Professional Profile

I. Personal Information

Name: SUMAN MAITY
Date of Birth: 29.06.1978
Current Position & Domain: Deputy Director, Environment
Office Location: Regional Directorate, Kolkata
Languages: English, Bengali, Hindi, Oriya (reading, writing and speaking)
Contact: (033) 22876069/3116
Email : suman.maity@npcindia.gov.in, sumanmaity7524@gmail.com

II. Professional Summary

20 years of consulting and industry experience in execution of consultancy and training activities in diverse environmental business areas/ Environment Trainer & Specialist / ESG / Circular Economy/ Energy Efficiency/ Project Management/Sustainability & Climate Change/Mining/Cleaner Production & Waste Minimization

III. Areas of Expertise

Primary Domains: Environment Management, Waste Management, ESG & Sustainable development, Environmental Monitoring & Reporting, Hazardous & Bio-Medical Waste Mgmt.
Specialized Skills: Problem solving, analytical skills, Leadership, creativity
Industry Focus: Steel sector, Mining Industry, cement sector

IV. Professional Experience

My experience in various capacities in the different organizations especially those which made a positive impact to the organization are given hereunder in reverse chronological order.

Current Position: Deputy Director
Organisation: National Productivity Council, Under DPIIT, Ministry of Commerce & Industry, Govt. of India
Duration: 07.09.2015 to till date (07.02.2025)
Key Responsibilities:

- Helping the team of professionals to ascertain the profitability and growth of the division and in turn of the organization;
- Execution of consultancy and training activities in diverse environmental business areas;
- Developing new businesses in the field of environment;
- To carry out consultancy assignments in the field of Environmental management. To recommend improvements so as to enhance productivity in the organization;
- To plan, organize and conduct training programme. To impart knowledge to participants so as to improve productivity of the organization;
- To prepare report and reading material for above stated activities;
- To perform developmental activities so as to propagate concept of productivity improvement;
- To execute all professional and administrative activities entrusted by Regional Director;
- Ultimate responsibility for enhancing revenue for the organisation by extending services to the client organisation ensuring satisfaction and meeting delivery schedule of the services;
- Support responsibility along with Regional Director for providing/arranging necessary resources to meet the targets qualitatively, quantitatively and in time;
- Responsible for achieving cost control and efficient execution of task in cost effective manner;
- Acts as a member of committee recommended by Regional Director for management of the office and liaison with the Government offices as and when required.

Previous Position 1: Asst. Director
Organisation: National Productivity Council, Under DPIIT, Ministry of Commerce & Industry, Govt. of India
Duration: 01.06.2007 to 06.09.2015
Key Responsibilities:

- Execution of consultancy and training activities in diverse environmental business areas;
- To carry out consultancy assignments in the field of Environmental management. To recommend improvements so as to enhance productivity in the organization;
- To plan, organize and conduct training programme. To impart knowledge to participants so as to improve productivity of the organization;
- To prepare report and reading material for above stated activities;
- To perform developmental activities so as to propagate concept of productivity improvement;
- To execute all professional and administrative activities entrusted by Regional Director;
- Support responsibility along with Regional Director for providing/arranging necessary resources to meet the targets qualitatively, quantitatively and in time;
- Acts as a member of committee recommended by Regional Director for management of the office and liaison with the Government offices as and when required.

Previous Position 2: Sr. Consultant (Environment)
Organisation: MinMec Consultancy Pvt. Ltd, New Delhi
Duration: July 2006 - May 2007
Key Responsibilities:
Min Mec Consultancy Private Limited was founded in July 1983 by a few experienced mining engineers. Over the decades the Company has expanded its activities from providing services in mine planning to environment, social, hydrogeology and laboratory analysis. My job profile involved helping client in providing consultancy on mine planning, mining environment projects, other environmental and social impact projects.

