




**Communication on Engagement by CLIMATE CHANGE RESEARCH INSTITUTE**

**Period covered by this Communication on Engagement**

**From:** [27.10.17] To [27.10.19]

The **Letter of Commitment** signed by the Chief Executive Officer of **Climate Change Research Institute** to the **Secretary-General** of the **United Nations** expressing ongoing commitment to the Global Compact and its ten principles.



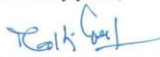
### Climate Change Research Institute

To,  
Mr. H.E. Antronio Guterres  
Secretary-General  
United Nations  
New York, NY 10017, USA

Date: 27.01.2020

I am pleased to confirm that Climate Change Research Institute reaffirms its support to the United Nations Global Compact and its Ten Principles in the areas of Human Rights, Labor, Environment and Anti-Corruption. This is our Communication on Engagement with the United Nations Global Compact. We welcome feedback on its contents.

In this Communication of Engagement, we describe the actions that our organization has taken to support the UN Global Compact and its Principles as suggested for an organization like ours. We also commit to sharing this information with our stakeholders using our primary channels of communication.

Sincerely yours,  
  
Dr. (Mrs.) Malti Goel  
CEO, Climate Change Research Institute

Climate Change Research Institute  
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## Communication on Engagement by CLIMATE CHANGE RESEARCH INSTITUTE

### **This Communication on Engagement has been prepared as a standalone document**

The Climate Change Research Institute welcomes the opportunity to make a statement of its commitment to the support for the United Nations Global Compact and its Principles. Actions taken by our Institute relate to the specific activities suggested in support of these initiatives.

The Climate Change Research Institute is a registered society with the Government of India, under the Societies Registration Act of 1860 and under Section 12A and 80G of Income Tax Act 1961. The Institute is registered with NITI Aayog, Government of India. It is also Associate Member of Global CCS Institute, Australia.

The Climate Change Research Institute has a mission to educate and inform youth in schools and colleges about the ecosystem changes and consequences of climate change. It disseminates science & technology research in the field of environment and climate change mitigation & adaptation to stakeholders and policy makers. The Institute is internationally renowned whose activities focus on research for finding out solutions to mitigate climate change impacts, in addition policy advocacy on national priorities. Awareness on scientific & technological measures for implementation of UN Sustainable Development Goals for environment protection and economic growth are undertaken.

The Institute with its scientific back-up has been serving the wide strata of society at various levels. It organizes awareness and capacity building workshops, scientific events of international relevance, lectures, campaigns on topics of scientific & societal interest in energy and environment. It aims to address as many stakeholders as possible through lectures in schools on one hand and discussions and awareness workshops among the students & researchers in colleges on the other. It has a vision is to become a Centre for Excellence in developing human resources and technical capacity building in the area of sustainable development <http://ccri.in/brochure/CCRI-Brochure-2016.pdf>.

It brings out publications like [Climate SAR Bulletin](#) and reports to disseminate scientific information for public good on society related topics.

These efforts in promoting climate change education and creating awareness on emerging environmental issues are, but a few examples of the many ways in which the Climate Change Research Institute has been working to create a transformative impact on National/International scene.

## MAIN OBJECTIVES OF THE ORGANIZATION

- Promoting environment education and teaching in climate change among wide strata of society.
- Creating scientific awareness through workshops, conferences, lectures, capacity building programmes on the topics of environment and sustainable development.
- Development of educational tools on emerging topics of societal interest; such as energy, health and water in the climate change context.
- To undertake studies in energy sector: clean coal, carbon capture and utilization, renewable sources and in achieving Sustainable Development Goals, through science & technology solutions.
- To enter into collaborations with other national, international organizations with similar objectives and also encourage study groups on various environmental aspects.

## ACTIVITIES PROGRESS REPORT FOR PERIOD OCT. 2017 TO OCT. 2019)

The main activities and programs organized and managed by the Climate Change Research Institute (CCRI), INDIA starting from October, 2017 to October, 2019 are as follows.

