

Jesus and Mary College

University of Delhi
Chanakyapuri, New Delhi - 110021

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JESUS AND MARY COLLEGE
UNIVERSITY OF DELHI

SUPPORTING DOCUMENT FOR 7.2.1

Part II

BEST PRACTICE

**“The Gift of Green”:
Towards Building a Sustainable
and Clean College Campus**

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This document contains information regarding:

- 1. National Conference on Resources Management for Sustainable Development**
- 2. National Conference on Innovative Approaches to Plastic Free India**



“NATIONAL CONFERENCE ON NATIONAL RESOURCES MANAGEMENT FOR SUSTAINABLE DEVELOPMENT” HELD ON 21ST JANUARY 2020

Website link for more information:

<https://www.jmc.ac.in/uploads/research/NRMSD%202020.pdf>

National Conference on National Resources Management for Sustainable Development (NRMSD-2020), January 21, 2020, held at Multi-Purpose Hall, Jesus and Mary College (University of Delhi), Chanakyapuri, New Delhi-110021.



The National Conference on National Resources Management for Sustainable Development was organised on 21 January 2020. The inaugural session began with Welcome Address by the Principal, Sr. (Dr) Rosily T. L. rjm. In her address, Sr. (Dr.) Rosily expressed the concern for the importance of this Conference and welcomed all the participants/ delegates, students, faculty members.

The Conference Convener, Dr. Surendra Kumar Yadav, introduced the themes, aims and objectives of the conference. Broad theme areas of research of the Conference were Natural Resources Management & Biodiversity Conservation; Environmental Pollution (Air, Water, Soil, Thermal, Noise, Nuclear Hazards) Management; Solid Waste Management & E-waste Management; Safe Drinking Water & Sanitation; Environmental Modeling & Best Available Technologies (BAT); Global Warming & Climate Change Mitigation Strategies; Environmental Health & Disaster Management; Energy Resources & Sustainable Development; Resources Economics & Green Development; Environmental Laws & Role of Society.

Prof. Virendra Kumar Vijay, Guest of Honour & IREDA Chair Professor at IIT Delhi and National Coordinator for Unnat Bharat Abhiyan (UBA, MHRD, GOI), Scientific Utilisation through Research Augmentation (SUTRA, MoST, GOI) & Biogas Development & Training Centre (BDTC, MNRE) addressed the gathering on sustainable energy supply.

Chief Guest, Prof. J. S. Yadav, Chairman, Communication Management Foundation and former Director General and the chief executive of Indian Institute of Mass Communication (IIMC), New Delhi delivered deliberation on sustainable development goals through judicious utilization of natural resources.

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The Inaugural Key note address was delivered on natural resources management and conservation by Prof. S Mukherjee, former Dean and Professor at School of Environmental Science, Jawaharlal Nehru University, New Delhi. Vote of thanks for Inaugural session was given by Sr (Dr) Molly K.A., Conference Convenor.



The Inaugural Session was followed by the Panel Discussion titled "*Natural Resources for Sustainable Development Goals*". The panelists were: Prof. Virendra Kumar Vijay, IIT Delhi discussed rural energy development and Unnat Bharat Mission; Prof. J. S. Yadav, Chairman, Communication Management Foundation delivered deliberations on different issues on sustainable development goals; Prof. S Mukherjee, JNU discussed on judicious natural resources management; Prof. Ranjana Jha, NSUT spoken on solar energy mission and clean development mechanism; Prof. A. K. Chaubey, CCSU highlighted role of nematodes in environmental protection; Dr Tripti Bhardwaj, Health Department, Meerut involved in discussions on environmental health issues related with sustainability. Dr Rekha Dayal, JMC acted as Moderator for Panel discussion and directed questions of participants with experts. The Panel Discussion was chaired by Prof. J. S. Yadav. Prof. J. S. Yadav, the Chair, concluded the session after an interactive Question/Answer session.

The informative and interactive Panel Discussion was followed by two parallel Technical Sessions 1 and 2. Technical session 1 was chaired by Prof. A. K. Chaubey, CCSU and Co-Chaired by Dr Tripti Bhardwaj, Incharge, Meerut PHC. About 26 research papers were presented orally on different environmental issues by different scholars from different organizations and States.

