



NETAJI SUBHAS OPEN UNIVERSITY

SCHOOL OF SCIENCES

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Programme Report of the International Seminar

on

“Multidisciplinary Perspectives of Managing Environment and Resource for Sustainable Development”

Organized by

Department of Geography, School of Sciences, Netaji Subhas Open University

Funded by the ICSSR Research Project

Introduction of the Programme:

As approved by the Hon'ble Vice-Chancellor, NSOU, the Department of Geography, under the umbrella of School of Sciences, has organized the two-day **International Seminar** on **“Multidisciplinary Perspectives of Managing Environment and Resource for Sustainable Development”** on **22-23 April 2024** at the University Headquarters, Kolkata. The event was a part of the bilateral research project, funded by the Indian Council of Social Science Research (ICSSR), New Delhi, India and undertaken by Biraj Kanti Mondal (Assistant Professor of Geography, Netaji Subhas Open University) as Principal Investigator and therefore, he acts as the Organizing Secretary & Convenor of the International Seminar. The program was conducted to discuss and have a discourse on the different aspects of the idea of sustainable development, to find connectivity on the ways these processes influence human development, nature, and nurture.

The seminar highlighted and focused on two very important aspects:

- First, being the preliminary importance of understanding and valuing the contemporary research, with special reference to the methods, theories, findings, and advancements to understand how, why, ifs and buts behind human perception, reasoning, learning, the human appearance, contribution and planning for sustainable development.
- Secondly, to explore various ways of facilitating human learning and education by applying concepts, principles, theories, methods, and research findings for achieving sustainable development goals from multidisciplinary perspectives.

Objectives of the Programme:

The theme of the International Seminar was **“Multidisciplinary Perspectives of Managing Environment and Resource for Sustainable Development”**, in which about 20 sub-themes were addressed, especially to achieve the following objectives:

- This seminar was organized to enhance the awareness about the Sustainable Development Goals (SDGs) and Millennium Development Goals (MDGs)

- To observe the recent development of Environmental Design, Planning and Management for the sustainable future.
- To highlights the Management of Natural Resources, Energy Policy, and Sustainable Use of Energy Sources
- To encouraging the recent development of Environmental Engineering, Science and Technology, New Technologies, and Innovative Solutions to Environmental Problems
- To inform about different issues of Human Development Index, Gross National Happiness Index and Sustainability and Community participation in Sustainable Development
- To observe the Environmental Education and Physical, Emotional, Cognitive Development and assist them in utilizing these tools responsibly.



Participants:

The academic persons, mostly the faculty members, research scholars from different parts of the country and abroad and some Postgraduate students of diverse departments of different institutes of India, faculty members of NSOU participated in the two days international seminar. More than 115 successful registration was recorded for the seminar by the Academicians, University/College/School Faculty Members, Research Scholars, and Post Doctoral Fellows and apart from that many students from different institutions and NSOU faculties. About 250 participants attended the seminar on both the days at the venue.

Details of the International Seminar:

The Inaugural session of the Seminar started at 11:00 a.m. in the Subhaschandra Sabhaghar of the NSOU headquarters, and distinguish guests, some other academic personalities and students were joined. The event began on 22 April 2024.

This two-day International Seminar witnessed a sustainable initiation with the distribution of plants to the chairs after lightening the lamp and furthermore it also bystander the grand inauguration by **Professor Indrajit Lahiri**, *Hon'ble Vice-Chancellor, NSOU* along with the invited esteemed guests and in-house academicians and organizing members.



Photo 1: Inauguration of the Seminar by lightening lamp by Vice Chancellor and other dignitaries in Day 1



Photo 2 & 3: Facilitation by gifting tree to Vice Chancellor and Keynote Speaker



Photo 4: Welcome address by Officer-in-Charge, School of Sciences; Photo 5: Presidential address by Vice Chancellor

