TEMPLATE

NPC Consultant Professional Profile

I. Personal Information

Name: Natarajan Pratap
Date of Birth: 01/05/1980
Current Position& Domain: Director Grade I, Environment and Climate Action
Office Location: Regional Directorate, Gandhinagar, Gujarat
Languages: Proficient in English, Hindi and Tamil
Contact: Email: n.pratap@npcindia.gov.in, Mobile No. 9898903566

II. Professional Summary

With over 22 years of extensive experience, I am a dedicated environmental professional specializing in delivering expert technical advisory, consultancy, and training services across diverse sectors and organization sizes. My expertise lies in waste management and pollution prevention, where I help clients achieve Green Productivity through enhanced resource efficiency and environmental performance. I am committed to fostering a culture of productivity awareness and environmental consciousness among government bodies, businesses, and society at large. My mission is to drive sustainable development and create a positive environmental impact through innovative solutions and best practices.

III. Areas of Expertise

Primary Domains: Pollution Prevention and Control, Waste Management, Circular Economy, Sustainability
Specialized Skills: Environmental Governance, Cleaner Production, Material Flow Cost Accounting, Environmental Social and Governance (ESG)
Industry Focus: Vitrified and Glaze Tiles, Cement, Tire, Thermal Power Plants, Laminate Sheetetc.

IV. Professional Experience

Current Position: Director Grade I**Organisation:**NPC, Gandhinagar**Duration:**September 2023 - Present
Key Responsibilities:

- My strategic role is to integrate environmental sustainability with productivity enhancement, fostering a culture of green growth and efficient resource utilization across sectors.
- As a Project Leader, I have successfully managed and executed numerous projects, showcasing my ability to guide and oversee complex initiatives from inception to completion.
- Providing consultancy and training services showcases my ability to mentor and develop others, sharing my extensive knowledge and expertise with my team and clients.
- My role involves preparing technical proposals, conducting field studies, delivering presentations, and imparting training, demonstrates my hands-on leadership approach and technical acumen.
- Performing necessary developmental activities for the promotion of “Productivity Culture” and timely execution of professional and administrative tasks illustrates my comprehensive leadership skills and dedication to organizational growth.

- My role in inspection, verification, evaluation, and selection processes highlights my decision-making abilities and commitment to environmental excellence.
- Some of the key projects led include;
    i. Verification of Registered E-Waste Recyclers/Dismantlers (15 Nos.) in Gujaratfor the Gujarat Pollution Control Board (GPCB), Government of Gujarat
    ii. Feasibility Study, Detailed Design and Development of Secured Landfill - 9 for Hindalco Industries (Unit: M/s Birla Copper, Dahej)
    iii. Pilot Study for Verification of Plastic Waste Processors in Gujarat (5 Nos.)for the Gujarat Pollution Control Board (GPCB)
    iv. Conduct of 2 Sustainability Conclaves on "Productivity and Green Growth" at Ganpat University and Gati Shakti Vishwavidyalaya, Vadodara
    v. Conduct of 5 Days Residential Training program on ESG for Sustainability at Port Blair
    vi. Performance Evaluation of Air Pollution Control Equipment's for M/s Balkrishna Industries Ltd., Bhuj

Previous Position: Director Grade II**Organisation:**NPC, Gandhinagar**Duration:**July 2019–August 2023
Key Responsibilities:

- My strategic role is to integrate environmental sustainability with productivity enhancement, fostering a culture of green growth and efficient resource utilization across sectors.
- As a Project Leader, I have successfully managed and executed numerous projects, showcasing my ability to guide and oversee complex initiatives from inception to completion.
- Providing consultancy and training services showcases my ability to mentor and develop others, sharing my extensive knowledge and expertise with my team and clients.
- My role involves preparing technical proposals, conducting field studies, delivering presentations, and imparting training, demonstrates my hands-on leadership approach and technical acumen.
- Performing necessary developmental activities for the promotion of "Productivity Culture" and timely execution of professional and administrative tasks illustrates my comprehensive leadership skills and dedication to organizational growth.
- Serving on various committees, such as the State Expert Appraisal Committee and the Gujarat State Cleaner Production Awards Committee, demonstrates my leadership in policy-making and environmental governance.
- My role in inspection, verification, evaluation, and selection processes highlights my decision-making abilities and commitment to environmental excellence.
- Key projects led include
    i. Bio-Medical Waste Management Study of 10 Government Hospitals in Gujarat for M/s IPL Centre for Rural Outreach (ICRO)
    ii. Feasibility Study and preparation of DPR for Mega Common Facility Centres at Mumbai and Surat for the GJEPC, Ministry of Commerce and Industry
    iii. Evaluation of Spray Dryers/Multiple Effect Evaporators in the Naroda region for Dust/Environmental Management and Resource Efficiency for M/s Naroda Enviro Projects Ltd. (Member Companies)

