



Sowmya Marriyapillai Ravisandiran, B.Tech.

Second Year Student, M.Sc., Industrial Ecology

✉ s.marriyapillai.ravisandiran@umail.leidenuniv.nl

in Sowmya Ravisandiran





Education

- 2021 – 2023  **M.Sc., Industrial Ecology**, Leiden University & TU Delft
- 2016 – 2020  **B.Tech., Engineering Physics**, Indian Institute of Technology (IIT) Bombay with a Minor in Humanities and Social Sciences
Grade: 8.74/10.



Academic Projects


- 2023  **Estimating the Contribution of the Informal sector to Plastic Packaging waste Recycling, Chennai, India**
Master's Thesis, Supervisor: Dr. Stefano Cucurachi
Performing a Material Flow Analysis (MFA) of plastic packaging waste in the mega-city of Chennai, India to understand the contribution of the informal sector in its recovery, and estimating the influences of demographic factors on household plastic packaging waste generation
- 2022  **One Man's Trash: the Impact of Byewaste's Second-hand Collection Efforts**
Commissioner: Byewaste, Consultancy Project: 4413SUSCH - Sustainability Challenge
Performed a combined MFA and LCA to estimate the avoided impacts of production and incineration due to the textile waste collection solution offered by the start-up, Byewaste
-  **Modelling Fish and Seafood Residues in the Global Supply Chains**
Supervisor: Dr. José M Mogollón, 4413IECS - Capita Selecta Module
Developed a preliminary model of the residue generated in the global seafood supply chain using triangulation of different FAOSTAT data sources
-  **Comparative Life Cycle Assessment (LCA) of Menstrual Products**
Course project: 4413LCA - Life Cycle Assessment Practice and Reporting
Performed an LCA study on compostable and reusable menstrual products to compare their environmental performance and identify hotspots in their life cycles
- 2019  **Changes in freeze and thaw patterns over Canadian regions**
MITACs Globalink Internship, Supervisor: Prof. Ali Nazemi, Concordia University, Montreal
Analysed global data of freeze and thaw patterns and the associated hydro-climatic variables, for the purpose of climatic trend analysis to identify the impact of changing climatic conditions
-  **Extended Producer Responsibility in Managing Menstrual Waste**
Supervisor: Prof. Shishir Jha, Course project: PS301 - Policy Related Supervised Learning
Performed a user survey to understand the awareness of consumers about menstrual waste disposal and their expectations from the manufacturer

Awards and Achievements

- 2023  **LUF-SVM Fund** for Master's Thesis related to the theme of packaging and environment, awarded by Foundation for Packaging and Environment (SVM) via Leiden University Fund (LUF)
- 2021  **Leiden University Excellency Scholarship (LExS)**, for M.Sc. Industrial Ecology
- 2019  **MITACS Globalink Research Internship Award**
- 2015  **Kishore Vaigyanik Protsahan Yojana (KVPY) Scholarship**, awarded by the Department of Science and Technology, Government of India

Professional Experiences




- Sep - Nov 2022  **Teaching Assistant**, 4413EASYS: Earth System Science and Analysis, Core Course for M.Sc. Industrial Ecology
Supervisor: Dr. José M Mogollón, Leiden University
- Mar - Jun 2021  **Sustainability Research Associate** at SAGE Sustainability
Sustainability consulting and advisory firm

Assisted in the environmental dimension of sustainability reporting, following the Global Reporting Initiative (GRI) Standards and handled sustainability communications for three clients
- Aug - Nov 2018  **Teaching Assistant**, PH107: Quantum Physics and Applications
Supervisor: Prof. Uma Shankar, IIT Bombay

Service and Outreach

- 2021 - 2023  **Career Committee Member**, Industrial Ecology Study Association (IESA) Shift
- 2019 - 2020  **Coordinator**, Department Academic Mentorship Program
Responsibilities include interviewing and selecting mentors, representing the students in Department Undergraduate Council, and organizing tutorial sessions
- 2017 - 2018  **Activity Associate**, National Service Scheme (NSS), IIT Bombay

Skills

- Methods  Life Cycle Assessment (LCA), Environmentally Extended Input-Output Analysis (EE-IOA), Material Flow Analysis (MFA)
- Coding  Python, MATLAB, \LaTeX
- Other  Academic research and writing, quantitative analysis, inter-disciplinary thinking

Certification

- 2016  **COP+22 International Climate Action Course** offered by IARC | Centre for United Nations