Technical session 2/ Poster presentation session was chaired by Prof. Subhash Chand, Ex-HoD, Chemistry, Meerut College (PG), Meerut and co-chaired by Dr. G. C. Mishra, Chairman, S.C.Mishra I.T.I. Paktola, Rarhi, Darbhanga (Bihar) & Member, J.N.U. University Court and Dr Sanjay Marale, President, Society for Environment and Sustainable Development (SESD), New Delhi. Total 17 research papers were presented as posters on different environmental issues from different organizations and best three posters were awarded certificates for 1st, 2nd and 3rd positions after evaluation by expert Judges.

The Technical Sessions were followed by the Valedictory Session Chaired by Prof. AL. Ramanathan, Former-Dean & Professor at School of Environmental Sciences, JNU, New Delhi. Ms. Megha Jacob welcomed the Chief Guest for Valedictory session. Prof Ramanathan delivered valedictory talk and emphasized the importance of water resources and he then distributed the certificates and Momentos to participants. Dr Christhu Doss gave his concluding remarks on the success of the conference. The Vote of Thanks was delivered by Dr. Divya Agarwal.

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The National Conference on National Resources Management for Sustainable Development (NRMSD-2020) was sponsored by University Grant Commission (UGC). The conference was very well attended with around 219 participants and delegates. The conference came together successfully due to the efforts and hard work of the Organising Team: Sr. (Dr.) Rosily T.L., r.j.m., Sr. (Dr.) Molly K.A., Dr

Surendra Kumar Yadav, Dr. Rekha Dayal, Dr M. Christhu Doss, Dr Roshan Praveen Kalvo, Ms Megha Jacob, Dr Divya Agarwal and Mr Gaurav Verma. Students of JMC namely Raisa Katyal, Vanshita Singhal, Dipanshi Jain, Rishpa Shrestha, Bhavya Sharma, Shobha Abraham, Sherin Sans, Arpita Mary Abraham, Sharon Rebecca Thomas, Ritu Jacob, Ann Maria Renny, Angel Susan John, Gayatri Capoor, Purnya Kalra, Anisha Singhal, Niyati Jain, Muskaan Punj, Janika Shaji, Aksa Sara Abraham, Mrudula Lukose, Neha Susan Babu, Brij Nandini, Akrity Jain, Cyan Boswell Gomes, Alisha Gragya, Varsha Vincent, Tanya Juneja, Clare Ann Biju, Rochelle Prakash, Chhavi Jain, Aishwarya Paul, Jimu S Koshy also helped in smooth conduction of the Conference.



NATIONAL CONFERENCE ON INNOVATIVE APPROACHES TO PLASTIC FREE INDIA 2020 (IAPFI 2020) HELD ON 28TH FEBRUARY 2020

Link to more information:

<https://www.jmc.ac.in/uploads/research/IAPFI%202020%20Long%20Report.pdf>

Report of National Conference on Innovative Approaches to Plastic Free India

The National Conference on Innovative Approaches to Plastic Free India was organised on 28 February 2020. The inaugural session began with the lighting of the lamp followed by the Welcome Address by the Principal, Sr. (Dr) Rosily T. L. rjm. In her address, Sr. (Dr.) Rosily emphasised the various anti-plastic initiatives undertaken by the college.

The Conference Convenor, Dr. Mani A. Nandhi, introduced the theme, underlining the importance of conducting the conference and the aim to create a positive impact on the audience. The Inaugural Speech was delivered by the Chief Guest, Prof. Saudamini Das who is the NAB-ARD chair at the Institute of Economic Growth, University of Delhi on the topic: "The Economics of Marine Plastic Pollution in India". In her speech, Prof. Das discussed the use of plastic from an economic perspective, problems faced during plastic waste management, impact of marine plastic pollution and marine litter in India.

The Special Address was delivered on "Plogging Your Way through the Plastic Pollution" by Mr. Ripu Daman Bevli, founder and CEO of Ploggers of India. He screened a documentary to introduce the practice of plogging to the audience, the three-steps to make India litter free. Mr Bevli, along with the audience took a pledge for a Swachh Bharat through individual effort.

The Keynote Address was given by Ms. Vidya Amarnath, Director of Paterson Energy Pvt. Ltd. titled "Innovation is the Key to Overcome Plastic Pollution in India". She discussed the Hummingbird Effect of Innovation. Moving on to plastic she talked about its invention, nature, the Great Pacific Garbage Patch and proper management. She highlighted the mission of Paterson Energy to introduce circular economy in plastic using the process of Thermochemical Depolymerisation to produce high variant diesel called Vertex. Ms. Amarnath concluded her talk by stressing on finding solution through innovation and encouraged the audience to do the same.