iv. Assessment of Pollution Load received from River Sabarmati from the different sources of treated Sewage and Industrial Wastewater Discharges for M/s Ahmedabad Mega Clean Association (AMCA), Ahmedabad
v. Developed e-Learning Courses for NPC on Waste Management and Pollution Prevention, Sustainable Waste Management and Advanced Environmental Tools for enhanced Productivity
vi. As an organized and effective trainer, I have conducted and served as an expert faculty in five webinars covering key topics such as E-Waste Management Rules, 2016; Plastic Waste Management Rules, 2016; Material Flow Cost Accounting; Solid Waste Management, 2016; and Waste Minimization – the Need of the Hour.

Previous Position: Deputy Director**Organisation:**NPC, Gandhinagar**Duration:**February 2010 – June 2019
Key Responsibilities:

- My strategic role is to integrate environmental sustainability with productivity enhancement, fostering a culture of green growth and efficient resource utilization across sectors.
- As a Project Leader, I have successfully managed and executed numerous projects, showcasing my ability to guide and oversee complex initiatives from inception to completion.
- Providing consultancy and training services showcases my ability to mentor and develop others, sharing my extensive knowledge and expertise with my team and clients.
- My role involves preparing technical proposals, conducting field studies, delivering presentations, and imparting training, demonstrates my hands-on leadership approach and technical acumen.
- Performing necessary developmental activities for the promotion of "Productivity Culture" and timely execution of professional and administrative tasks illustrates my comprehensive leadership skills and dedication to organizational growth.
- Serving on various committees, such as the State Expert Appraisal Committee and the Gujarat State Cleaner Production Awards Committee, demonstrates my leadership in policy-making and environmental governance.
- My role in inspection, verification, evaluation, and selection processes highlights my decision-making abilities and commitment to environmental excellence.
- Key projects led include
    i. Productivity Promotion with special focus on Innovation and Dissemination for multiplier effect on MFCA – a Plan Project from DPIIT, Ministry of Commerce and Industry
    ii. Adequacy and Performance Evaluation of Spray Dryers and Gasifiers for M/s Green Environment Services Co-operative Society Ltd. (GESCSL), Vatva
    iii. Capacity building of School Students of Daman Diu and Dadra and Nagar Haveli (DD&DNH) on need for Pollution Prevention and latest Environment Management Practices for Pollution Control Committee (PCC), DD&DNH
    iv. Capacity Building of Students and Academicians on Environment Management with special emphasis on Cleaner Production for the Forests and Environment Department, Government of Gujarat
    v. Study of Groundwater Quality and its compliance due to operations of Secured Landfill for M/s Saurashtra Enviro Projects Pvt.Limited (SEPPL)

vi. Evaluation of Feasibility for a larger capacity Secured Landfill based on Technical and Design Considerations for Hindalco Industries (Unit: M/s Birla Copper, Dahej)
vii. Study on Adequacy of Pollution Control Equipment's installed and Fugitive Emission Management for M/s Adani Petronet Port (Dahej) Pvt. Ltd. etc.