Previous Position 3 : Manager (Environment, Health & Safety)
Organisation: Rexon Stripes Ltd, Rourkela, Odisha
Duration: Jul 2005 - Jul 2006
Key Responsibilities:
As an EHS (Environmental, Health, and Safety) Manager, my role was to oversee and implement policies and practices that ensure a safe and compliant working environment for employees. I had developed and enforced safety and environment procedures, conducted risk assessments, and coordinated employee training programs.

V. Major Project Experience in NPC

Project Title 1: Inventorization of Hazardous and Other waste generating units/Industries in Tripura State"

Client Name: Tripura State Pollution Control Board (TSPCB)
Type: Statutory Board under State Government
Sector: Environment Regulatory Board
Role: Team Leader
Duration: September 2021 to June 2023
Problem Definition:

- Inventory of all Hazardous and other waste generating Industries/Units in the state of Tripura;
- Assessment of Hazardous and other waste management in the state;
- Development of Hazardous Waste Generation Factor based on the type of waste;

- Understanding the gap between generation of Hazardous and other wastes in the State and treatment/disposal methodologies ;
- Preparation of Report.

Recommendations Made:

Quantification: Total generation of hazardous waste by 86 units has been found to be 331.2836 MT per annum (TPA). In respect of disposal options, majority of the generated waste is recyclable, which is around 78.5% of the total waste generation. A small quantity of waste (0.2% of total waste generation) is incinerable waste, while secured landfillable waste is around 21.3% of the total waste generation.

Treatment Facilities Available: At present, the state of Tripura does not have a common Treatment, Storage & Disposal Facility (TSDF) for non-recyclable, non-utilizable hazardous waste.

Requirement of Treatment Facilities: It is proposed to set up an Common Hazardous Waste Treatment, Storage and Disposal Facilities (TSDF) in the state for non-recyclable, non-utilizable hazardous waste either for landfilling in secured landfill or incineration.

Impact Created:

Based on the field visits, hazardous waste generating units operating in the state and total generation of hazardous waste were estimated during the course of inventorization exercise. Also, it was proposed to set up a Hazardous Waste Treatment, Storage and Disposal Facilities (TSDFs) in the state for non-recyclable, non-utilizable hazardous waste either for landfilling in secured landfill or incineration, since the state of Tripura does not have a Treatment, Storage & Disposal Facility (TSDF) for non-recyclable, non-utilizable hazardous waste. This would further strengthen the waste disposal options in the North-Eastern Region.

Project Title 2: Inventorization of Bio-Medical waste in the state of West Bengal

Client Name: West Bengal Pollution Control Board (WBPCB)
Type: Statutory Board under State Government
Sector: Environment Regulatory Board
Role: Team Leader
Duration: July 2019 to March 2020
Problem Definition: The objective of the study is to carry out Inventorization of Bio Medical Waste in the state of West Bengal as per Bio-Medical Waste Management Rules, 2016(Schedule III). The main objectives of this study are as follows:

- Quantitative assessment of Bio Medical waste generated in different Health Care Units (HCUs) category wise (bedded hospitals & nursing homes and non-bedded health care units) in the state of West Bengal;
- Assessing the status of authorization of HCUs in the state of West Bengal;
- Inventorization of the existing system of storage, collection, transportation and disposal of Bio-medical waste in the HCUs& Common Bio Medical Waste Treatment Facilitator (CBWTF) and identification of deficiencies in the respective management system.
- Gap analysis of district-wise BMW generation and availability of treatment facilities in the HCUs;
- Assessment of membership status of HCUs with CBWTFs.

Recommendations Made:

Quantification: Total BMW generated in the state from these facilities is around 20694 MT per year. With a rate of increase of 1% per year, the annual generation of BMW in the state has been estimated to be nearly 23000 MT in the year 2030. 45% of the BMW as a whole is made of recyclable materials. If the recyclable

items can be properly segregated, decontaminated and then recycled, a good amount of resources can be saved in environment-friendly manner. But if these are salvaged through unscrupulous recyclable trade practices or incinerated or left in dumpsites, huge risk of environmental pollution and adverse health effect cannot be avoided.

