

Curriculum Vitae: Shabbir H. Gheewala

Professor and Head
Life Cycle Sustainability Assessment Lab
The Joint Graduate School of Energy and Environment (JGSEE)
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Professional qualifications:

- **D.Eng.** (2001): Environmental Engineering, Asian Institute of Technology, Thailand
- **M.Eng.** (1995): Environmental Engineering, Asian Institute of Technology, Thailand
- **B.Eng.** (1992): Civil Engineering, Jadavpur University (First class honours), Calcutta, India

Academic positions:

- Distinguished Adjunct Professor, Asian Institute of Technology, Thailand (2015 onwards)
- Adjunct Professor, University of North Carolina at Chapel Hill, USA (2012 onwards)
- Adjunct Professor, Diponegoro University, Indonesia (2022 onwards)
- Honorary Professor, Prince of Songkla University, Phuket campus, Thailand (2018 onwards)
- Subject Editor, International Journal of Life Cycle Assessment, Springer
- Editor, Sustainable Production and Consumption, Elsevier
- Academic board member, Journal of Cleaner Production, Elsevier
- Editor-in-Chief: Journal of Sustainable Energy and Environment
- Specialty Chief Editor: Frontiers in Sustainability (Quantitative Sustainability Assessment)
- International editorial board member, Indonesian Journal of Life Cycle Assessment and Sustainability
- International advisory board member, International Journal of Renewable Energy Development
- Founding member, International Society for Energy Transition Studies
- Member, International Life Cycle Academy
- Member, International Advisory Board, Ecobalance conference, Japan
- Member, Scientific Committee, LCA Food conference
- Member, Thai Carbon Footprint methodology development committee

Professional experience:

Professor at JGSEE, KMUTT (Jun 2010 – present)

Associate Professor / Assistant Professor / Lecturer at JGSEE, KMUTT (Mar 2002 – Jun 2010)

Researcher at the Asian Institute of Technology (Sep 1995– Feb 2002)

Design Engineer at F. Harley and Co. Pvt. Ltd., India (1992 – 1993)

Research projects:

Conducted over 60 research projects on sustainability assessment of biofuels, life cycle assessment of agriculture and energy systems as well as product carbon and water footprinting.

Research supervision:

Supervised 30 PhD students, 30 Masters students and currently mentoring 2 post-doctoral candidates.

Publications:

Over 300 papers in peer reviewed journals, 20 book chapters and 180 conference papers. Scopus h-index of 52.

Awards:

- Mahidol Science Environment & Sustainability Award 2022
- Distinguished Alumni Award in academic and research excellence, Asian Institute of Technology Alumni Association (2021)
- World's top 1000 most influential climate scientists (Reuter's Hot List 2021)
- World's top 1% of the most-cited researchers in "Earth and Environmental Sciences" (Stanford University and Elsevier) (2020, 2021, 2022, 2023)
- **Research Chair Professor** granted by the National Science and Technology Development Agency, Ministry of Science and Technology, for "Network for Research and Innovation for Trade and Production of Sustainable Food and Bioenergy" (2016)
- **Silver Award** from Kasetsart University for high impact research on trade and sustainable development of the Agrifood Industry (2014)
- **Excellent research award** for contribution to National Life Cycle Inventory Database for Green Product Development (Shrimp) from the Thailand Research Fund (2013)
- **Excellent research award** for contribution to National Life Cycle Inventory Database for Green Product Development (Rice) from the Thailand Research Fund (2013)
- **Gold Award** from Kasetsart University for designing Carbon Footprint Calculator to help the Agrifood Industry (2012)

Recent projects (selected):