- **Dr. Bibhas Guha**, *Officer-in-Charge, School of Sciences, NSOU*, began the program by greeting and welcoming all the delegates and resource persons of two-days explaining the objectives of the seminar in correspondence with SDG-17. He also congratulates Biraj Kanti Mondal and his team for shouldering the responsibility of organizing this Two-Day International Seminar and choosing such a brilliant and up-to-date theme.
- **Prof. Anirban Ghosh**, *Director, CIQA, NSOU* address the audience and give his speech about activities of CIQA, NSOU highlighting the achievement of grading 'A' by the NAAC in 2022.
- **Prof. Indrajit Lahiri**, *Hon'ble Vice-Chancellor, NSOU*, delivered the Presidential Speech covering the theme and its diverse aspects in the present-day context. He also highlighted the moto to save our earth from multidisciplinary perspectives.
- **Dr. Anadi Gayen**, *The Regional Director, Central Ground Water Board, Eastern Region, Ministry of Jal Shakti, Kolkata* delivered a keynote address on '*Groundwater Dynamics of West Bengal: A Critical Analysis*' highlighting the groundwater dynamics of West Bengal its present status, and upcoming strategies to combat the issues regarding the groundwater problems.
- **Dr. Debdas Ray**, *Former Associate Professor of Geology, Asutosh College; Fulbright-Nehru Scholar on Environmental Leadership Program* addressed the audience on '*Multidisciplinary Perspective of Managing Environment and Resource for Sustainable Development: A Review of the Present Scenario*' and explained the multidisciplinary perspective of managing environment and resource for sustainable development.
- **Dr. Meheub Sahana**, *Leverhulme Fellow & Lecturer in GIS, The University of Manchester, United Kingdom* delivered the speech on '*Water Disaster, Transboundary River Basins, and Environmental Sustainability in South Asia: Understanding through machine learning model and geospatial application*' and explains how machine learning models and geospatial technology can be used for a better understanding of the situation and future prediction.
- **Prof. Ming-An-Lee**, *Professor, Dept. of Environmental Biology & Fisheries Science, National Taiwan Ocean University, Taiwan* give his speech on '*Comparative Study of Small-Scale Fishing Communities in Taiwan and India to Unravel Climate Change Impacts*' related to the ICSSR-MOST bilateral project and unravels the climate change impacts on the small-scale fishing communities in Taiwan and India.
- **Dr. Biraj Kanti Mondal**, *Assistant Professor of Geography, NSOU and Organizing Secretary & Convener* of the International Seminar delivered the formal Vote of Thanks mentioning the invited speakers of India and abroad, in-house academicians, officials, teaching and other staff members, research scholars, students. He also acknowledged and extend thanks and gratitude to Indian Council of Social Science Research (ICSSR), New Delhi for funding me the research project related to the International Seminar.
- The Seminar session was followed by two parallel technical sessions I and II in the Subhaschandra Sabhaghar and Seminar room respectively on the first day of the seminar, 22nd April 2024.



Photo 6: Keynote speech by Dr. A. Gayen



Photo 7: Speech of the chief guest Dr. D. Ray



Photo 8: Speech of the Special International Resource Person Prof. Ming-An-Lee from Taiwan



Photo 9: Vote of Thanks by the Organizing Secretary & Convenor;



Photo 10: Photo session of Technical Session-I

Day I: Technical Session I:

The technical session-I was chaired by Dr. Debdas Ray, *Fulbright-Nehru Scholar on Environmental Leadership Program* and Co-chaired by Dr. Ajit Kr. Sil, *Associate Professor of Geography, NSOU*. In this session, Biraj Kanti Mondal, Organizing Secretary and Convenor of the seminar presented his speech on 'Assessing the Seasonal Water Storage Dynamics of Howrah District of West Bengal (India) using Geospatial Technology' and made the audience think about the sustainable use of water resource in near future on this *Earth Day*. After that,

18 paper presenters from faculties, research scholars, and students from different parts of India from different fields represent their research findings. Various interesting topics are being discussed in this technical session for example light pollution in India, Maternal Health and Sustainable Development Goals, Patterns of Climate Change Through Rainfall Forecasting Using ARIMA Model, Spatio-temporal Analysis of Transportation Network, and Literacy of Karnataka State. Wide utilization of Geospatial Technology in Assessing the Seasonal Water Storage Dynamics, and Mineral Exploration to inform precision Environmental Affairs were also discussed in this technical session. The session was concluded with moderator remarks and interaction with the audience. After the completion of the technical session, the Chair and Co-chair appreciated the participants for their excellent work and encouraged more research.



