

Science & Technology Solutions for Sustainable Energy Future

# Climate Change Research Institute India

Information Brochure and Activity Highlights

"The world is connected and dependant on each other. Our international partnerships need to be centred on the progress of humanity."

—Shri Narendra Modi, Prime Minister of India

# Vision

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

# Mission



To inform youth in schools and colleges about the ecosystem changes and consequences of climate change through awareness and capacity building on topics of scientific & societal interest such as Energy, Health, Air and Water.



To work with industry, undertake research & training for helping them to meet their Corporate and Social Responsibility (CSR) targets while reducing CO<sub>2</sub> footprints through imparting national and international knowledge.





# **Upcoming Bulletin**



































# **President Speak**



Climate Change Research Institute (CCRI), India is founded in 2009 with a vision to become a Centre for Excellence in human source development. Its mission is to promote environment and climate change education, research, innovation and trainings among youth and members of wide strata of society about the consequences of climate change on our lives and importance of taking control measures.

It is a pleasure for me to introduce various activity highlights of the Institute. The Institute has enlarged its scope by taking up Implementation of Sustainable Development Goals and development of educational tools including bulletins and videos etc. on climate change, It has initiated research studies on Science & Technology indicators and working for science diplomacy in South Asia. We shall continue to focus on clean energy technologies including renewable sources, fossil fuels and carbon sequestration.

Dr. (Mrs) Malti Goel

# Capacity Building in Carbon Capture, Storage and Utilization in India

The Carbon Capture and Storage (CCS) is an emerging technology to reduce CO<sub>2</sub> concentrations in the atmosphere by capturing from its point sources. Co<sub>2</sub> capture and conversion in value added products away from the atmosphere is considered a key option within the portfolio of approaches required to reduce greenhouse gas emissions. Capacity building in this multi-disciplinary field is very much needed on strategic perspectives for a low carbon economy. The Institute has been organizing such capacity building workshops biannually. These workshops brought together outstanding scientists working in the area of carbon capture & storage. Perspectives in carbon capture and sequestration technology, pre-combustion, combustion and post combustion options, bio sequestration, terrestrial sequestration, storage and utilization have been covered, attended by nominees of major stakeholder industry and institutions in the country.

Dr. Harsh K. Gupta, Member NDMA, inauguration the ACBCCS-2013 workshop





Dr. M.O. Garg, DG, CSIR Inaugurating the ACBCCS - 2015 Workshop

Shri M.P. Narayanan, Ex. CMD Coal India, briefing the capacity building workshop on CCS





Dr. Anupam Agnihotri, Director, JNARDDC, delivering Keynote Address

Prof D. P. Agrawal Chairman, Governing Council, CCRI Former Chairman, UPSC

### Message



The newly adopted Sustainable Development Goals (SDGs) and Paris Climate Agreement are shaping a new agenda for growth for the survival of Planet Earth. The UN Global Compact encourages its members to take the lead on turning these climate change agreements into drivers for more visible and sustainable actions.

I am happy to learn that Climate Change Research Institute has become a Member to United Nations Global Compact. The 17 SDGs proclaimed by United Nations in 2015 are more ambitious than Millennium Development Goals pronounced in 2000 and outline the future that world aspires to achieve by 2030. As they cover a broad range of inter connected issues, from environment protection and economic growth to social development for public good we hope to find solutions to some of the biggest and most important challenges of our time.

I wish success to the CCRI for achieving success in this venture and fulfilling its mission & vision.