Treatment Facilities Available: At present there are 7 CBWTFs in the state of which 6 CBWTFs are operational while the CBWTF at Hooghly was not operational during the study period. All the seven facilities have autoclaves, shredders and incinerators for treatment of the bio-medical wastes. The operators collect BMWs (segregated into incinerable and autoclavable in colour coded bags or containers) from their member HCEs and transport the wastes to their treatment and disposal facilities. All the facilities having capacity to treat BMW of beds ranging from 10000 to 30000 per day. These are all private facilities. Their areas of operation cover specific districts ranging from 2 to 8. Only one CBWTF that is West Bengal Waste Management Facility, Haldia (WBWML) has designated secured landfill for disposal of incineration ash. All other facilities having incinerator send incineration ash to this facility for disposal. Out of 8217 health care units, a total of 6264 health care units covering 1,20,765 beds are having membership with CBWTFs, treating 13300 MT of BMW per annum.

Further Requirement of Treatment Facilities: BMW treatment capacity as a whole available in the state is 100% of its present generation. But that does not indicate that the capacity is enough in all the regions. CBWTF has to be made available within an optimum distance from the generation point of BMW. In Central region, already capacity falls much short of production, in West Region falls short, in North region falls short whereas it is largely excess in South-West region. Since the South Region and the South East Region is a combination of districts of Kolkata, South 24 Parganas and North 24 Parganas, the combined capacity indicates excess of total generation, but the percentage may be lesser if calculated for individual regions. To cater to the requirement both by capacity and accessibility it is recommended that seven more facilities should come up. Initiative should be taken to install 7 more CBWTFs - 1 in North 24 Parganas, 1 in Kolkata, 1 in Murshidabad, 1 in Purba Burdwan, 1 in Bankura, 1 in Coochbehar and 1 in Uttar Dinajpur.

Status of BMW authorization: On the basis of comparative study conducted on the data obtained from various Regional Offices of WBPCB, Circle offices and Waste Management Cell at Paribesh Bhavan, it was found that currenty 3322 nos. of health care units are not authorized to handle BMW. These units have to apply either for fresh application or renewal for authorization through online platform as provided in WBPCB website. Emphasis need to be given to pursue the HCUs to come under agreement with CBWTFs of respective areas.

Impact Created:

- The State has established 7 more CBWTFs - 1 in North 24 Parganas, 1 in Kolkata, 1 in Murshidabad, 1 in Purba Burdwan, 1 in Bankura, 1 in Coochbehar and 1 in Uttar Dinajpur.
- Authorization has been provided by WBPCB, who were not authorized to handle BMW.

Project Title 3: Capacity building training programmes on latest waste management rules for stakeholders

Client Name: West Bengal Pollution Control Board (WBPCB)
Type: Statutory Board under State Government
Sector: Environment Regulatory Board
Role: Team Leader
Duration: July 2019 to March 2020
Problem Definition:
With a view to impart better understanding of latest waste management rules among all the stakeholders & to promote awareness about new rules & regulations which could be adopted, ten (10) Nos. of one day Awareness programmes in the 1st phase (August –September, 2019) and ten (10) Nos. of one day Awareness programmes in the 2nd phase (January-February, 2020) under the jurisdiction/area coverage of each Regional Office (RO) of WBPCB covering all the districts of West Bengal. A total no. of 20 Awareness Programmes has been conducted in both the phases. In each phase, one Awareness Programme has been conducted under the jurisdiction of each the 10 Nos. ROs. The objectives of the awareness programs were designed to create awareness, pro-activeness and confidence building on waste management. The inputs and knowledge to be gained by the participants after the programme have enabled them to review and prepare various issues of concern in waste management area. The programmes were being offered to provide comprehensive inputs to the participants.