Photo 11: Lecture by the Organizing Secretary and Convenor of the seminar about water resource

Technical Session II (Parallel Session):

The technical session-II was chaired by Dr. Chhanda Dana Kundu, *Associate Professor of Geography, NSOU*, and Co-chaired Dr. Asit Kr. Sarkar, *Academic consultant, School of Science, NSOU*. In this parallel session About 19 participants from different segments of India from different fields presented their research findings in diverse topics. The session started with the talk 'Modelling sediment grain size populations and characterization of wave-current parameters for planning dynamic coastal resilience' by Subhajit Sinha. Then one by one various topics came out in the discussion forum for instance Sustainable Development and Beekeeping; Wetlands classification and assessment using Remote Sensing; assessment and validation of groundwater potential zones using multi-criteria decision and geospatial techniques. Some social research has also been showcased like HIV/AIDS awareness and risk behaviors among long-haul truck drivers in post-COVID times; Stereotype to Empowerment: Evolving "Superwomen"; Ecocriticism: literary perspectives on sustainability etc. The session concluded with an appreciation for the students who showed interest and actively took part in presenting research papers. Day one was concluded with these two enriched brainstorming technical sessions with lots of energy.



Photo 12: Paper presentation at Subhas Chandra Sabhaghar; Photo 13: Paper presentation at seminal hall



Photo 14: Photo of the end session at Subhas Chandra Sabhaghar

Day II: 23rd April 2024

The day II of the International Seminar started with a fresh vibe with the lightening of the Diya and watering the tree. The audience experiences a delightful talk from six renowned resource professionals from the Country and Abroad. They share their vast experience and encourage researchers for future research in different versatile fields.

- **Dr. Aditi Acharya** *Senior Scientist, Dept. of Science and Technology and Biotechnology, Govt. of West Bengal, Kolkata* delivered a lecture on 'Advanced Geo-Informatics Technology in Disaster Management' highlighting its benefits, tools, GIS layers and its use in Disaster Management.
- **Prof. Sunando Bandopadhyay**, *Professor, Department of Geography University of Calcutta* beautifully discussed the 'Sustainability of the Bankline Settlements along the Ganga in West Bengal' using very interesting satellite images and maps. He also highlighted how after protecting the riverbank for a critical time frame, the river naturally changed its direction and meandering pattern with special reference to Ganga.
- **Prof. Lakhmi Sivaramakrishnan**, *Professor, Department of Geography, Jadavpur University* delivered a talk on 'Sustainable Livelihood in India'. He emphasized on the various developmental programs of the government and their critical analysis with special reference to West Bengal with a brief comparison with some other states of India.



Photo 15: Inauguration of 2nd day of the Seminar by lightening lamp and watering tree by the dignitaries



Photo 16: Facilitation in the Inaugural Session of 2nd day of the seminar



Photo 17: Distinguish Invitees of the Inaugural Session of 2nd day of the seminar



Photo 18: Speech by the invited speaker Dr. A. Acharya in the Inaugural Session of 2nd day



Photo 19: Speech by the invited speaker Prof. S. Bandoipadhyay in the Inaugural Session of 2nd day



Photo 20: Speech by the invited speaker Prof. L. Sivaramakrishnan in the Inaugural Session of 2nd day

- **Dr. Mubarak Mammel** from the *Department of Environmental Biology and Fisheries Science, National Taiwan Ocean University, Taiwan* delivered the lectures on '*Exploring the Feeding Ecology and Habitat Dynamics of Greater Amberjack (*Seriola dumerili*) in Taiwanese Waters: Insights into ENSO Event Influences*' enlightened the thoughts on how the ENSO Event Influenced the feeding ecology and habitat dynamics of Greater Amberjack in Taiwanese waters.
- **Louis George** from the *School of Sustainable Resources Management & Business Studies (SSRMBS), Papua New Guinea University of Natural Resources & Environment, PNG* convey speech on '*Assessing the Influence of Climate Change on Sustainable Small-Scale Fisheries and Marine Tenure Systems along the Southwestern and Northeastern Coasts of India*'.

- The first half of the second day ended with prolonged interaction and cross-questions among the resource persons and the participants.
- Like the 1st day of the Seminar, the 2nd day was also followed by two parallel technical sessions, III and IV in the Subhaschandra Sabhaghar and Seminar room respectively of the seminar on 23rd April 2024.

Day II: Technical Session III:

