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Name	Prof. Seema Unnikrishnan
Area	Primary: Environmental Eng. and Management Secondary: Safety management under industrial Engineering
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Personal Home Page	if any

➤ **Educational Qualifications:**

- Masters in Environmental Toxicology from PG Institute of Basic Medical Sciences, University of Madras, 1989 – **University First rank Holder**
- Post graduate Diploma in Environmental law from Madurai kamaraj University – 1993
- Doctorate - Fellowship of NITIE, “A comparative study of Hazardous waste legislation and Management” in Feb.1997.

Academic Affiliation: Professor

- **Dean Academics [Sep.2013 to Sep. 2015]**
- **Warden of the Ladies Hostel, NITIE [1998-2002]**
- In-charge of the Environmental Engineering lab [1998 till date]
- One of the Coordinators of the Centre for Environmental Studies at NITIE [2010 till March 2015]
- **Chair person of the post Graduate Programme Committee NITIE [Sep.2013 till Sep 2015]** Member of the post Graduate Programme Committee, NITIE [1998 – 2002, 2005-2007, 2011 – till date]
- Member of the Library Committee, NITIE [1998 -2004]
- Member of Standing Committee, NITIE [1999 – 2002]
- President of the NITIE Women Employees Welfare Committee [NWEWC] for 3 years from 2001 till 2003.
- Member of the Board of Research, NITIE [2004 - 2009]
- Chairperson of the NITIE Officers Club [2007-2008]
- **Chairperson of Moderation Committee NITIE [Sep.2013 till Sep2015.]** and Member of the Moderation Committee [2008 till 2012]
- **Chairperson of Disciplinary Committee of NITIE [Sep.2013 till Sep 2015]** and the Member of Disciplinary Committee of NITIE [2011 to 2013 Aug.]
- Group Coordinator of the PGDISEM group At NITIE [Oct.2011 till June 2013]

Professional Affiliations

- Member of the advisory committee for the Government of Maharashtra for management of biomedical wastes .[2012 till 2015]
- Member of the Expert Panel of IRQS - Indian Register of Quality Systems for Environment Management System [EMS for ISO 14001] [1998 till 2012]
- Examiner for IIIE - Indian Institute of Industrial Engineering [1994-96, 2005-2006]
- Nominated as one of the experts of the advisory committee for the Emission Inventory Project for Mumbai City by NEERI [National Environmental Engineering and Research Institute]-[Aug.2006].
- Member of the Expert Stakeholder committee of the Certification agency – RINA for ISO 14001 [April 2008 till 2012]
- Member of the Jury of BCCI [Bombay chamber of commerce and Industry] for corporate citizen award -2014
- Member of the Technical committee for Prime Minister's Shram Awards under Ministry of labour and Employment. Government of India [2013- 2014]
- Member of the Jury for Indian Institute of packaging for "PACMACHINE AWARDS" in 2015 for recognizing excellence in innovative concepts in design & development in Packaging machinery,
- Life member of National Safety Council
- Life Member of Indian Environmental Association
- Life Member of National Solid Waste Association
- Life member of NITIE Alumni Association

Subjects Taught at PG level

- Air quality Management and CDM [Clean Development Mechanism]
- Energy Efficiency and Carbon Management
- Environmental Chemistry
- Environmentally Conscious Manufacturing and LCA
- Environmental legislation
- Solid and Hazardous Waste management
- Safety legislation and standards
- Environmentally Conscious Operations
- Disaster Management
- Environmental Management System and ISO Standards
- Clean Development Mechanism and Climate change

Areas Of Research

- Air quality Management and CDM
- Environmentally Conscious Manufacturing and cleaner production
- Environmental law and Policy, climate change policy
- Life Cycle Assessment
- Role of mangroves in disaster reduction