Previous Position: Assistant Director**Organisation:**NPC, Gandhinagar**Duration:**January 2006 – January 2010
Key Responsibilities:

- My strategic role is to integrate environmental sustainability with productivity enhancement, fostering a culture of green growth and efficient resource utilization across sectors.
- As a Project Leader, I have successfully managed and executed numerous projects, showcasing my ability to guide and oversee complex initiatives from inception to completion.
- Providing consultancy and training services showcases my ability to mentor and develop others, sharing my extensive knowledge and expertise with my team and clients.
- My role involves preparing technical proposals, conducting field studies, delivering presentations, and imparting training, demonstrates my hands-on leadership approach and technical acumen.
- Performing necessary developmental activities for the promotion of "Productivity Culture" and timely execution of professional and administrative tasks.
- Key projects led include
    i. Cleaner Production Demonstration/Assessment studies were carried out in sectors such as Cement, Thermal Power Stations, Secondary Steel, Sugar and Distillery, Decorative Laminate Sheet Manufacturing, Rice Milling, Edible Oil, Automobile, Vertical Shaft Kiln, Industrial Boilers, Government Office Buildings etc. for the Forests and Environment Department, Government of Gujarat.
    ii. Cleaner Production options in treating specific trade effluents with high COD and TDS for the Forests and Environment Department.
    iii. Structured Training Program for GPCB officials on CP, CDM and other Environment Protection related topics
    iv. Development of Cleaner Production Strategic Road Map for future activities in Gujarat
    v. Cleaner Production Assessment in Vitrified Tiles Units for Gujarat Tiles Association

V. Major Project Experience in NPC

1. **Project Title:** Cleaner Production Assessment in Vitrified Tiles Manufacturing Units
   Client Name: Gujarat Granito Manufacturers Association (in association with GPCB)
   Type: Private **Sector:** Vitrified Tiles Manufacturing
   Role: Project Leader
   Duration: 6 Months

   Problem Definition: To undertake Cleaner Production Assessment in 2 Vitrified Tiles Manufacturing Units as a pilot scale to enhance the Productivity, Resource Efficiency and Environmental Performance. The project was undertaken on behalf of Gujarat Granito Manufacturers Association in association with GPCB, Govt. of Gujarat, to control emissions for Vitrified Tiles Industries. The study findings were disseminated to other member industries.

   Recommendations Made:

   i. Air Pollution Control: Segregate storage areas, use enclosed silos, install bagfilters, and maintain air quality monitoring equipment.
   ii. Water Pollution Prevention: Optimize water usage, treat wastewater in ETP, and install flow meters.
   iii. Solid Waste Management: Use moisture sensors, provide filter press for ETP, and reuse or properly dispose of sludge.
   iv. Resource Conservation: Check raw material quality, reduce excess air in combustion, and optimize spray drier feed quantity.
   v. Energy Efficiency: Optimize grinding-cycle time, install VFDs for fans, improve kiln sealing, and maximize natural lighting.
   vi. Industrial Safety: Install shield guards, provide PPEs, and train workers on safety aspects.
   vii. Coal Handling: Proper sizing, conditioning, and blending of coal to ensure efficient combustion.

   Impact Created:

   Quantifiable results achieved

   i. Anticipated Monetary Savings in 2 study units is Rs. 1,64,22,165/- with simple payback less than a year
   ii. Reduction in Air Pollution: Significant decrease in dust emissions and improved ambient air quality within the plant.
   iii. Water Savings: Reduction in water consumption by optimizing usage and reusing treated wastewater.
   iv. Solid Waste Reduction: Decreased percentage of broken tiles and effective reuse of sludge.
   v. Resource Optimization: Enhanced raw material utilization and reduced wastage.

Process improvements achieved

i. Air Quality: Better dust control and reduced fugitive emissions.
ii. Water Management: Efficient treatment and reuse of wastewater.
iii. Waste Management: Improved handling and disposal of solid waste.
iv. Energy Efficiency: Optimized energy consumption through various measures.

Cost savings or efficiency gains

i. Energy Savings: Reduced energy consumption through VFDs, better combustion, and heat recovery.
ii. Cost Savings: Lowered operational costs by minimizing wastage and optimizing resource utilization.
iii. Greenhouse Gas Reduction: Decreased greenhouse gas emissions through improved energy efficiency and use of low-sulfur fuels.

Capacity building outcomes

i. Training and Awareness: Workers trained on energy, environment, health, and safety aspects.
ii. Knowledge Sharing: Capacity building for other vitrified tile manufacturing units in Gujarat through the demonstration project.
iii. Enhanced Compliance: Improved adherence to environmental regulations and standards.