### **1. Marine Ecology: Implementing Sustainable Development Goals 14**

The 2030 Agenda for Sustainable Development, which came into effect on 1 January 2016 with 17 SDGs, pays specific attention to the importance of Oceans and waterways. **SDG 14 – Life below Water** – looks to “**conserve and sustainably use the oceans, seas and marine resources**” and articulates ten targets and their corresponding indicators to help countries and agencies achieve this goal. To conserve and sustainably use the oceans, seas and marine resources for sustainable development India has taken various steps to protect and enhance the marine ecosystem. India has launched a flagship programme, *Sagarmala*, for promoting port connectivity, development and industrialization, in a phased manner during 2015 to 2025.

Capacity Building is needed to develop concepts related to Sustainable Marine Ecology. With this in view, the Climate Change Research Institute (CCRI) participated in the joint Workshop supported by Centre for Marine Living Resources & Ecology (CMLRE), Ministry of Earth Sciences and the Swadeshi Science Movement (SSM) on '[Marine Ecology: Implementing Sustainable Development Goals 14](#)', held at ATAL BHAVAN Campus, Puthuvype, Kochi on 21st September 2019. [The SDG 14.1 and 14.3 are targeting to prevent and minimize impact of Marine pollution and Ocean acidification. Both these sub-targets of SDG 14 were covered in the programme.](#)

The Workshop was attended by around 200 graduate, postgraduate and research students from Universities and Institutes in and around Kochi viz. Kerala University of Fisheries and Ocean studies, MG University, CIFNET, National Institute of Oceanography, Central Marine Fisheries Research Institute, Indian Maritime University and St. Albert's college. The CEO of the Institute Dr. Malti Goel delivered the Theme Address and distributed [Information Brochure](#) on the theme of the Workshop titled [SDG14 and S&T Solutions](#) to all participants. The Institute is committed to disseminate information on advancement of SDGs.

## **2. Awareness And Capacity Building Workshop on '[Recent Advances In CO2 Capture Technology And Its Sectoral Application](#)'**

The Climate Change Research Institute (CCRI) in 2018 organized a Workshop to create awareness and deliberate ways & means of Carbon Capture and Utilization (ACBCCU 2018) in collaboration with Institute of Infrastructure Technology Research and Management, Ahmedabad. The workshop titled as '[Recent Advances in CO2 Capture Technology and Its Sectoral Application](#)' partially sponsored by Ministry of Earth Sciences, Govt. of India and was held from August 29 - September 1, 2018, at the India International Convention Center, New Delhi.

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The CO<sub>2</sub> issue is truly global and the efforts are needed for achieving the goal of reducing the carbon footprint, increasing energy independence as also revenue generation from utilization of waste carbon dioxide gas. The workshop discussed ways to capture excess CO<sub>2</sub> in the atmosphere from Oil refineries and Agriculture sectors and its disposal away from the atmosphere with a focus on its utilization.

The Chief Guest on this occasion, Honorable SHRI SURESH PRABHU, Union Minister for Ministry of Commerce & Industry and Civil Aviation, Government of India inaugurated the workshop. Many high level dignitaries and experts from Academia as well as Industry delivered lectures on how carbon capture can become an opportunity. The CEO, Dr. (Mrs.) Malti Goel, in her introductory remarks said that CO<sub>2</sub> being the main product of fossil fuel use, developing capabilities in CO<sub>2</sub> capture and goal oriented utilization in products of scarcity, can lead to immense benefits in the long-term.

The Pre-Workshop Lecture Notes and Presentations of the workshop can be accessed at <http://ccri.in/pdf/acbccu18-pre-workshop-Report.pdf>

### 3. Training School Teachers: Activity Based Learning for Science Teachers in Schools in Chemistry

The Climate Change Research Institute (CCRI) in association with India International Center held a Teachers' Training Workshop on [Activity Based Learning in Chemistry on June 6-7, 2019](#) to celebrate World Environment Day 2019. The workshop was conducted in collaboration with the [Royal Society of Chemistry, Bangluru Office](#). In the Inaugural Session Honorable Chief Guest Dr. V.K. Garg, Ex- CMD, Power Finance Corporation Ltd said that future development of any nation is in the hands of teachers. He described importance of chemistry in our life and gave innovative ideas on how to mitigate plastic pollution. Dr. (Mrs.) Malti Goel, President CCRI said that chemistry has a vital role in our environment. Chemicals produced from natural resources enhance our life in many ways, but their overuse is accompanied by environmental pollution as well as adverse health impacts. Knowledge about chemistry then helps to solve the environmental problems.