Impact Created:

Around 1353 participants were trained in the various programs organized in cities/towns spread throughout the state of West Bengal. The programme brought together the representatives from Industry, Govt. organizations dealing with Environment Management, Environmental consultants, Govt. officials related to policy & regulation on Environmental issues, NGOs and other stakeholders. The spectrum of participants includes a heterogeneous mix of Industrial sectors, Health Care Units, Urban Local Bodies, builders and civil contractors, recyclers etc. Overall, the response from the participants were found to be positive. The learning events were well received by the participants who rated the experience as either good or excellent. Written comments on the evaluations were also found to be positive, indicating that the participants appreciated the learning opportunity. Some participants have opined certain suggestions for improvement. Many participants felt that the learning event have benefited from in-depth exchange of best practices and challenges, a more probing review of resource materials and finally more time to discuss and develop action plans. Since the feedback collected from the participants were during the learning stage, therefore it's difficult to provide an accurate assessment of how the learning would be applied in the workplace after the learning event took place. It was clear from the results outlined in the evaluations above that there is increased understanding and knowledge of the latest waste management rules among participants. As a result, it was not surprising to see that progress will be made with regards to the subject matter. Overall, the majority of participants had managed to clarify expectations and promote better understanding the issues for developing strategies.

Project Title 4: Formulation of Schedule of Rates (SOR) for hiring of HEMM and coal & sand transportation

Client Name: Eastern Coalfields Ltd.(ECL)
Type: CPSU
Sector: Mining
Role: Team Leader
Duration: October 2018 to September 2019
Problem Definition:
ECL is undertaking mining operation activities in both contractual and departmental mode. Under the contractual patch, the organization has been engaging civilian contractors for hiring of Heavy Earth Moving Machinery (HEMM) for Mechanized coal & Overburden (OB) excavation, loading, transportation and allied jobs. The Departmental Coal produced is being transported to railway siding through engaging civilian contractors under existing SOR through discount bidding. ECL has entrusted NPC for preparation of Scheduled of Rates (SOR) for Mechanized coal Extraction, Mechanized Overburden removal and transportation through trucks/tippers of coal, OB and re-handling of OB, sand transportation from river bed for stowing activities in underground mines, mine dewatering activities due to underground seepage including rain water at different lead ranges by outsourcing mode through outside agencies.

Recommendations Made:

- Formulation of Schedule of Rates (SOR) for different lead ranges in mining Open Cast Projects (OCP) and coal & sand transportation.
- Lead wise(with **discrete** slab width of 1 km), surface condition wise, Equipment wise detailed SOR Calculations based on the current diesel/electric/CNG rates along with other costs;
- Designing of empirical formulae / equations for updation of SOR rate based above data collections with the various statistical tools/software;
- Establishing the Values of various constants for the aforesaid empirical formulae / equations for the already mentioned scenarios through Extrapolation/Interpolation.

Impact Created:

The Schedule of Rates (SOR) were formulated for hiring of HEMM and discrete slab for lead ranges in coal and sand transportation. This structured list of rates were issued by ECL as SOR-2019 and are used for payment to civilian contractors on the basis of per ton of coal handled/OB excavated.

In December 2024, based on the success of the study, ECL has again entrusted NPC to update the SOR-2019 and formulate SOR for additional items for hiring of HEMM and coal/sand transportation.

Project Title 5: Capacity building of Designated Entities of Eastern & North Eastern Regions

Client Name: Shakti Sustainable Energy Foundation, New Delhi

Type: Shakti is a not-for-profit, section 25 company with its focus on supporting India's developmental and energy security objectives.
Sector: Clean Energy
Role: Team Leader
Duration: December 2015 to November 2016
Problem Definition:
The objective of the initiative is to Impart better understanding of Perform, Achieve & Trade (PAT) mechanism in the Industry and SDAs, create awareness about new energy efficient technologies which could be adopted, create awareness on achievement of energy reduction through sharing of success stories. NPC had organised

4 numbers of two days' non-residential capacity building workshops at Kolkata, Bhubaneswar, Guwahati and Ranchi for designated entities in eastern region and north eastern region of India.