These outcomes highlight the project's success in achieving Cleaner Production and Energy Efficiency while supporting the overall productivity and profitability of the manufacturing units.

2. **Project Title:** Verification of Registered E-Waste Recyclers/Dismantlers in Gujarat
Client Name: Gujarat Pollution Control Board **Type:** Government**Sector:**Environment
Role: Project Leader
Duration:5 Months

Problem Definition: To undertake study of 15 representative registered E-Waste Recycling andDismantling Units (registered in the CPCB's Centralized Online Portal) in GujaratState to verify their Compliance/Statusand Capacity Verification

Recommendations Made:

i. Optimization of Capacity Utilization: Encourage units to maximize their processing capacity by addressing challenges related to e-waste procurement and streamlining dismantling activities.

ii. Implementation of Standard Operating Procedures (SOPs): Develop and implement SOPs for each machine and process to ensure consistency and efficiency in recycling operations.
iii. Installation of Adequate Infrastructure: Ensure dismantling activities are carried out on proper dismantling tables with suction hoods to capture dust and prevent environmental contamination.
iv. Use of Advanced Equipment: Install essential equipment like Data Degausser, weigh bridges, and compactors to enhance security, space utilization, and transportation efficiency.
v. 5S Practices: Adopt 5S practices (Sort, Set in order, Shine, Standardize, Sustain) for better workplace organization and productivity.
vi. Worker Training: Provide regular training to workers, especially in smaller units, on dismantling and recycling operations, and ensure the use of personal protective equipment (PPE).

Impact Created:

Quantifiable results achieved

i. Increased Capacity Utilization: Measurable increase in the percentage of consent capacity utilized by the recycling units.
ii. Improved Energy Efficiency: Reduction in specific energy consumption per ton of e-waste processed, particularly in units with higher machinery capacity.
iii. Enhanced Recycling Rates: Increase in the percentage of e-waste undergoing proper dismantling and recycling.
iv. Compliance with Environmental Standards: Higher compliance rates with GPCB and CPCB guidelines and conditions.

Process improvements achieved

i. Streamlined Dismantling Operations: Implementation of SOPs and proper infrastructure for dismantling activities, leading to more efficient and safer operations.
ii. Enhanced Data Management: Improved record-keeping for e-waste dismantling and recycling activities, including tracking of materials recovered.
iii. Operational Efficiency: Introduction of automation and advanced equipment to optimize recycling processes and reduce manual labor.

Cost savings or efficiency gains

i. Reduced Transportation Costs:Installation of compactors to reduce product volume and maximize space utilization, leading to better transportation efficiency.
ii. Lower Operational Costs: Implementation of energy management systems to monitor and reduce energy consumption.
iii. Increased Revenue from Resource Recovery:Maximizing the recovery of valuable materials from e-waste, generating additional revenue streams.

Capacity building outcomes

i. Skilled Workforce: Development of a trained and knowledgeable workforce through regular training programs.
ii. Stakeholder Collaboration: Enhanced collaboration between recyclers, producers, and other stakeholders to improve e-waste management.
iii. Technology Adoption: Adoption of advanced recycling technologies and equipment to improve efficiency and environmental performance.
iv. Sustainable Practices: Promotion of sustainable practices across recycling facilities, contributing to better environmental outcomes.

3. **Project Title:** Bio-Medical Waste Management Study of Government Hospitals
Client Name: IPL Centre for Rural Outreach **Type:**PSU**Sector:**Public Sector
Role: Project Leader
Duration:9 Months

Problem Definition:

i. To study the Bio-Medical Waste Management practices adopted at 10 Government Hospitals in Gujarat State.
ii. To conduct training for hospital staffs on Bio-Medical Waste Management.
iii. To identify gaps as per Bio-Medical Waste Management Rules, 2016.
iv. To suggest recommendations/Solutions for effective Bio-Medical Waste Management in accordance with the rules

Recommendations Made:

i. Segregation & Storage: Waste segregation at source and safe storage.
ii. Pre-treatment & Safety: Pre-treat specific wastes, phase out chlorinated plastics, immunize healthcare workers, provide PPEs, and regular training.
iii. Transport & Treatment: Vehicles authorized under Motor Vehicle Act, 1988, maintaining logs of treatment equipment.
iv. Collection & Disposal: Daily collection, timely disposal within 48 hours.
v. Facilities & Maintenance: Central waste collection room specifications, pest control, and waste transportation guidelines.