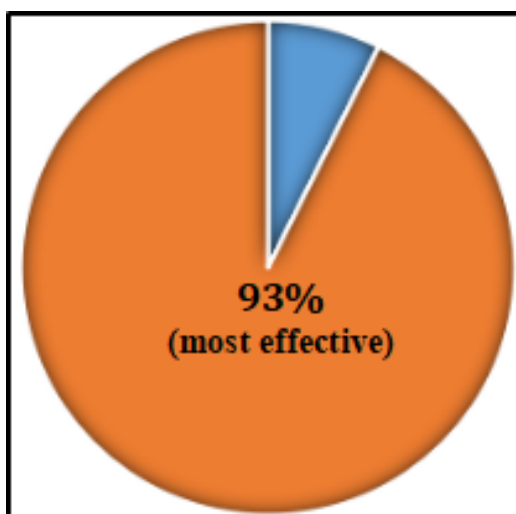
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This unique programme was participated by more than forty teachers and mentors from different schools. It has benefitted teachers immensely, who found it extremely interesting and useful. Giving emphasis to 100% engagement through novel approaches, and sustainable growth active learning techniques such as; DART, use of Concept maps, *Tarsia* grids and Chemical reaction grids were introduced. 'Foldscope' - a low cost, paper microscope easy to assemble and indigenously designed to give optical quality similar to conventional microscope was demonstrated for detection of pollutants in air, water and soil. Teachers were urged to introduce it among children for monitoring of pollution and collection of data from their surroundings.

The CCRI Bulletin '**Climate SAR**' on '**Climate Change and COP 24**' Vol. VI, no. 1, 2019 was released on this occasion'. The Proceedings of the event have been uploaded on the Website <http://ccri.in/pdf/WED-2019-proceedings.pdf>

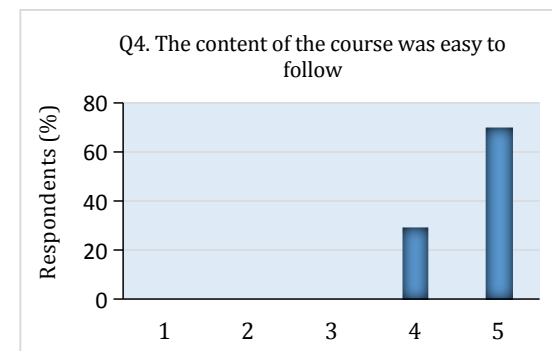
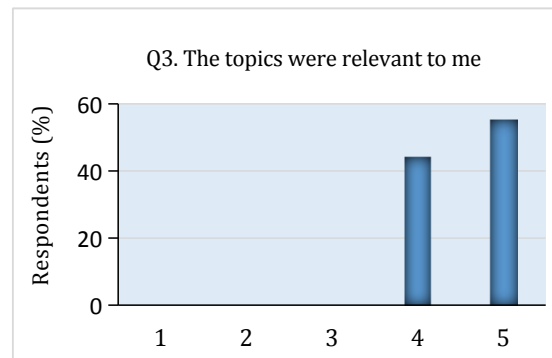
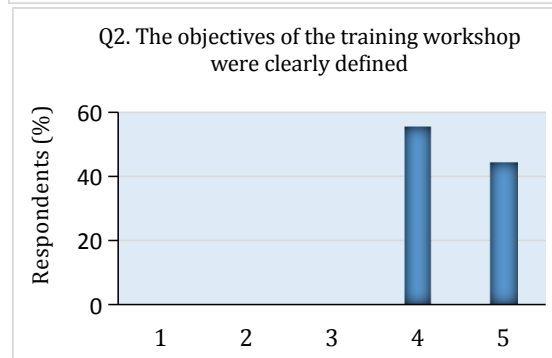
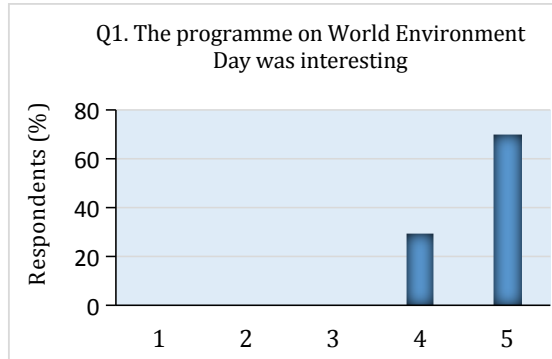
### **Feedback by the Teachers**