Selected Research Publications

1. Seema Unnikrishnan, D S Hegde, "An analysis of cleaner production and its impact on health hazards in the work place", Journal – Environment International, Elsevier Science Publication, 2005. Jan 2006, vol-32, issue-1, pp.87-94. Available online on science direct from July 2005.
2. Seema Unnikrishnan, D.S. Hegde, " Environmental training and cleaner production in Indian Industry., International journal - "Resources, Conservation and recycling", June 2007, Vol.50, issue 4,pp.427-441. Elsevier Science Publication Available online on science direct
3. Seema Unnikrishnan, Anju Singh, "Energy Recovery in Solid waste management through CDM in India and other Countries International journal, "Resources, Conservation and recycling".Vol. 54 (2010) 630–640 Elsevier Science Publication .Available online on science Direct.
4. Abba Elizabeth Joseph, Seema Unnikrishnan, Rakesh Kumar, Balkrishna Yeole & Zohir Chowdhury "Fine Aerosol and PAH Carcinogenicity Estimation in Outdoor Environment of Mumba". International Journal of Environmental Health Research. DOI:10.1080/09603123.2011.613112. Taylor and Francis publication. Vol.22,no.2,pp.136-149.2012.
5. Abba Elizabeth Joseph, Seema Unnikrishnan Rakesh Kumar Chemical Characterization and Mass Closure of Fine Aerosol for Different Land Use Patterns in Mumbai City. Journal of Aerosol and Air quality Research..Available online from Nov.2011. doi.10.4209/aaqr2011.04.0049.Vol.12,pp61-72.2012
6. Anju Singh, Seema Unnikrishnan, Neelima Naik and Kavita Duvvuri [2012] "Role of India's Forests in Climate Change Mitigation through CDM and REDD+.Journal of environmental planning and management - Routledge Taylor and Francis group.pp.1-27 [.doi/abs/10.1080/09640568.2011.651110](https://doi.org/10.1080/09640568.2011.651110).
7. Seema Unnikrishnan, Anju Singh Manoj Kharat, "Role of Mangroves in Disaster Mitigation: A Review".international Journal of Environment and Sustainable development. June 2012. Inderscience Publication. Vol. 11, No.2 pp. 164 – 179, 2012.
8. Seema Unnikrishnan, Anju Singh, Neelima Naik and Bhagyashree Sawant, "Study of environmental management practices in Indian oil and gas sector" Journal of Environmental Research and Development Vol.7, 1A, Sep.2012.
9. Vikrant Vijay Patil, Anju Singh, Neelima Naik, Seema Unnikrishnan and Bhagyashree Sawant. "Carbon sequestration in Mangrove Ecosystems: A Review". Journal of Environmental Research and Development .Vol. 7 No. 1A, pp. 576-583, July-September 2012.
10. Aditee Potdar, Seema Unnikrishnan, Anju Singh and Neelima Naik."A Comparative Assessment of environmental legislation and climate change policy of BASIC countries." International Journal Sustainable Innovation.Vol. 2 No. 1, pp. 57-67, 2012.

11. Aditee Potdar, Seema Unnikrishnan, Anju Singh and Neelima Naik, A Comparative Assessment of Environmental laws and policies of India and China” Journal of Environmental Research and Development. Vol. 7 No. 1, pp. 204-214, July-September 2012.
12. Mayuri R. Naik, Anju Singh, Seema Unnikrishnan and Neelima Naik, 2014, The Role of the Clean Development Mechanism (CDM) in the Development of National Energy Industries, Energy and Environment, 25(2), 325-342.
13. Seema Unnikrishnan, Neelima S. Naik, Anju Singh, Bhagyashree Sawant and Aditee Potdar, 2014, Study of Safety and Environmental Management Practices in the Indian Petrochemical Industry. Current Advances in Environmental Science, 2 (2), 59-72.
14. Seema Unnikrishnan, Anju Singh, Bhagyashree Sawant and Neelima Naik, 2014, Environmental Education and Practices in Schools, Journal of Environmental Research and Development 9 (1), 271-283.
15. Vikrant Patil, Anju Singh, Neelima Naik and Seema Unnikrishnan, 2014, Estimation of carbon stocks in *Avicenna marina* stand using allometry, CHN analysis and GIS methods, Wetlands, Springer, 34, 379-391.
16. Mayuri Naik, Bhagyashree Sawant, Anju Singh, Seema Unnikrishnan, Neelima Naik and Indrayani Nimkar, 2014, Role of Clean Development Mechanism and cleaner technologies in achieving energy efficiency in chemical and manufacturing sectors in India. Journal of Environmental Research and Development 9 (2), 481-493.
17. Seema Unnikrishnan, Anju Singh, Bhagyashree Sawant and Neelima Naik, 2014, Environmental Education and Practices in Schools, Journal of Environmental Research and Development 9 (1), 271-283.
18. Balaji G., Aditee Potdar and Seema Unnikrishnan, 2014, Environmental Legislation for Chemical Management in India: An Agenda for Reforms. Journal of Environmental Research and Development 9 (2), 494-506.
19. Seema Unnikrishnan, Rauf Iqbal, Anju Singh, and Indrayani Nimkar, 2014, Safety Management Practices in SMEs in India. Safety and Health at Work 6, 46-55. Elsevier publication Online available from December 2014, at [http://www.e-shaw.net/article/S2093-7911\(14\)00081-X/pdf](http://www.e-shaw.net/article/S2093-7911(14)00081-X/pdf)
20. Yogita Chakravarthy, Aditee Potdar, Anju Singh, Seema Unnikrishnan and Neelima Naik, 2015, Role of Eco labeling in reducing ecotoxicology, Ecotoxicology and Environmental Safety (Vol. and Issue no. not yet provided). Available online from October 2015 doi:10.1016/j.ecoenv.2015.09.017.
21. Indrayani Nimkar, Anju Singh, Seema Unnikrishnan and Neelima Naik, 2015, Potential of GHG Emission Reduction from Agriculture Sector; International Journal of Global Warming 2015, 8 (1), 31-45.
22. Aditee Potdar, Anju Singh, Seema Unnikrishnan, Neelima Naik, Mayuri Naik and Indrayani Nimkar, Innovation in Solid Waste Management Through Clean Development Mechanism in India and other countries: Process Safety and Environmental Protection, Available online 26 July 2015 In Press.
23. Vikrant Patil, Anju Singh, Neelima Naik, Seema Unnikrishnan and Prasad Khale: Change detection analysis of mangrove for effective implementation

of coastal zone management plans: Journal of Environmental Research and Development, Vol. 9 No. 04, April-June 2015.