Impact Created:

Quantifiable results achieved

i. Reduced Infection Rates: Immunizing health care workers and using PPEs led to fewer workplace infections.
ii. Reduced Hazardous Waste: Phasing out chlorinated plastics decreased hazardous waste by an estimated 20%.

iii. Improved Compliance: Increased adherence to biomedical waste management regulations.

Process improvements achieved

i. Enhanced Segregation: Improved waste segregation at the source.
ii. Efficient Pre-treatment: Effective pre-treatment protocols for laboratory and microbiological waste.
iii. Streamlined Transport: Better waste transportation routes and authorized vehicle use.

Cost savings or efficiency gains

i. Lower Disposal Costs: Reduced hazardous waste disposal costs through better segregation and recycling practices.
ii. Operational Savings: Efficient use of treatment equipment and preventive maintenance.

Capacity building outcomes

i. Training Programs: Regular training of health care workers on Bio-Medical Waste Management.
ii. Skill Enhancement: Improved skills of waste handlers through proper training and immunization.
iii. Occupational Safety: Enhanced safety measures and reduced accidents in the workplace.

4. **Project Title:** Productivity Promotion with special focus on Innovation and Dissemination for multiplier effect
Client Name: DPIIT, Ministry of Commerce & Industry **Type:** Government **Sector:** Environment
Role: Project coordinatorand subject matter expert/trainer
Duration: 3 Years

Problem Definition:

i. To train SMEs across India by conducting Practice Oriented Certificate Course- The objective of such programmes is to create the awareness in MSME industries about the concept of material wastages in the manufacturing operations and significance of MFCA concept in reducing the wastages and thus inch towards the goal of sustainable development.

ii. To generate awareness and build capacity among SMEs and Stakeholders across India on MFCA - The objective of such programmes is to create the Capacity in Indian Industry for MFCA implementation as well as consulting and therefore these programmes were designed with the view to extensively train the participants with practical Implementation exposure.

Recommendations Made:

i. Awareness generation on material wastage in operations.
ii. Implementation of MFCA in MSMEs to reduce material and energy wastage and improve the productivity and overall environmental performance.
iii. Creation of a culture of continual improvement in organizations.

Impact Created:

Quantifiable results achieved

i. Approximately 2500 participants from 300 MSMEs were made aware of MFCA.
ii. Reduction in material wastages by 3-4% in each of the 40 projects undertaken.
iii. 42 improvement projects successfully undertaken by participants.
iv. Development of MFCA booklet, guidebook, video documentary and gallery.

Cost savings or efficiency gains

i. Reduction in material wastages by 3-4% in various industries, leading to cost savings.
ii. Completion of 40 projects focused on reducing material and energy wastages.
iii. Enhanced productivity and competitiveness in the participating industries.

Capacity building outcomes

i. 3 certificate-oriented programmes completed, training 150 participants as experts.
ii. 32 competent trainers available in India to train others in MFCA.
iii. Regional Directorate (RD), Gandhinagar trained more than 1250 participants in about 15 awareness programs.
iv. A total of 2167 participants trained across 44 programmes conducted by different RDs.
v. Establishment of a network of trainers and experts to propagate the concept of MFCA further.

VI. Educational Background

1. **Degree:** Bachelor of Technology (B.Tech)
   Institution: Madras University
   Type: Full Time
   Year: 2001
   Specialization: Chemical Engineering

2. **Degree:** Post Graduate Diploma in Industrial Safety
   Institution: Annamalai University
   Type: Part Time
   Year: 2002

Specialization: Industrial Safety

3. **Degree:** Master of Environmental Engineering
   Institution: Griffith University
   Type: Full Time
   Year: 2004
   Specialization: Environmental Engineering

4. **Degree:** Master of Business Administration (MBA)
   Institution: Bharathiar University
   Type: Part Time
   Year: 2006
   Specialization: Personnel Management

Additional Professional Qualifications:

Certifications:

1. Certified by GRI on "Reporting with the GRI Standards 2021 Update" (26th July 2024).
2. Training on Bharat 4.0: Digital Readiness Assessment Tool by NPC – APO.
3. Training on ISO IEC 17020:2012 and ISO 19011:2018 - Guidelines for Auditing Management Systems by Quality Care Services and NPC (3rdOctober 2019).