93% of participants found the workshop most effective well-structured, comprehensive, rich in content and useful for activity based learning

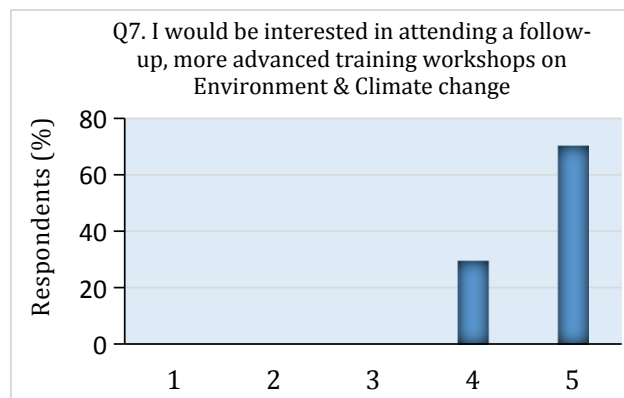
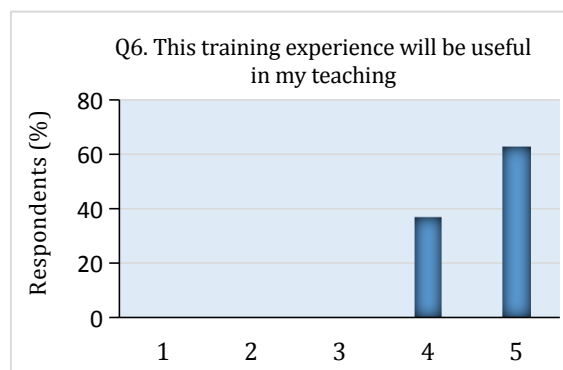
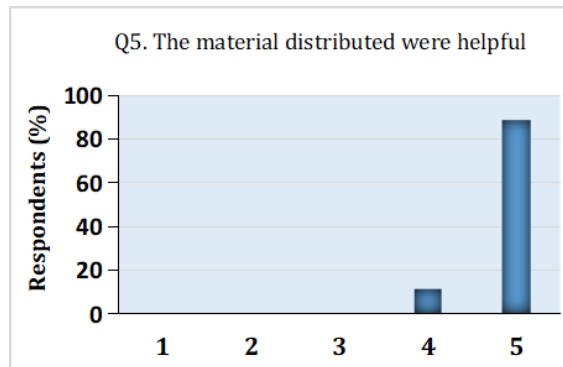


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## Response to Questionnaire



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Note: (1= Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree and 5= Strongly agree)



### **Representative Schools in Active Learning**

1. Army Public School, Shankar Vihar, New Delhi
2. Birla Vidya Niketan, PushpVihar, Sector – IV, New Delhi
3. Delhi Police Public School, Safdarjung Enclave, New Delhi
4. Kamal Model School, Mohan Garden, New Delhi
5. Lal Bahadur Shastri School, Gopal Prasad Shastri Marg, Sec-III, R.K. Puram, New Delhi
6. Mount Abu School, Rohini, Delhi
7. Mata Sukhdevi Public School, National Highway 1, Nangli Poon, New Delhi
8. GSKV, Laxmi Nagar, Laxmi Nagar, Delhi
9. Sadhu Vaswani International School, Shanty Niketan, New Delhi
10. ITL Public School, Sector -9 Dwarka, New Delhi
11. Universal Public school, A Block, PreetVihar, New Delhi
12. N. P.CoEd. Sr. Sec. School, Laxmi Bai Nagar, New Delhi
13. Yuva Shakti Model School, Rohini, Sector 3, Delhi
14. Mount Carmel School, Sector 22, Dwarka, New Delhi