This technical session-III was chaired by Dr. Biraj Kanti Mondal, *Assistant Professor of Geography, NSOU* and Co-chaired by Dr. Chhanda Dana Kundu, *Associate Professor of Geography, NSOU*. About 19 participants from different parts of India from different discourses represent their research findings to the hall. In this session, first an invited speech was arranged, which was delivered by Prof. Sanjukta Sattar, *Professor, University of Mumbai, Mumbai*. She presented her thoughts on an interesting topic of 'Gastronomy tourism as a driver of sustainable tourism development: Examples from the State of Maharashtra'. Then one by one different researchers present their highly interesting topics highlighting the objectives, methodology and major findings in front of the audience. Some of them are as follows, the vulnerability study of the repetitive cyclones and their impact on the social and economic life of the fishing community in the state of Odisha, ancient civilization along the palaeo-distributaries of the river Ganga including Adi Ganga in Lower Ganga Delta Plain are also explored, Socio-economic relevance of Small-Scale Fish Farming Entrepreneurship in Different Blocks around Sundarbans also studied. Tanmoy Basu represents his work on agricultural land suitability analysis using MCDM and GIS techniques in Puruliya district in West Bengal, India. Sumit Panja delivered his works on Impact and Adaptation of Climate Variability on Coastal Agriculture of West Bengal: A Conflict between Sustainability and Profitability which was appreciated largely by the audience. Dr. Debdas Ray and his co-presenter present a paper and trying to find out the probable answer to the biggest question of the era, why do we consider the climate change phenomenon as the major crisis in our contemporary society and culture in terms of its impact? There are many more. It is also to be noted that this session was enriched with the PG Geography 1st Year students of NSOU, they also represented their findings and reviewed works based on Heavy metal pollution, solid waste management under the guidance of Biraj Kanti Mondal, Assistant Professor of Geography, NSOU. The session concluded with an appreciation for the students who showed interest and actively took part in presenting research papers, especially the PG students. The chair and Co-chair of the session appreciated the participants for their excellent work and encouraged more research on Environmental Sustainability, Pollution and Management strategies.



Photo 21 & 22: Paper presentation by the Research Scholar of Geography, NSOU in the 2nd day of the seminar



Photo 23 & 24: Photo session of Research Scholar, Post Graduate students of Geography, NSOU in 2nd day



Photo 25, 26 & 27: Photographs with faculties, research scholars of other institutions & PG Geography students, NSOU

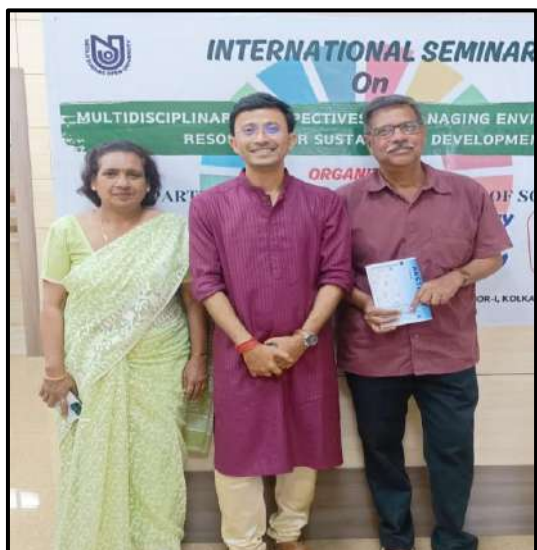


Photo 28: Distinguish Invitees with the Convenor; Photo 29: Photo with the best paper presenter's awardee.

Day II: Technical Session IV (Parallel Session):

The technical session-II was chaired by Smt. Tinki Kar Bhattacharya, *Assistant Professor of Geography, NSOU* and Co-chaired by Smt. Dipali Kundu, Associate Professor of Geography, NSOU. In this parallel session. About 20 participants from different segments of India from different fields presented their research findings to the seminar hall. The session started with

the talk 'Prevalence and Influencing Factors of Chronic Respiratory Disease among Women in India' by Arpita Trivedy. Then a case study was presented on the changing nature of ambient air quality in the Kolkata fringe. Priya Banerjee from Rabindra Bharati University represents her work on Sustainability, efficiency, and cost-effectiveness of integrated adsorption-biodegradation process for wastewater treatment. Many more researchers were also representing their work back-to-back. Apart from the mentioned topics, many topics are being discussed which are based on SDG-17. The session concluded with an appreciation for the students who showed interest and actively took part in presenting research papers. The technical sessions of the seminar were concluded with lots of knowledge, opening new research pathways and encouragement for future research.

Question & Answer Session:

There was an interactive Question and Answer session after every invited speech as most of these lectures were found highly interesting and appreciable. Moreover, after the presentation of about 10 research paper presentation and the related queries amongst the audience were addressed by the presenters in the event. Moreover, the diverse issues of sustainable development from various perspectives were also discussed in a broader way, which was not only enriched the students but also able to create awareness among the audience which will help in achieving sustainable development.



