

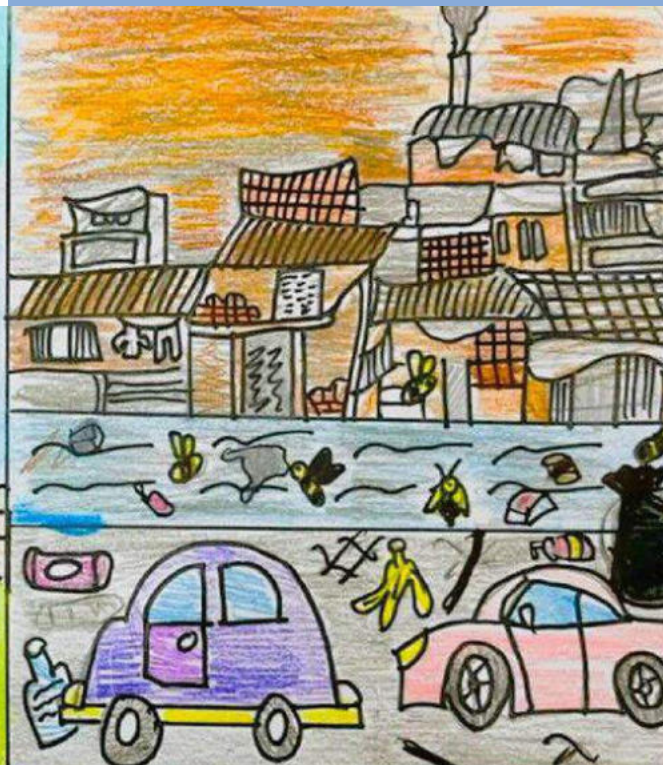
# IGCS EXPERIENCE REPORT 07/2023

Indo-German Centre for Sustainability (IGCS)  
Winter School 2023 at IIT Madras, Chennai



# experience reports

Reetu Kundu



## Experience Report on IGCS Winter School 2023, IIT Madras, India

### *IGCS School Participant*

Reetu Kundu

### *Affiliation*

Amity University, Noida, Uttar Pradesh

### *IGCS School Theme*

IGCS Winter School 2023, IIT Madras, Chennai, India

“Microgrid – A Key Contribution Towards Carbon Neutral Society”

### *Starting/End date of the student exchange period*

20. February – 03. March 2023

### *Organisers*

IGCS Area Coordinator, Prof. Dr. Frank Behrendt (Technical University Berlin),

IGCS Area Coordinator, Prof. Dr. Krishna Vasudevan (Indian Institute of Technology Madras),

IGCS Postdoc, Dr. Khulud Alsouleman (Technical University Berlin).

### *Layout and Design*

Rahul G. Rajkarnikar

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Zurück zur Erde: A Workshop on Human-Nature Relationships and Sustainability for Students and Teachers

Co-organized by Goethe Institute and the Indo-German Centre for Sustainability (IGCS)



## Experience Report from Winter School 2023, IIT Madras, India

I am Reetu, a DBT-SRF and research scholar at Amity Institute of biotechnology, Amity University, Noida, India.

I had the great opportunity to participate in the IGCS Winter School on Microgrids for a Carbon neutral Society from 20th February 2023 to 3rd March 2023. I am extremely grateful to the German Academic Exchange Service (DAAD) for the funding. The funding made it possible for me to attend this school and rear the benefits. I would also like to thank the coordinating

universities of the school which are RWTH Aachen University and IIT Madras.

We stayed and participated in the programme for two weeks at the IIT Madras. We were a group of 27 individuals from different universities in Germany and India. We came from a variety of educational backgrounds, including those in social science, economics, agricultural science, environmental science, mechanical engineering, electrical engineering, and other areas.



*Intercultural activities*

I had never heard the phrase "Microgrids," and I had no idea what it meant technically. With numerous lectures, group projects, discussions, and field trips, this school educated me.

The classes were scheduled from 9.00 AM to 5.00 PM and the sessions were categorized into two parts one includes the lectures and the other is group work. For the group works, we were divided into five groups and mine was group five. Our topic was 'Microgrids and sustainable cities and my team comprised six members. Dr. Christoph Woiwode was our mentor. On the first day we had some icebreaking sessions for intercultural exchange and in the afternoon we went for an IIT campus tour and explored the greenery and wildlife of the campus.

On the second day, Prof. Vasudevan gave the introductory lecture and provided an overview of the summer school. Because of the broad audience, the speakers made an effort to make each lesson straightforward and easy to grasp. I learned a lot from Prof. Sreenivas Reddy's presentation on Resilient Solar Energy Production and Storage Systems for Flexible and Efficient System Integration in Tri-generation. He covered some fundamental concepts regarding solar panels and displayed some visuals from his lab. Also, Mr. Raghu's presentation from

E-hands Energy was very helpful in helping me grasp the key challenges associated with the practical side of microgrid installation and maintenance. Prof. R. Vinu gave an insight on tying the knot between Municipal Solid waste-to-energy with the Microgrids was really enlightening and it helped me to understand the solid waste management practices on the IIT campus and their water recycling strategies.

We had an opportunity to visit some labs in IIT including the Power Electronics lab, Energy and Emission Lab, Flow Battery Lab, and HTTP lab 1 & 2. There we saw some budding scientists and their inventions. Vanadium batteries and Air conditioner that uses ice as a coolant from the labs are very new to me. On the fifth day, we had our first excursion to Auroville in Pondicherry. It is a collective experiment in human unity based on the revolutionary ideal view of Shri. Aurobindo and his spiritual companion the mother (Mirra Alfassa). We had the privilege of meeting the Secretary of Auroville, Dr. Jayanti Ravi. We visited some of their sustainable energy practices and we sat near the Matrimandir (The golden globe) for some time before leaving.

Over the weekend, we visited some nearby markets for some shopping and on Sunday, we went to Mahabalipuram. That was a wonderful experience and it helped us to build a strong bond between ourselves.

The next interesting session was the student panel discussion. At first, the IGCS team collected topics from the participants to be discussed and after that, the selected participants gave a small introduction on the topic and everyone conversed about it and registered their opinion. We had three-panel discussions on different topics.

On the final day, we had our group presentations on different topics. Our group work was on the topic “Microgrids in India and Germany”, in it we discussed the major economics and policies related to the implementation of microgrids in both countries. We had the privilege to meet the honorable director of IIT Madras, Prof.V. Kamakoti and we received our participation certificates from him.



*Receiving participation certificate from Prof.V. Kamakoti*

Overall, I found the winter school to be an educational and enriching experience, not just because of the lectures but also because of the participant engagement and cultural exchanges. That was a wonderful event in my life because they were all so motivated and focused on sustainability methods.

I would highly encourage anyone considering applying to the school to do so,

and before you go, read some papers or books on the subject and go with purpose.

Finally, I'd like to express my gratitude to the RWTH Aachen University in Germany and the Indo-German Centre for Sustainability (IGCS), both located at the Indian Institute of Technology, Madras. Also, I want to thank all of the winter school organizers, attendees, and my supervisor Teacher.



*IGCS Winter School 2023 Team*

### About the IGCS Schools

*IGCS' flagship teaching projects are the annual interdisciplinary Summer and Winter schools. The annual schools are held under the motto of one of our IGCS focus areas and are organised by the respective area coordinators and their partners. The itinerary is about two weeks long and consists of lectures, discussions, group work, and field trips. The Winter Schools take place at IIT Madras in Chennai in February / March while the Summer School takes place at one German partner university in June / July. For more information on IGCS' events, see [here](#).*