## **4. World Earth Day Campaign**

The Climate Change Research Institute organized World Earth Day on April 25, 2019 at India International Centre, New Delhi, attended by about many children from different schools in Delhi. Dr. (Mrs.) Malti Goel, Chief Executive spoke on Global Warming and its relation to the World Earth Day theme on 'Protect Our Species'. Guest of Honor Dr. M. Sudhakar, Director, Centre for Marine Living Resources and Ecology (CMLRE), Cochin delivered the EEC lecture on Conservation and Sustainability of Biological Resources on the Planet Earth: Present and Future. **Dr. M. Sudhakar, Director CMLRE presented a copy of his rare book on TAXONOMIC DISCOVERIES FROM NORTHERN INDIAN OCEAN, Eds. M. Sudhakar et al. to CEO, CCRI for her excellent contributions to environment and climate change education.**

Bulletin **Climate SAR** on 'Plastic Pollution and Climate Change', Vol.V, No.2- published by CCRI was released on this occasion. An **Essay Competition among students from class X-XII** was also held to educate youth about need for improving Air Quality in Delhi. A rapid snap-shot of 3 minutes presentation on the Essay competition entries on 'Environment in Delhi' was made by the students from participating Schools namely; Universal Public School, Preet Vihar;

Navyug School, Laxmi Bai Nagar and Navyug School, Moti Bagh. Prizes were awarded to the winners.

## 5. "Environment and Earth Care" (EEC) Lecture Series

Our Institute organizes Lectures by eminent experts for youth to create awareness on topics related to anthropogenic climate change, environmental pollution and their toxicity, their impact on our body and their impact on the global atmosphere. Following Guest lectures were delivered by distinguished experts on topics related to Environment and Earth Care.

- a. Prof. Anjan Ray, Director, CSIR-IIP Dehradun, on "**Carbon Capture and Sequestration - Implications and Opportunities for India**" (August 29, 2018)
- b. Prof. R.K. Khandal ,President, R&D and Business Development, India Glycols Limited, Ex-VC, UPTU & Former Director, SIIR on "**Plastics: Ban or Boon ?**" (June 8, 2018)
- c. Dr. M. Sudhakar, Director, CMLRE, Cochin, and Scientist 'G' Ministry of Earth Science, on "**Conservation and Sustainability of Biological Resources on the Planet Earth: Present and Future**" (April 25, 2019)
- d. Mrs. Maya Gupta, Director-Principal, Universal Public School, on "**Beat - Air Pollution**" ( June 6, 2019)

In these lectures, students from different schools, colleges and Institute of Technologies participated in large number. Youth were also sensitized to **Sustainable Development Goals 12 (Responsible Production and Consumption), 13 (Climate Action), 14 (Life Below Water) and 15 (Life on Land)** as well as the Paris Agreement on climate change.

The Compendium of EEC Lecture series highlights can be accessed at <http://www.ccri.in/pdf/EEC-Highlights.pdf>

## **6. Implementing Sustainable Development Goals: Beating Plastic Pollution - Awareness Workshop**

The Climate Change Research Institute in a scientific social responsibility initiative organized a half-day Awareness Workshop on Implementing Sustainable Development Goals in India: Beating Plastic Pollution in line with the World Environment Day theme on June 8, 2018. Conducted in collaboration with Indian International Centre, New Delhi, the Workshop was held for wider dissemination of information and education about Plastic Pollution. A number of Distinguished experts namely; Prof. R.K. Khandal, President, R&D and Business Development, India Glycols Limited, Ex-VC, UPTU & Former Director, SIIR; Shri A.K. Jain, Former Commissioner (Planning); Shri Gautam Sen, Ex-ED, ONGC and Ex-Sr. VP, Reliance; Er. Sourabh Manuja, Associate fellow and Areas Convener, TERI; Shri Rakesh Solanki, Independent Consultant, Plastic Waste Management; Shri Satish Sinha, Associate Director, Toxic Links shared their views and experiences on the topic with the participants from educational institutions and civil society. Participants were sensitized to relevant sub-targets of **Sustainable Development Goals 12 and 14**.