Photo 30, 31 & 32: Distribution of Certificate to the paper presenters in the seminar

Making of Benchmark

The two-day international seminar able to create a significant platform for promoting multidisciplinary perspectives on sustainable development. This seminar provided a valuable opportunity for participants to engage in fruitful discussions, exchange ideas, and foster collaborations. The research papers presented offered innovative perspectives, cutting-edge methodologies, and practical recommendations for achieving sustainable development goals. The event also facilitated networking among participants, encouraging interdisciplinary cooperation in the pursuit of sustainable development. The event's success was evident through the diverse range of research papers presented and the collaborative spirit exhibited by participants. Such initiatives play a vital role in advancing knowledge and fostering sustainable practices for a better future. The seminar was ended with the valedictory session, where a cultural program is also arranged. The certificates were distributed in this session apart from taking group photographs and finally followed by wide interaction among the participants and presenters and sharing of knowledge. Overall, the seminar is a grand success, and a wide appreciation was praised from all the experts and participants.

Valedictory Session

After completion of the technical sessions on 23rd April, 2024, we come to the end of the International Seminar in the Subhaschandra Sabhaghar. At the initiation of the valedictory session Organizing Secretary & Convener, Dr. Mondal, conveyed thanks for attending and providing a brief report to the foreign delegates, participants, resource persons and other attendees in the hall. It was reported that about 74 research papers, apart from the invited speech were presented in two days covering a wide range of disciplines in the event. Moreover, seven experts from Kolkata, Delhi, Mumbai of India and five distinguished experts from Taiwan, United Kingdom and Papua New Guinea presented their wonderful thoughts related to the theme of the seminar. Their contributions enabled the Department of Geography, NSOU to create a benchmark by bringing together renowned experts and researchers around the world to address crucial issues related to managing the environment and resource sustainability. In this valedictory session, the certificates of the paper presenters, participants and the best paper were distributed a photograph of each were captured. Then finally Dr. Mondal, proposed the vote of thanks to the audience. He also explains the success of the seminar. The delegates shared their opinion about the two-day International Seminar and the best paper presenters were awarded. The session concluded with a vote of thanks and concluding dance by the students of the Department of Geography, NSOU and a big round of plagues.



Photo 33 &34: Photographs of the Valedictory Session of 2nd day of the seminar



Photo 35: Dance Programme at the Valedictory Session



Photo 36: Valedictory speech by Organizing Secretary & Convenor of the International Seminar

Summing up:

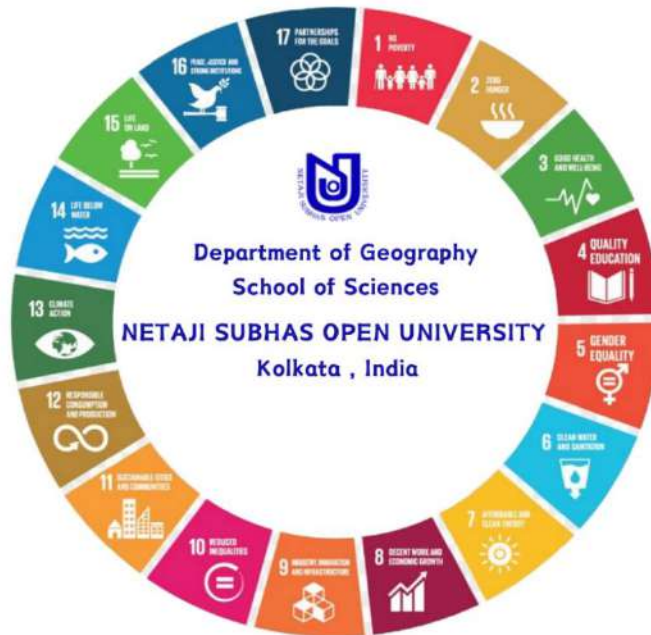
The entire programme of the seminar was smoothly and successfully conducted by the Dr. Biraj Kanti Mondal, *Assistant Professor of Geography and Organizing Secretary & Convenor, NSOU* and this was highly appreciated from the Invited guest from India and abroad, paper presenters and participants which makes the event fruitful and grand success. Some of the participants requested to the organizers to organize such kind of seminar every year and they wanted to participate happily. This seminar provided a premier interdisciplinary platform to leading academic scientists, researchers, practitioners, and educators to exchange and share their experiences and research results on the recent innovations, trends, and concerns as well as practical challenges encountered, and solutions adopted in the field of sustainable development.



Photo 37: Paper presenters and participants of the technical session-III in the 2nd day of the seminar



Photo 38: Closing Ceremony of the two day International Seminar



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