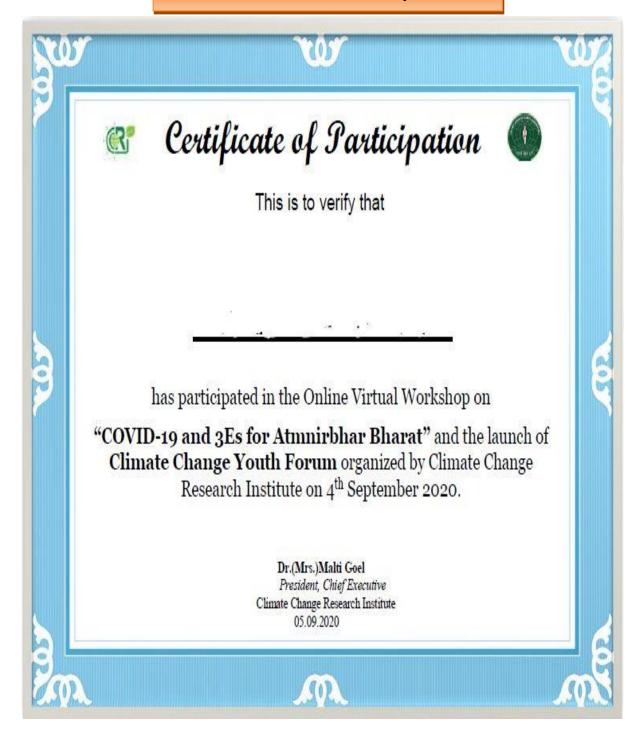
Registrations



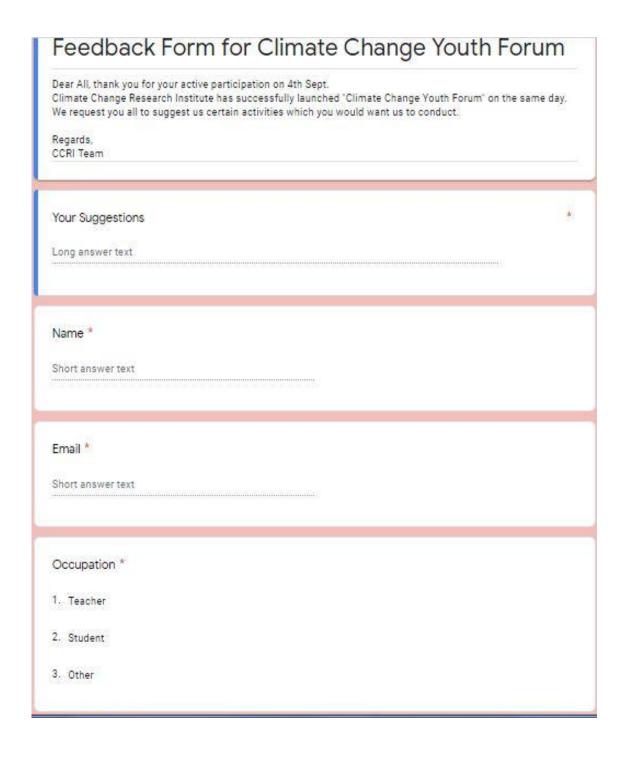
Number of Registrations

■ Males ■ Females

Certificate to the Participatints



Feedback Form



Feedback and Responses

<u>S. No.</u>	<u>Name</u>	Name of School	Suggestion
1	Ms. Parisha Mathur Teacher	Hillwoods Academy Delhi	Must keep conducting such webinars
2	Ms. Parul Saxena Teacher	GD. Goenka Public School, Dwarka, Delhi- 75	Details of Green chemistry
3	Ms. Arti Bhatia Teacher	Universal Public School	Trees are planted in number but after care of the plants is not done, which are planted on the roadside. That hurts. As plantation is one of the most important solutions to climate change. Solar lights, solar fans, if existing then should be available for common people,
4	Ms. Gita Sharma Teacher	-DO-	I personally like that we should be provided with such informative session in near future.
5	Ms. Parul Saxena Teacher	GD. Goenka Public School, Dwarka	Should encourage housewives so it will be automatically be there in kids.
6	Ms. Deepika Behal Teacher	Universal Public School	Very interesting and informative.
7	Ms. Kritika Dhiman Teacher	-DO-	Very nice meeting
8	Ms. Anu Khosla Teacher	-DO-	Time management
9	Mr. Khagesh Chandra Joshi	-DO-	We should grow more and more trees

	Teacher		
10	Ms. Arzoo Aggarwal Student	-DO-	The webinar was very good and appreciable too .The different people share their ideas and said great words
11	Ms. Mrinalini Student	-DO-	Make session little more attractive
12	Ms. Aarushi Gupta Student	-DO-	I thank all the members of the CCRI team to conduct such an interesting and informative session. We really gained a lot of knowledge from this session. I would suggest some quizzes, webinars, workshops and many more activities about social topics like COVID-19 etc. to be held. It will highly be informative for other students also.