A Policy Paper on **'Strategies for Controlling Plastic Pollution in India'** has been prepared for sensitizing the concerned Government Departments and other Stakeholders. The paper can be accessed at <http://www.ccri.in/pdf/Plastics-Policy-paper.pdf>

## **7. Participation in COP14**

Our Institute actively participated In the Side event on **'Certification of Natural Resources to Combat Desertification and Restoring Landscapes'** organized by the Network for Certification and Conservation of Forests on 7th September 2019, Greater Noida. The fourteenth session of the Conference of the Parties (COP 14), United Nations Convention to Combat Desertification (UNCCD) held in India from September 2-13, 2019. The theme of the conference was **'RESTORE LAND TO SUSTAIN LIFE. Honorable Shri Narendra Modi, Prime Minister of India addressing the thousands of participant observed 'Human Empowerment is closely linked to the State of Environment.'**

### Climate SAR - Bulletin of Climate Science and Research

The Climate Change Research Institute has started the Bulletin of **Climate Science and Research - Climate SAR** for a wider reach among the society. The following Issues of the Bulletins have been published by the Institute during the period of Report (<http://www.ccri.in/bulletin.htm>).

1. Climate SAR Vol.-IV No.2 – **CLIMATE CHANGE AND HUMAN HEALTH**
2. Climate SAR Vol.-V No.1- **SMART CITIES**
3. Climate SAR Vol.-V No.2–**PLASTIC POLLUTION AND CLIMATE CHANGE**
4. Climate SAR Vol.-VI No.1 – **CLIMATE CHANGE AND COP 24**
5. Climate SAR Vol.-VI No.2 – **SOLAR CITIES**

### Participation in the GC Local Network Programmes

1. Our Institute has participated in the GC Local Network Programmes held in New Delhi under the auspices of **UNGC Network India**

### Keynote Lectures Delivered by Our CEO ( Dr. Malti Goel) at International and National Conferences

#### **INTERNATIONAL**

- Delivered Invited Lecture on '**Carbon Capture and Utilization: A Policy Predicament for Climate Change Mitigation or an Emerging Technological Challenge**' at the International Conference on '**CARBON CAPTURE AND ITS UTILIZATION**' organized by **CSIR National chemical laboratory** and the Royal Chemical Society at Pune on **December 14-15 December 2018**.
- The Institute participated and the Chief Executive conducted a Workshop on **Carbon Capture and Utilization Towards Climate Change Mitigation** for the participants of the first Euro-Asia Conference on CO2 Capture and Utilization (**EACCO2-CU**) held in **Malaysia** on **August 6-8, 2019**. The Conference was hosted by the **Sunway University**, a leading University ranked among top 2% Universities in Asia.