The Inaugural Session was followed by the Panel Discussion titled *Plastics in Environment and Eco Systems – Challenges for Human Health and Welfare*. The panelists were: Prof. Anand Krishnan, Professor at the Centre for Community Medicine at AIIMS, New Delhi; Ms. Archana Chatterjee, Project Manager and Lead, the Mangroves For Future Initiative in India and National Coordinator at International Union of Conservation of Nature, India office; Dr. T.K. Joshi, Member, Central Pollution Control Board, Member, Delhi Pollution Control Committee, Advis-

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er, Environment Ministry, Government of India; Ms. Richa Malik, Founder and Director, The Happy Turtle; and Ms. Sameera Satija, Citizen Volunteer for Sustainable Waste Management for Chemical Free Life. The Panel Discussion was chaired by Prof. Saudamini Das.

Prof. Anand Krishnan discussed Air Pollution in Delhi and highlighted top-driven solutions like the Odd-Even Rule and the Bus Rapid Transit or the BRT. He proposed an eco-health approach and a neighborhood environment audit. The next panelist, Ms. Archana Chatterjee discussed how global plastic dumps are in tandem with ocean currents which results in their entry into the food chain. She proposed managing plastic better in order to reduce our plastic footprint, closing the plastic tap program and an improvement in corporate social responsibility. The next speaker Dr. T.K. Joshi focused on the role environment plays on health. He discussed the National Plan on Chemical Safety which is the current focus of the Central Pollution Control Board. He outlined the challenges the medical profession faces because they fail to factor in the environment while diagnosing diseases. He concluded by saying that the century will be spent in understanding how the environment affects our health. The next speaker Ms. Richa Malik spoke about the need for change in consumer behavior by emphasizing individual ownership. According to her, shift of blame and responsibility is not the solution. She concluded by highlighting the importance of solution-based thinking. The last speaker of the panel discussion was Ms. Sameera Satija. Through her work in waste management, she has been privy to the journey of plastic and is aware of the fact that the major contributor in landfills is single-use plastic. She outlined her work in setting up various crockery banks. Prof. Saudamini Das, the Chair, concluded the session after an interactive Question/Answer session.

The informative and interactive Panel Discussion was followed by two parallel Technical Tracks. Technical Track 1, titled *Plastic in Environment and Ecosystems: Initiatives in Reducing Plastic Pollution* was chaired by Dr. Shachi Shah, Associate Professor (Environment Studies), School of Interdisciplinary and Transdisciplinary Studies, Indira Gandhi National Open University, New Delhi.

The first paper was presented by Dr. Veeragoni Shirisha and Dr. Bir Abhimanyu Kumar, Assistant Director, Student Registration Division, Indira Gandhi National Open University, on the topic "Institutional Initiatives to Control Plastic Pollution - A Case Study of IGNOU". They highlighted the issues of recycling plastic waste and elaborated on the wide range of initiatives led by IGNOU to combat the problem. The paper also pointed to the scheme 'Plastic Free Campus', where community awareness was targeted through plantation drives and workshops and which made the IGNOU campus the first "Plastic free Campus" in the country.

The second presentation was on a study of Household Waste Management conducted in Baghpat, Uttar Pradesh and was presented by Ms. Srishti Malik, who is currently pursuing her Masters in Psychology from IGNOU and co-authored by Dr. Archana Kumar, Assistant Professor and Ms. Ruchi Gaur, Assistant Professor Department of Development Communication and Extension, Lady Irwin College, University of Delhi. The study was based on Bio-Degradable as well as Non-degradable waste and not just plastic. The study focused on the pattern of household waste

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management and examined the role of women in the waste disposal process and their perception of it.

The third and the last paper for the session was presented by Mr. Shivani Dagar, Ms. Ishika Shah, Ms. Kirti Kumari and Ms. Kiran Pal from the Department of Chemistry, Maitreyi College, University of Delhi. They presented their research on "Synthesis of Copper Nanoparticles Using Non-Biodegradable Waste as well as Using Plant Extract", focusing on the threat of industrial dyes, particularly Rhodamine B which is produced with the accumulation of Copper nanoparticles in water. They showcased a mode of synthesising copper nanoparticles using waste plastic bottles for the removal of harmful dyes.

