Gokulram Azhaguvel (he/him)

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PROFILE

Mechanical Engineer with a research focus on industrial ecology. With over six years of experience in cross-cultural stakeholder engagement, project management, and industrial sustainability research, I have designed and implemented material recovery initiatives in collaboration with key organisations in Gujarat such as regional pollution control boards, the Gujarat Cleaner Production Centre and Naroda Industries Association. My work focuses on driving sustainability in industrial processes, waste management, and climate education. Passionate about studying the quantification of materials, energy, and emissions from industrial estates, especially developing and emerging nations, and advancing greener transition projects.

PROFESSIONAL EXPERIENCE

Anant National University (School for Climate Action) Manager Operations and Applied Research

Ahmedabad, GJ 09/2018-Present

- Spearheaded a key research study on industrial symbiosis at Naroda Industrial Estate, resulting in the publication of "Industrial Symbiosis in India Challenge or Opportunity? Learnings from a Study of Naroda Industrial Estate".
- Developed and delivered applied research in industrial ecology to undergraduate engineering students. Delivered theory courses on social innovation, climate heritage and design, technology and society to undergraduate and postgraduate students.
- Managed the Anant Fellowship for Climate Action, a global immersive programme that attracted over 5,000 overseas applicants from 78 countries within four years.
- Budgeted and managed academic and operational activities, ensuring smooth execution for the BTech in Climate Change, Anant Fellowship for Climate Action and Centre for Sustainability.
- Managed the establishment of 27 COVID-19 recovery facilities across six states, including critical services like temporary beds, emergency auto rickshaws and oxygen ambulances.
- Managed decision making meetings and coached team members to drive operational excellence and effective project execution. Coordinated with external stakeholders for partnerships to integrate academic initiatives. Led campus sustainability, including waste management.

EDUCATION

Anant National University PGD Fellowship in Sustainability and Built Environment Dissertation: Industrial symbiosis - exploring the challenges in India. Ahmedabad, GJ 2017-18

Anna University BE Mechanical Engineering Chennai, TN 2013-17

Dissertation: Performance of aluminium anode with zinc addition in seawater for corrosion resistance.

RESEARCH EXPERIENCE

Anant National University

Researcher, Centre for Sustainability

1. Industrial symbiosis in India - A study at Naroda Industrial Estate

• Devised survey questionnaire and gathered primary data on resources from 65 manufacturing companies, a cluster of informal waste recovery markets, and statutory authorities in Naroda Industrial Estate, GIDC-Ahmedabad. Analysed the data to develop frameworks for industrial symbiosis implementation in India. Presented the research findings at several platforms including the World Resources Institute India and University of Surrey, UK.

2. Investigating the carbon savings of traditional lime masonry building techniques in India 2018

• Collected an exhaustive literature for the research team and managed the project.

Fellowship in Sustainability and Built Environment Fellow, Anant National University

1. Industrial symbiosis - exploring the challenges in India

• Researched and converted waste from a steel manufacturing company into sustainable building blocks using the rammed earth method. Presented findings at the Gujarat Cleaner Production Centre, published in the Indian Institute of Forest Management, and produced a documentary showcased at the Ellen MacArthur Foundation's Disruptive Innovation Festival 2018. Selected to present at two international conferences. Collaborated with the National Institute of Design, Ahmedabad, and the Hunnarshala Foundation for the waste to wealth products.

Anna University	Ahmedabad, GJ
Undergraduate student, BE in Mechanical Engineering	2013-17
1. Cathodic protection to prevent corrosion in marine vessels	2017
• Developed an aluminium anode composition to enhance corrosion resistance in a s	ship's hull.

Conducted electrochemical polarisation test to study corrosion development.

5. Traction mechanism in automobile

• Designed an affordable locking differential system for Indian auto-rickshaws and built a working prototype. Examined the existing locking differential mechanisms, their benefits, and limitations.

PUBLICATIONS & CONFERENCES

Publications

- Gokulram A, Shaping tomorrow Climate engineers as catalysts for a sustainable future, The Times of India, 2023 (view <u>article</u>)
- Gokulram A and Dr Abhishek Kumar, Industrial symbiosis in India Challenge or Opportunity? Learnings from a study of Naroda Industrial Estate, Gujarat, Anant Centre for Sustainability, Anant National University, 06/2021. (view <u>report</u>)
- Performance of aluminium anode by addition of zinc in sea water a review, Journal of latest engineering research and application, volume 03, issue 05, 05/2018. (view <u>article</u>)

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2018-21 2018-21

Ahmedabad, GJ

2016

Ahmedabad, GJ

2017-18

• A study of the performance of aluminium anode by addition of zinc in sea water, SSRG International Journal of Mechanical Engineering, 04/2017. (view <u>article</u>)

Conference

- Gokulram A, Industrial symbiosis in India an exploration of an Indian industrial estate, International Conference on Resource Sustainability, University of Surrey, 08/2023.
- Gokulram and Akhil Reddy, Industrial symbiosis model and coping traditional sustainable practice with the circular economy, International conference on multi-disciplinary approach towards sustainable development, 02/2019

Chapters in book publication

• Gokulram and Akhil Reddy, Industrial symbiosis model and coping traditional sustainable practice with circular economy, chapter publication in an edited book titled "Multi-Disciplinary approach towards sustainable development", Indian Institute of Forest Management, Bookwell publisher, New Delhi, 02/2020.

Documentary

• Circular Economy in India: Exploring the challenges, Disruptive Innovation Festival – Ellen MacArthur Foundation, 11/2018. (view <u>article</u>)

SHORT TERM COURSES COMPLETED

- Creating sustainable organisation: Role of marketing, finance and operations management, Indian Institute of Forest Management, 05/2024
- Climate models, Divecha Centre for Climate Change, Indian Institute of Science, Bengaluru, 07/2023.
- Designing leadership for impact in changing context, University of Pennsylvania, 05/2023.
- Financial management, Loyola Institute of Business Administration, 07/2017-09/2017.

Hard skills: Lifecycle assessment, material study for sustainable products, waste to wealth management, circular economy strategies, financial management and policy analysis.

Soft skills: Interdisciplinary collaboration, critical thinking and problem-solving, analytical and presentation skills, adaptability.