Appendix-3

List of Participants

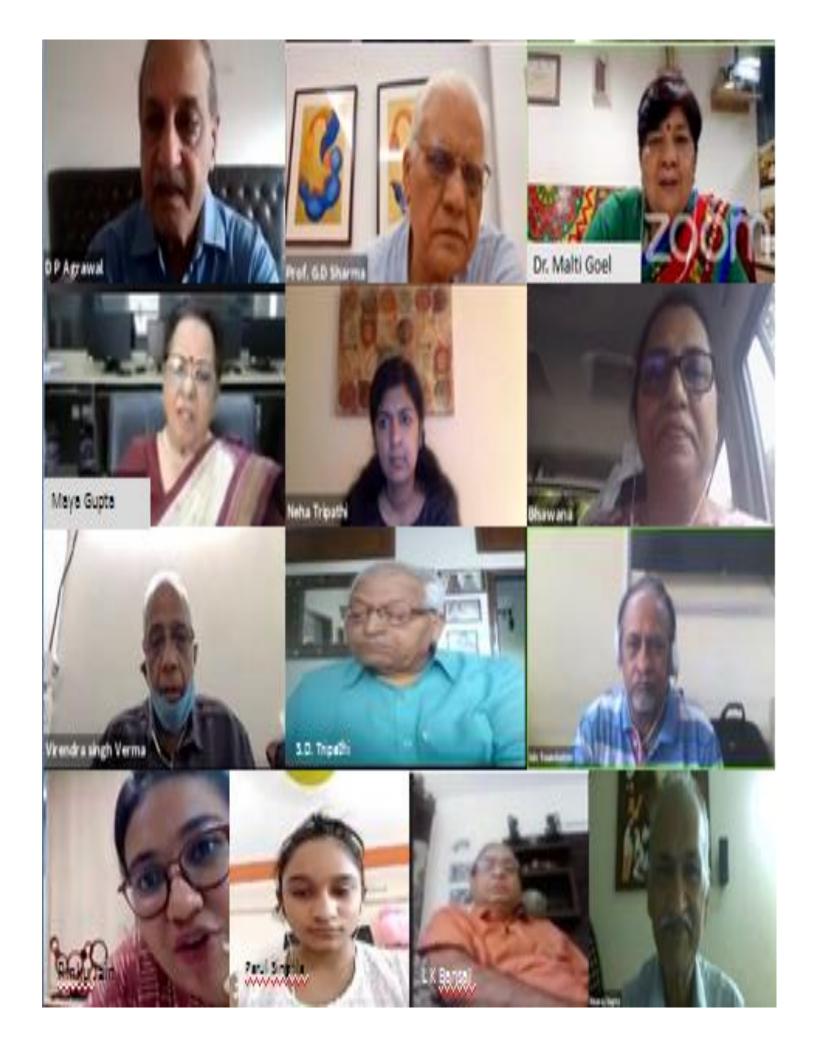
S.No	Name	Occupation	Organisation	E-mail
1	Ms. Parul Saxena	Teacher	GD.Goenka Public school,Dwarka Delhi-11075	parulsaxena@gmail.com
2	Ms. Khushboo Kapoor	Teacher	JinvaniBharti Public School Delhi- 110059	khushbookapoor1983@gmail.co m
3	Ms. Divya Saxena	Teacher	Universal Public School A Block, PreetVihar Delhi-110092	divya2016.70@gmail.com
4	Ms. Dipika Sharma	Teacher	-Do-	tantokis12@gmail.com
5	Ms. Dr.Suman Anand	Teacher	-Do-	dr.sumananand@yahoo.com
6	Ms. Arti Bhatia	Teacher	-Do-	ababhatia01@gmail.com
7	Ms. Vinita Kalra	Teacher	-Do-	vinitakalra1963@gmail.com
8	Ms. Bhawna Bhardwaj	Teacher	-Do-	bhanubhanu197@gmail.com
9	Ms. Asha Rohatgi	Teacher	-Do-	asharohatgi12@gmail.com
10	Ms. Deepika Behal	Teacher	-Do-	kridaybehal@gmail.com
11	Ms. Richa Srivastav	Teacher	-Do-	richa6102@gmail.com
12	Ms. Anu Khosla	Teacher	-Do-	khosla.1971@gmail.com
13	Mr. Akshat Jain	Student	-Do-	akshatjain1308@gmail.com
14	Ms. Saloni Garg	Student	-Do-	salonigarg2021@gmail.com
15	Ms. Parisha Mathur	Teacher	Hillwoods Academy 110032	parisha.mathur23@gmail.com
16	Ms. Rakhee Kaushal	Teacher	Universal Nursery School 201301	rakheekaushalups@gmail.com
17	Ms. Reena Talwar	Teacher	-Do-	reenatlwr@gmail.com
18	Ms. Lakshmi Kapil	Teacher	Universal Public School A Block, Preet Vihar Delhi 110092	lakshmikapil@yahoo,com
19	Ms. Khushboo	Teacher	Hillwoods Academy Delhi 110092	khushboo619@gmail.com

	Aggarwal			
20	Ms. Nidhi Harit	Teacher	-Do-	nidhiharit112@gmail.com
21	Ms. Pooja Arneja	Teacher	-Do-	poojaarneja24@gmail.com
22	Ms. Pooja Singh	Teacher	-Do-	poojasinghhwa@gmail.com
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24	Ms. Chandrakala Mishra	Student	-Do-	ckmknm@gmail.com
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Vision &Mission

To become a
Centre for
Excellence in
developing human
resources and
technical capacity
building in the
area of climate
change adaptation
and mitigation

Organizers

Climate Change Youth Forum at Climate Change Research Institute founded with a mission to promoteenvironment education, innovation and teachings. It aims to address wide strata of society about the consequences of climate change on our lives and the need for taking control measures. The Institute is taking initiative to create awareness onenergy security and sustainability through lectures in schools and colleges, holding workshops and internet out reach. Its future work plan would included evelopment of educational tools on topics of scientific and societal interest; such as energy, health and water in the climate change context. Research and studies are being undertaken on science & technology measures aimed at climate change mitigation and ways of reducing our CO₂ foot prints.

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