Professional Memberships:

1. State Expert Appraisal Committee (SEAC), Gujarat: Member from 2014 to 2020 – assisted SEIAA, Gujarat in project appraisals for environmental clearance.
2. Gujarat State Cleaner Production Awards Committee: Member, representing NPC, to select recipients of the Gujarat Cleaner Production Awards.

Specialized Training:

1. Material Flow Cost Accounting (MFCA) and ISO 14051: Trained by APO experts from Japan.
2. Capacity Building Project for Six Waste Management Rules (2016): Training of Trainers Programme by National Productivity Council and Central Pollution Control Board (29-30 June 2017).
3. Advanced Training Course for Green Productivity Practitioners: Asian Productivity Organization (APO) and Japan Productivity Center (JPC) (9-13 December 2013) in Tokyo, Japan.
4. Management and Monitoring of Agricultural Water Quality for Green Food Production in the Asia Pacific Region: Five-Day Study Meeting by APO, Japan (29 September - 3 October 2008) at Taipei, Taiwan.

IT Tools and Proficiency Level:

- Proficient in MS-Office Tools (MS-Word, MS-Excel and MS-PowerPoint).

VII. Research and Publications

Publications:

Title: An Alternative Efficient and Economical Method to Discharge High TDS and COD Effluents from the Industries

Journal: The IUP Journal of Chemical Engineering

- **Volume**: II, No. 3
- **Pages**: 33-43
- **Date**: September 2010
- **Posted**: 10th November 2010

Abstract: The paper discusses an innovative method for treating industrial effluents with high Total Dissolved Solids (TDS) and Chemical Oxygen Demand (COD). The proposed method aims to provide a cost-effective and efficient solution for industries to discharge these effluents, thereby reducing environmental impact and compliance costs.

Speaking Engagements:

1. **Expert Sessions**:
    i. "Verification of E-Waste Recyclers/Dismantlers in Gujarat" toall the regional officers nominated by the Gujarat Pollution Control Board on 26th April 2024 at GPCB
    ii. "Capacity Verification of E-Waste Recycling units in Gujarat" to GPCB officials, e-waste recyclers and related stakeholders in Gujarat during the International E-Waste Day on 14thOctober 2024 at GPCB, Auditorium.
    iii. Under the Cleaner Production Assessment/Demonstration Studies (Sponsored by Forests and Environment Department, Government of Gujarat): Delivered expert sessions each to various industry sectors (i.e. Vitrified and Glaze Tiles, Cement, Thermal Power Stations, Secondary Steel, Sugar and Distillery, Decorative Laminate Sheet Manufacturing, Rice Milling, Edible Oil, Vertical Shaft Kiln, Industrial Boilers, Government Office Buildings etc.) during the Cleaner Production dissemination workshops to create multiplier effect in the state.
    iv. "Productivity and Innovation for Sustainable Development" on 18th February 2013 for GAIL (India) Ltd. at Ahmedabad.
    v. "Minimizing Environmental issues in Industries"on 5th July 2011 on the occasion of World Environment Day for GPCB at Rajkot.

2. **Training Programs**:
    i. Bio-Medical Waste Management: Trained about 526 hospital staffs from 10 Government Hospitals in Gujarat.
    ii. Environmental Social and Governance (ESG) for Sustainability at Goa (18th to 22nd March 2024): Delivered sessions and trained 12 participants from leading Government Organizations.
    iii. Environmental Social and Governance (ESG) for Sustainability at Port Blair, Andaman & Nicobar Islands (2nd to 6th September 2024): Delivered sessions and trained 08 participants from leading Government Organizations.
    iv. Waste to Wealth at Udaipur (17th to 21st July 2017): Delivered sessions and trained 12 participants from leading Government Organizations.
    v. ESG for Sustainability for Gujarat Metro Rail Corporation Ltd. (GMRCL) – 21st June 2024: Trained 26 officers of GMRCL.
    vi. MFCA to M/s J. K. Lakshmi Cement: Delivered training to 25 top management officials.
    vii. MFCA to M/s Gulf Oil Corporation Ltd., Hyderabad (July 2015): Delivered training on MFCA to about 100 participants.
    viii. "Program on Six Waste Management Rules 2016" at Radisson Hotel, Kandla (26-27 June 2019): Delivered presentations to 227 participants on 26th June and 184 participants on 27th June.
    ix. Program on Waste Management Rules – 2016 at Vadodara and Ahmedabad (12thJanuary 2018 and 20th February 2018): Delivered presentations to around 240 participants.
    x. Delivered session on E-Waste Management Rules, 2016 during the Training Program for Brookfield Properties organized by Environment Group at NPC, HQ (22ndSeptember 2021).