D. P. Agrawal)

# Imparting Knowledge









### Implementation of Sustainable Development Goals

Climate Change Research Institute (CCRI) in a Social Responsibility Initiative organized an Awareness Workshop on the theme IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOALS on **World Environment Day 2016** jointly with IIC, New Delhi on June 7<sup>th</sup> 2016. It is one of the first such workshops held in India. Shri A. K Jain, Ex-Commissioner (Planning), DDA delivered the guest lecture on the **Sustainable Green and Smart Cities** on this occasion. Inaugural address was delivered by **Dr. S.Y.Quraishi, Former Chief Election Commissioner of India** who highlighted the need for reducing consumption and conservation of natural resources. Dr. Malti Goel, President & CEO, CCRI introduced the theme and said that we are committed to take actions for reducing carbon footprints by application of science & technology. Sustainable Development Goals (SGDs) provide a vast canvas of activities. In his special address Prof. D.P. Agarwal, Chairman of the Governing Council of GCRI stressed on the importance of waste reduction and management as an important SDGs strategy. Prof. Meenakshi Dhote, Head-Environment planning Division, (SPA) delivered the lecture on Urban & Environment Planning Strategies for Implementation of SDGs. Teachers, students and environment activists participated in the workshop in large numbers.

### **Green Buildings & Smart Cities**

Green buildings and sustainable habitat have become important drivers for responding to climate change concerns in building sector. A capacity building workshop on 'GREEN BUILDINGS AND SMART CITIES' was held by Climate Change Research Institute on 31st January 2014 in IIC New Delhi. Shri Gireesh Pradhan, Chairman, Central Electricity Regulatory Commission Inaugurated and inspired youth to look for out-to-the box solutions for addressing climate change concerns in urban planning. SUSTAINABLE HABITAT & LEARNING ENVIRONMENT was held on 6th June, 2014 at IIC, New Delhi to train architects about green campus designs and healthy performance of buildings. The Institute jointly held a National Conference on GREEN BUILDINGS FOR SUSTAINABLE DEVELOPMENT at the behest of Madhav Institute of Technology and Science (MITS) on 19 & 20th March 2015 at Gwalior.







### Science Diplomacy

Science diplomacy in foreign policy is becoming important in providing new opportunities for collaborations among countries. Climate Change Research Institute (CCRI) organized a brainstorming discussion meeting on 'Science Diplomacy' jointly with Trans–Disciplining Research Cluster in Sustainability Studies (TRCSS), JNU at IIC, New Delhi. The discussion topics included: (i) Knowledge Networking; (ii) Hydropower; (iii) Cultural diplomacy; (iv) Science & Technology, Research and Collaboration; (v) Education

# Programme and Activity Areas

- Awareness Workshops
- Capacity Building and Training Workshops
- Partnership in Excellence
- Sustainable Development Goals
- Knowledge Networking
- Science Policy Research
- Education tools & Videos

# Recognized by

- · Ministry of Earth Sciences, Govt of India;
- Ministry of New and Renewable Energy, Govt. of India;
- Ministry of Science & Technology, Govt. of India;
- Department of Environment, Delhi Government;
- · India International Centre, New Delhi

# **Awareness Campaigns**

### **ECC Lecture Series 2015**

Global warming and Climate change have become greatest threats to humanity in the 21st century. Youth in their formative years in schools need to be made aware about current challenges in relation to climate change and motivated to take action for mitigating its impacts. A lecture series on Environment & Climate Change (ECC) was held aimed to fulfill the society's mission to impart environment education and create awareness among youth in schools and colleges. Distinguished speakers delivered the lectures in layman language to various topics, namely Waste Management Strategies'; Future Energy Paradigms for Clean Environment; CO<sub>2</sub> Sequestration: A Fresh Outlook; Energy and Fossil Fuel among others.









### Climate Change Campaigns

Committed to greener cause the Climate Change Research Institute organizes campaigns on World Earth Day, World Environment Day and World Ozone Day by holding competitions among students. Inter-school Slogan Writing and Quiz competitions were held on April 24th and October 16th respectively in 2015 and winners from participating schools were awarded. World Environment Day also known on WED has been one of the major environmental campaigns began in 1972. The event is an annual event celebrated worldwide on June 5 for creating awareness and encouraging action for the betterment of environment. The Institute has pledged to hold WED awareness campaign every year. In response to UN theme of the year 'Seven Billion Dreams, One Planet; Consume with Care', eminent experts shared their knowledge and concerns. Getting overwhelming response from the participating school teachers and students, ECC 2015 Awards have been given to Principals of highest winning schools.