Technical Track 2, titled *Impact of Plastic Pollution on Environment and Health: Challenges and Lessons*, was chaired by Dr. Chirashree Ghosh, Associate Professor, Department of Environmental Studies, University of Delhi. The first paper, presented by Ms. Gowri S. and Mr. Prashant Thote, discussed the green school project wherein students from every grade used waste materials to make various everyday items. Some innovative items include making their own scientific lab equipment and making soaps out of natural products which the school also sales.

The second paper was presented by Ms. Manasvi Bansal, a student of business sustainability school. She talked about circular economy and its impact on the environment, relating it to the sustainable development goals. The third paper was presented by Mr. Madan Singh, a research scholar. He talked about environmental pollution and how the banning of single use plastic can help in the waste management problems in India. The fourth paper was presented by Mr. Soham Krishna. He talked about the reduced plastic consumption in Arunachal Pradesh and using bamboo for various purposes in place of plastic, with the help from the Apatani Tribal Group. This was followed by a lively discussion about sustainable ways to reduce the use of plastic in India.

Technical Track 3, titled *Innovative Approaches and Design Strategies for Reducing Plastic Pollution in India*, was chaired by Prof. P.K. Joshi, School of Environmental Sciences and Chairperson, Special Centre for Disaster Research, Jawaharlal Nehru University.

The first paper titled "A Creative Solution for a Plastic Free India: Project in Progress" was presented by team Enactus JMC based on their project that undertakes the making of public washrooms using plastic bricks, known as eco-bricks. The project focusses on combating plastic waste and the open defecation problem as these eco bricks will be used in building washrooms in the slum areas of Sangam Vihar, New Delhi.

The second presenter was Ms. Mansha Jain who discussed how black plastic could be re-used multiple times as well as its ability to be able to generate electricity by removing carbon and turning it into nanotubes. She focussed on the field of Innovative Chemical Recycling of Plastics and underlined how plastic can be converted into useful forms of energy like Wind Energy, solar cells and Energy Recovery.

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The last speaker of the session was Dr. Divya Agarwal who presented a paper titled "Roadmap of Global Environmental Initiatives and Policies towards Innovative Integral Plastic Waste Management". Dr. Agarwal explored the advantages and disadvantages of plastic. She highlighted the growing need for systemic plastic waste management and introduced the best practicable global options and environmental policies for Plastic Waste Management. She also presented a comparison between different countries that manage waste efficiently at a global level. She also discussed about several initiatives taken by Indian states and individuals for best practicable methods to manage plastic waste.

The Technical Tracks were followed by the Valedictory Session chaired by Prof. Jyoti Rana, Dean of Skill Faculty of Management Studies, and Dean of Student Welfare and In-charge of GND Centre for Innovative Leadership and Entrepreneurship at Shri Vishwakarma Skill University. The Rapporteurs Shubhangi Tyagi, Anusha Batra, Shreya Dash, Glenys D'Souza, Bhumika Agarwal, Sasha N. Bhatnagar, Aleen Maria Sibi, Neha Mustafi, Srishti Tyagi and Prisha Rewar read out their reports. Prof. Rana gave her concluding remarks on the success of the conference. The Vote of Thanks was delivered by Dr. Renu Gupta.

The National Conference on Innovative Approaches to Plastic Free India was sponsored by Oriental Bank of Commerce. The conference was very well attended with around 560 student participants and 75-100 faculty participants in attendance. The conference came together successfully due to the efforts and hard work of the Organising Team: Sr. (Dr.) Rosily T.L., rj.j.m., Dr. Mani Arul Nandhi, Dr. Renu Gupta, Sr. (Dr.) Molly K.A., Ms. Charu Sarin, Ms. Rashi Mukhopadhyay, Ms. Sukham P. Chawla, Ms. Ishita Singh, Dr. Christu Doss, Ms. Megha Jacob, Dr. Roshan Xalxo and Dr. Divya Agarwal. The compères for the conference were Muskaan Sethi and Sahyata Bhateja.

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IAPFI 2020 Conference

Inaugural Session



Audience taking an anti-plastic oath during the conference



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Panel Discussion

Ms. Sameera Satija (L) and Ms. Richa Malik (R)



Dr. T.K Joshi delivering his talk