- Impart better understanding of PAT mechanism in the industry and SDAs;
- Create awareness about new energy efficient technologies which could be adopted;
- Create awareness on achievement of Energy reduction through sharing of success stories.
- To provide a platform to discuss about the Normalization Methodology and Reporting Format, M&V Guideline, Role of State Designated Agency (SDA), Role of Accredited Energy Auditor/Agency in the PAT Scheme.

Impact Created:

The focus of the events has been to create a benchmark for all the stakeholders under the purview of PAT scheme by giving them exposure to the best Energy conservation practices and Energy reduction achievements adopted and implemented by their peers/counterparts so that they could learn, adopt and implement these practices in their respective organizations, which could further help them to achieve and fulfill the desired Energy Efficiency targets. The programs have also given a platform and opportunity to the participants for networking with the speakers, experts and fellow participants. The events also helped the DCs to contribute in the continuous endeavor in developing and upgrading skills & knowledge about the PAT compliance procedures and mechanisms. Furthermore, the capacity building programmes helped the industries (already included in PAT cycle 1) to redefine or re-brush the entire process of PAT procedural mechanism by identifying techniques and thereby incorporating in their system and making sync with the current trend.

VI. Educational Background

Post Graduation Level

- **Degree:** Master of Technology (M.Tech)
- **Institution:** Indian Institute of Technology-Indian School of Mines (IIT-ISM), Dhanbad
- **Type:** 2 years Full Time course curriculum
- **Year:** 2005
- **Specialization:** Environment Science & Engineering

Graduation Level

- **Degree:** Bachelor of Technology (B.Tech)
- **Institution:** National Institute of Technology, (NIT), Rourkela
- **Type:** 4 years Full Time course curriculum
- **Year:** 2002
- **Specialization:** Mining Engineering

Additional Professional Qualifications:

GRI Certified Training on Sustainable Reporting with the GRI Standards 2021

- Global Reporting Initiative (GRI) Issued Jul 2023 Credential ID C46511
- Skills: Corporate Sustainability Reporting

Certificate in Project Management(CIPM)

- International Institute of Projects and Program Management (i2P2M)
  Issued May 2019 Credential ID CIPM 19 12397
- Skills: Project Management

Certified Trainer on Wastewater Treatment Plant Technician under Skill Council for Green Jobs(SCGJ)

- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Issued Oct 2018

CQI and IRCA Certified ISO 14001: 2015 EMS Lead Auditor Training Course

- BSI Training Academy Issued Jul 2018 Credential ID Certificate No. ENR- 00543951
- **Skills:** Environment Management Systems

IRCA Certified ISO 50001: 2011 Energy Management System EnMS Lead Auditor Training Course

- BSI Training Academy Issued Mar 2015 Credential ID Certificate No. ENR – 00186584
- Skills: Energy Management Systems (EMS)

APO Certified MFCA /ISO 14051 Expert

- Asian Productivity Organization, Tokyo Japan Issued Jan 2014
- **Skills:** Material Flow Cost Accounting

Certified Trainer on Six Waste Management Rules 2016 for Central Pollution Control Board (CPCB), MoEFCC ; Certified Trainer for Productivity Tools & Techniques on 5S conducted by NPC.

VII. Research and Publications

Recent Publications:

- Gorai, A. K., Maity, S and Pal, A. K. Development of the path model in road traffic noise annoyance of Dhanbad township. Journal of Noise & Vibration Worldwide, Vol 38 (3), March 2007, pp 17-22.

- Maity, S., Gorai, A.K. and Pal, A.K. Determination of Path Coefficients and Its Application in Road Traffic Noise Annoyance – A Theoretical Approach. Environmental Monitoring and Assessment, Springer Netherlands 2006, 117: 21-26.

- Gorai, A. K., Pal, A. K & Maity, S. (2007). Development of the Traffic Noise Prediction Model, Asian Journal of Water, Environment and Pollution, Vol. 4(2), pp. 65-74.