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### NATIONAL

- ✓ Participated as Panelist in the Panel Discussion of National Conference on '**Water CRISIS, Public Health & Sustainable Solutions (WCPHS) & 1st annual conference of STE**' organized by 'Save the Environment', Kolkata held on 22nd October 2019 during 21st - 22nd October 2019 at Indian National Science Academy (INSA), New Delhi.
- ✓ Participated in the **All India Radio Panel Discussion on Climate Change** on 2nd June, 2019 relayed on World Radio
- ✓ Delivered First Dr. S.Z. QASIM ORATION Lecture on **CLIMATE CHANGE AND ITS EFFECT ON HUMAN HEALTH** on 4th July 2019.
- ✓ **Chief Guest** address delivered on **Climate Change Education** at the "Delhi State Science Teachers' Forum" (Regd.) **Science Teachers' Congress 2018** on the theme "**Science and Technology Literacy for National Development**" held at Vivekanand School, Anand Vihar on 29th October 2018.
- ✓ Delivered **Live lecture** in education series on '**Plastics Science, Technology & Pollution**' recorded by the **Consortium of Educational Communication (CEC)** on 10th July 2018.
- ✓ Delivered **two online video lectures in the Orientation Course on Climate Change for Higher Education Faculty** developed by the **National Research Council (NRC) of IISER, Pune** recorded on September 10, 2018 (Lectures are posted on SWAYAM Portal).
- ✓ Invited Guest Lecture delivered at Motilal Nehru College, University of Delhi. The lecture on "**Excess CO2 in the Environment and Science for Sustainability**" was held on 28th February 2018 to celebrate National Science Day.
- ✓ Invited lecture delivered on **Carbon Capture, Storage & Reuse: Technologies and Initiatives in India** in the one week Training Programme, held on "**Advances in Heat Transfer and Refrigeration**" during 8-13 January 2018 at Institute of Infrastructure, Technology, Research and Management (IITRAM), Ahmedabad on 12th January 2018.
- ✓ Presented an Invited Paper on "**Broad Contours of Science Diplomacy**" in the Inaugural workshop of RIS-NIAS Programme on Science Diplomacy held on 7th May 2018.

- ✓ Participated in the '**Environment Campaign**' to create Awareness among the Citizens in Vasant Kunj and to expose them to the intricacies of degradation taking place in environment. The event was organized by **TERI University** on 24th February 2018.
- ✓ Delivered an **Invited lecture** in **RIS-ITEC Capacity Building Programme on Science Diplomacy**, 7-18 January 2019. The lecture on "**Globalization of Clean Technologies and Science Diplomacy**" was delivered on 11th January, 2019.
- ✓ Invited lecture in **9th World PetroCoal Congress**, 15-17 February 2019. The lecture on **Waste to Energy – Plastic to Fuel : A Renewable Energy Resource** was delivered on 16<sup>th</sup> February 2019 at New Delhi.

### Publications

Our CEO has authored scientific papers and articles, which were published in the International and national journals and in the popular magazines for wider dissemination of information.

1. '**Strategies for Controlling Plastic Pollution in India**', Malti Goel and Neha Tripathi, A Policy Paper, 2018.
2. **Carbon capture and utilization technology can lead to immense benefits in the long run**, Malti Goel, in Experts Speak Guest Column, INFRALINE PLUS, March 2018, vol. 6, no. 11, p. 58-59, [ Link ]
3. '**Recent Advances in CO2 Capture Technology and its Sectoral Applications**', Bulletin of Pre Workshop Lecture Notes, July 2018.
4. **Science Diplomacy as a Tool for Development Cooperation in South Asia**, Malti Goel, DEVELOPMENT COOPERATION REVIEW, vol.1, no. 3, 2018, pp 9-12.
5. **Beat Plastic Pollution – Towards Swachh Bharat Abhiyan**, Malti Goel, Sandeep Chatterjee, UNIVERSITY NEWS, Vol 57, 44, Nov., 2019.

### **Concluding Remarks**

The Climate Change Research Institute has been engaged in providing resources and would continue to support UN Global Compact within its sphere of influence. In this communication we describe the actions that our organization has taken to support the UN Global Compact and its principles as suggested for an organization like ours. Our focus has been Environment, Climate Change and Sustainable Development Goals.

The Institute has made enormous effort in creating awareness and capacity building for Advancing Sustainable Development Goals and to discuss role of Science, Technology and Innovation. The efforts have been directed to promoting environment education and teachings in climate change among wide strata of society. Measurements of outcomes are; sharing of expertise by our organization to further the aims of United Nations Global Compact Local Network.

We pledge to continue to take part in the activities of United Nations Global Compact at International/national/local networks level, whenever feasible, to involve in specialized initiatives, to engage in partnership projects and to review the projects and progress when approached.

Glimpses of our activities are available at [www.ccri.in](http://www.ccri.in)