### Weather

Climate SAR Vol. I - No. 1 , January - June, 2014



### **Global Warming**

Climate SAR Vol. I - No. 2 , July - December, 2014



### **Carbon Sequestration**

Climate SAR Vol. II - No. 1 , January - June, 2015



### Green Building

Climate SAR Vol. II - No. 2 , July - December, 2015



**INDCs - Paris Agreement** 

Climate SAR Vol. III - No. 1 , January - June, 2016



### **About CCRI**

An idea to start a national level organization in climate change science was conceived in 2008 at a breakfast meeting in India International Centre with friends and well-wishers. The Climate Change Research Institute established in 2009 (formerly as Climate Change Research Society) aims to promote awareness about scienti~c solutions for sustainable energy future. Measures in everyday life for stabilizing the greenhouse gas concentrations in the atmosphere and capacity building to achieve energy sustainability across the sectors are encouraged. Environment and Climate Change lectures are held for teachers and students. Indtitute is committed to take actions for reducing carbon footprints by application of science & technology.

The Institute is taking a lead role in hosting awareness workshops on key topics of UN sustainable development goals and finding innovative solutions for their implementation. In clean energy sector challenges in both renewable energy and carbon capture from fossil fuel based energy have been discussed on the same platform. The Institute has organized capacity building workshops on new and latest topics related to energy and climate change, carbon capture and storage, Green buildings, solar rooftop and smart cities among others. Its workshops have high technical content and shared vision of experts on key issues, besides imparting knowledge among youth. Over 1000 youths across the country have been inspired and trained. The office premises of the Institute are located in South Delhi.

## Aims & Objectives

- To create awareness through talks, contest and research in the study of climate change in general and carbon capture in particular among wide strata of society.
- To organize discussions, workshops, seminars, social & cultural programs to impart knowledge.
- To promote environment education and teaching in climate change, through short term, medium term training-cum-awareness programs.
- To address issues related to science, climate change, publish and create libraries on educational subjects.
- To undertake studies in energy sector, clean coal, carbon capture and fixation, renewable and encourage study groups on various environmental aspects.
- To establish and run educational and vocational institutions in urban, rural and backward area and/ or to provide financial assistance and other facilities for the establishment of to such institutions.

- To secure and manage funds, grants and endowments for the promotion of environment science and climate change including the rights of disposing off for selling all or any part (portion) there of.
- To invite experts and enter into collaborations with other national, international Society with similar objectives.
- To give or establish prizes for excellence in the field of (a) Social services (b) Climate understanding (c) Scientific & Technical work / research for peace in the country.
- To do all such other lawful acts, deeds and things as are incidental or conductive to the attainment of the above objects or any of them and to promote the cause at the national and state level.
- To frame byelaws and rules and regulations for the conduct of the business of the Society and its officers and employees.

### Publications of CCRI

- Sustainable Energy, Proc. of ACBSE-2010.
- ABC of Green Buildings Responsible Education, ISBN 97881-922686-0-6, 2011.
- · Green Buildings in Schools, Proc. of AGBRES-2011.
- Carbon Capture and Storage: Earth Processes, Proc of ACBCCS-II. 2013.
- A Solar Rooftop, AGBRES II, 2013
- Green Buildings and Smart Cities Proc. of AGBRES- III, 2014
- Sustainable Habitat & Learning Environment Proc. of ACBSE II, 2014
- Carbon Capture, Storage & Utilization: A possible climate change solution for Energy Industry, Teri Press, ISBN 97881-799356-8-2, 2015
- Carbon Capture, Storage and Utilization: A low Carbon Growth Strategy, Lecture Notes and Proceedings, ACBCCS-III, 2015





# The Institute becomes a Member to United Nations Global Compact