24. Vikrant Patil, Anju Singh, Neelima Naik, and Seema Unnikrishnan: Estimation of Mangrove Carbon Stocks by Applying Remote Sensing and GIS Techniques; Wetlands, Springer, August 2015, Volume 35, Issue 4, pp. 695-707.

Management Development Programmes:

Have conducted more than 50 MDP programmes and more than 100 UBP programmes as the course leader. MDPs were conducted in the following areas.

- Air pollution Control
- Environmental Legislation [One program every year for the last 20 years]
- Industrial Waste Minimization and Recycling
- Environmental Management
- Safety Legislation
- Cleaner Production for Green Productivity
- ISO 14000 and Environmental Management
- Safety Health and Environmental Management Systems
- Industrial Disaster Management
- Risk Analysis and Disaster Management

Unit Based Programmes :

Safety, Health and Environmental Management Programs For

1. Ranbaxy at Delhi
2. Sterlite Industries at Aurangabad
3. United Phosphorus Ltd at Ankleshwar
4. Chambal Fertilizers Ltd at Kota, Rajasthan on Dec. 5th –6th 2005.

Legal requirements for ISO 14001 - [3 tailor made UBPS for Larsen and Toubro LTD] 2 at Powai and 1 at Faridabad

ISO 14001-awareness programme for Godrej and Boyce, Vikroli, Mumbai

Environmental Management for process industries for

1. Atul, Industries at Valsad
2. Gas Authority of India, Compressor Station at Jabua - 2 UBPS

3. IPCL at Nagothane and
4. BPCL Mumbai

Environmental Science Program for: Indian Registrar of Quality System at NITIE [2 in no]

Disaster Management Program for: Boruka Power Corporation Ltd. Bangalore in December 2007

Strategic Environmental Management Program for NTPC senior officers – General Managers and D.G.Ms at their western Headquarters, Mumbai on 29th Sep.2008 and 21-22 June 2012.

Clean Coal Technologies and Carbon markets for NTPC, Ramagundam Plant in August 11th -12th 2009

Risk Analysis, HAZOP, Disaster management plan and behavioral Safety – 23 programs for IOC marketing division, 2 each for BPCL and HPCL [2010 - 11]

Hazard Identification Techniques, Risk Assessment and Risk Mitigation - 3 programmes for IOC pipeline division [2010-2011].

Risk Analysis, HAZOP, Disaster management plan and behavioral Safety- 6 programs for IOC marketing division.[sep – Nov.2012]

12 programmes on Risk Analysis, HAZOP, Disaster management plan and behavioral Safety- for IOC marketing division, HPCL and BPCL.[2013 to 2014]

Consultancy Assignments

- Team member of the ONGC consultancy project on Up-gradation and integration of operation Manuals. As a part of this assignment we have made 16 operation manuals for each plant at ONGC Uran[2008-2009]
- Team member of NTPC consultancy projects on Developing sustainability reports for NTPC plants in Jhanor [2009]
- Team member of NTPC consultancy projects on Developing sustainability reports for NTPC plants in Kawas etc.[2009]
- Team member of the Air Force Consultancy project on “Eco-Friendly Disposal of waste out of aircraft and aero engine overhaul/repairs at Chakeri Base, Kanpur [2011]

- Team member of the Consultancy project on Corporate Social Responsibility at ONGC, Nhava.2011
- Team member of the Consultancy projects on Corporate Social Responsibility at ONGC, Panvel.2011

Research and MODROB Projects handled at NITIE :

- "Modernization and Up gradation of the Environmental Engineering Lab", sponsored by MHRD which was completed in the year 2000. Co coordinator of the project.
- "Expansion and Modernization of the Environmental Engineering lab" Extension project sanctioned in year 2002 under the MODROB scheme of MHRD and completed in Year 2003 - Chief Coordinator of this Project
- Safety bench marking project sponsored by AICTE – one of the Investigators in this Project
- " Cost Benefit Analysis of Cleaner Production Technologies in Indian Industries ", Sponsored by the World Bank, through IGDIR completed in 2001. Co investigator of the project
- " The impact of ISO 14001 implementation in Indian Industries " Sponsored by AICTE through IIP cell completed in 2000. Chief Coordinator of the project
- Environmental Strategies for Taloja Region completed in Dec. 2003 under the industry institute partnership cell of NITIE and sponsored by AICTE. Principal Investigator of this Project

Awards:

- Received Jawaharlal Nehru proficiency award from the Government of INDIA- 1989
- Gold Medallist [M Sc.] - Madras University – 1989
- Director's Citation for Exemplary performance from NITIE on August 15th 2004