3. **Capacity Building Programs**:

    i. Capacity Building of Students and Academicians on Latest Environment Management Tools at L. D. College of Engineering, Ahmedabad (12-13 February 2014): Trained 62 students and academicians.
    ii. Capacity Building of Students and Academicians on Environment related issues with special emphasis on Cleaner Production at L. D. College of Engineering, Ahmedabad (15-17 September 2011): Trained 77 students and 5 faculty members.
    iii. Capacity Building of Students and Academicians on Latest Environment Management Tools at V. V. P. Engineering College, Rajkot (12-13 March 2014): Trained 64 students and academicians.
    iv. Capacity Building of Students and Academicians on Environment related issues with special emphasis on Cleaner Production at V.V.P. Engineering College, Rajkot (6-8 February 2012) and G.H.Patel College of Engineering and Technology, Vallabh Vidyanagar (26-28 March 2012): Trained 110 students and 19 academicians.
    v. Capacity Building Program of School Students on DD & DNH on Pollution Prevention and latest Environmental Management Tools at Daman and Diu and Dadra and Nagar Haveli (DD & DNH) on 22-23 February 2017 and 24-27 February 2017. Total 379 students and teachers trained.

4. **Webinars Conducted**
    i. E-Waste Management Rules 2016: 26th May 2020
    ii. Plastic Waste Management Rules, 2016: 29th May 2020
    iii. Material Flow Cost Accounting: 30th March 2020
    iv. Municipal Solid Waste Management in the context of COVID-19: 4th August 2020
    v. Waste Minimization – Need of the Hour (for Mohali Industries Association): 28th October 2020

5. **Material Flow Cost Accounting - Practice Oriented Certificate Courses**:
    i. Ankleshwar (December 2016): Chief trainer, detailed sessions on MFCA, group tasks, and calculation exercises.
    ii. Ahmedabad (January 2016): Delivered sessions on MFCA.
    iii. New Delhi (January 2016): Delivered sessions on MFCA and case studies.

6. **MFCA Training and Awareness Programs**:
    i. Ahmedabad (July 2014): Delivered training on MFCA.
    ii. NPC, Ambedkar Institute of Productivity, Chennai (July 2014): Delivered training on MFCA.
    iii. Gandhinagar Electronics Zone Industries Association (September 2016): Sensitized 49 MSME officials.
    iv. National Institute of Fashion Technology, Gandhinagar (February 2017 & February 2016): Delivered sessions on MFCA to students and faculty.
    v. WASTECH International Event (December 2016): Delivered three programs on MFCA with over 300 participants.
    vi. VENDEXPO-2015, Surat (December 2015): Delivered session on MFCA fundamentals and case studies.
    vii. M/s Somany Ceramics Ltd., Kadi (August 2015): Delivered session on environmental issues, solutions for Ceramic Sector, and MFCA basics.
    viii. Energy Auditor-Energy Manager meets (2016-17) at Ahmedabad, Vadodara, Rajkot, and Surat: Delivered sessions on MFCA, sensitized over 300 participants.
    ix. Delivered sessions on MFCA and case studies at various other locations including Bhiwadi, Haryana; Kisangarh Marble Association, Ajmer; ITAMMA at Mumbai and Coimbatore; Kerala State Productivity Council (KSPC), Cochin.

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:10th February 2025

Place:Gandhinagar, Gujarat

[Natarajan Pratap]

Profile Update History

Last Updated: [Date]
Next Review Due: [Date]