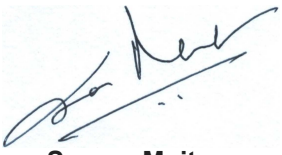
Speaking Engagements:

- Delivered presentation in conference of Ceramic Tiles Association, Mobri at Rakjot on “Cleaner Production/Energy Efficiency in Glaze Tiles sector;
- Delivered detailed presentation at Workshop on survey on Leather & Leather Products Sector & Evaluation of ILDP at Kolkata on 3rd November, 2016, covering the present status of the leather sector and various sub schemes of ILDP implemented during the 12th plan period;
- Delivered lecture on “Efficient Boiler Management” at practice oriented training for boiler operators organized by Chhattisgarh State Renewable Energy Development Agency (CREDA) on 23rd & 24th July, 2015 at Raipur, Chhattisgarh and 26th & 27th November, 2015 at Raigarh, Chattisgarh;
- Delivered presentation on Cleaner Production demonstration projects & clinics organized by Dept. of Forest & Environment, Govt. of Gujarat for Automobile sector, Steel sector, Cement sector, ceramic tiles sector, thermal power plant, Sugar & Distillery Sector etc.;
- Delivered lecture on coal power plants emission for the study Assessment in support of generation side efficiency and tighter emission standards for coal based thermal power plants organized by Shakti Sustainable Energy Foundation, New Delhi on 5th December, 2013;

- Delivered presentation on Material Flow Cost Accounting (MFCA) at Bhubaneswar on 10th January, 2014, 6th August,2014 at Kolkata and at Hotel Royale de Casa, Guwahati on 27th December, 2014 under plan project "Productivity Promotion through special focus on Innovation and Dissemination for Multiplier effect"
- Delivered final presentation on “Environmental status in WCL of Vidharbha region of Maharashtra” at CPCB, Vadodara;
- Delivered final presentation at MoEF for environmental clearance of M/s Alok Industries Ltd;
- Delivering presentation on the topic “ Productivity Improvement through Cleaner Production for M/s ONGC Ltd, Western onshore Basin, Vadodara;
- Imparted training for capacity building of final year engineering student & academicians on various technical aspects related to Environmental issues with special emphasis on Cleaner Production Sponsored by Forests & Environment Department, Govt. of Gujarat;
- Delivering presentation/ session on Hazardous waste management & Handling for Two days Training Program on ”Management of Hazardous Waste, Used Batteries & E-Waste” sponsored by MoEF, Govt. of India;
- Delivered final presentation for 12th Plan Project entitled” “Preparation of good practices manuals for green house gas emission reduction in five energy intensive industry sectors in India.”
- Delivered presentations for IOCL, Eastern Region, Kolkata for Productivity Week celebration 2016 on with theme “Ease of Doing Business for Higher Productivity and Sustainable Growth” and also for Productivity Week celebration 2017 on with theme “From Waste to Profit through Reduce, Recycle and Reuse”;
- Delivered presentations as trainer for 5 days Training Program was conducted on Upgradation and Internal auditors on ISO 9001:2015 and ISO 14001:2015 for middle & senior level management at Rail Wheel Plant, Bela, Bihar;
- Presentations were delivered on latest waste management rules for 20 Nos. of Awareness Programmes conducted in the state of West Bengal for West Bengal Pollution Control Board (WBPCB); A total of 64 nos. of presentations were delivered by me on WM rules in the awareness programmes.
- Speaker on 11 nos. of webinars conducted during COVID period FY 2021-22 & FY 2022-23 on various environment management topics;
- Delivered presentation in capacity building programmes on Bio-Medical Waste Management at M.R.Bangur Hospital, Kolkata and Nadia District Hospital, West Bengal;
- Delivered presentation on Hazardous Waste Management for employees of Tripura State Pollution Control Board (TSPCB) on 3th June, 2022;
- Trained employees of National Aluminium Company (NALCO) on ESG & Business Responsibility and Sustainability Report (BRSR) at Bhubaneswar on 20th & 21st July, 2023;

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that I shall be responsible for any willful misstatement described herein.



Date: 07.02.2025

Place: Kolkata

Suman Maity

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