International grants

- ***Strengthening resource efficiency and sustainable consumption & production.*** Conducting a Leadership Academy on Communicating Circular Economy in collaboration with Ekconnect Foundation. Updating and finalizing regional indicators and database on resource efficiency in Asia The project is funded by the United Nations Environment Programme (UNEP) (Nov 2020 – Aug 2021).
- ***Mainstreaming coherent and effective sustainable consumption and production policies, including through circular economy models: Best practices and recommendations.*** Technical assistance provided at the national and subnational levels to support the promotion and implementation of cleaner, resource-efficient production technologies and practices in industries, including small and medium-sized enterprises. The project is funded by the United Nations Environment Programme (UNEP) (Jun – Dec 2020).
- ***Analysis of Future Mobility Fuel Scenarios Considering the Sustainable Use of Biofuels and Other Alternative Vehicle Fuels in East Asia Summit Countries.*** Integrated project in ASEAN led by the National Institute of Advanced Industrial Science and Technology (AIST) and funded by the Economic Research Institute for ASEAN and East Asia (ERIA) (Jan 2021 – Dec 2023)
- ***Palm Oil: Sustainability, Health and Economics.*** Assessed the sustainability, health and economic aspects of palm oil in Thailand to use for policy decision making in the future. The project was led by the School of Oriental and African Studies (SOAS), University of London and has the London School of Hygiene and Tropical Medicine, Chiang Mai University, University of Copenhagen and Stanford University as the other partners. It was funded by the Wellcome Trust, UK (Sept 2014 – Dec 2017)

National grants

- ***Research Team Promotion Grant.*** The project is for mentoring a group of 15 researchers from different universities in Thailand over a period of 3 years under the topic "Moving towards carbon neutrality and sustainability of food, feed, fuel through BCG using life cycle thinking". The grant is awarded by the National Research Council of Thailand (NRCT) (April 2022 – March 2025).
- ***Research Chair Professor grant.*** Mentoring a group of 10 researchers from different universities in Thailand over a period of 5 years under the topic "Network for Research and Innovation for Trade and Production of Sustainable Food and Bioenergy". The grant is awarded by the National Science and Technology Development Agency (NSTDA) (Jan 2017 – Dec 2021).

- ***Life cycle sustainability assessment and sustainable rice standard adoption to enhance the marketing competitiveness to move towards sustainable Thai rice industry.*** Project led by Kasetsart University and funded by the Agriculture Research and Development Agency (ARDA) (Feb 2022 – Feb 2023). [Project advisor]
- ***Food Waste National Baseline and Food Waste Index for Monitoring the Progress of SDG 12.3.1.*** Project led by Kasetsart University and funded by the Agriculture Research and Development Agency (ARDA) (Feb 2022 –Jan 2023). [Project advisor]
- ***Implementation of Extended Producer Responsibility for Recycling and Sustainable Packaging Management Towards Circular Economy.*** Project led by Kasetsart University and funded under the PMU C, Circular Economy of the Ministry of Higher Education, Science, Research and Innovation (Mar 2022 – Feb 2023). [Project advisor]
- ***Production Cost and Life Cycle Assessment (LCA) of MSW Power Generation in Thailand.*** The project was funded by the Department of Alternative Energy and Efficiency (DEDE), Ministry of Energy (Mar–Nov 2019)
- ***Sustainability assessment of sugarcane complex for enhancing competitiveness of Thai sugarcane industry.*** This national project studied the sugarcane industry in Thailand to establish the current status and make recommendations for its further sustainability and competitiveness. It is funded by the National Science and Technology Development Agency (NSTDA) (Sep 2014 – Aug 2016).
- ***Network for LCA and Policy Research on Food, Fuel and Climate Change.*** Mentoring 10 researchers (5 Postdoc and 5 PhD) on LCA of agriculture to develop capacity on LCA in Thailand and produce high quality peer-reviewed journal paper. The project is funded by the National Science and Technology Development Agency (NSTDA) with Royal Golden Jubilee PhD scholarships from the Thailand Research Fund (Sep 2012 – Sep 2016).
- ***Sustainability assessment of oil palm value chain for food, fuel and other high value added products in Thailand.*** A national project funded by the Agriculture Research and Development Agency (Aug 2016 – Aug 2018).
- ***Water footprinting of food, feed and fuel for effective water resource management (Phases I and II).*** This national project had Kasetsart Univ. as a partner and was funded by the Thailand Research Fund (Apr 2012–Mar 2013; Oct 2013-Sep 2015).

Corporate grants

- ***Life Cycle Assessment of Aluminium Alloy Coils for air conditioner fins.*** Conducting an LCA study on aluminium coils for UACJ (Thailand) Co. Ltd. (Jan – Nov 2023)
- ***Life Cycle Assessment of Aluminium Alloy Coils for Beverage Cans.*** Conducting an LCA study on aluminium coils for UACJ (Thailand) Co. Ltd. (Mar – Nov 2021)
- ***Water Footprint of Bangchak Petroleum Refinery.*** The project was for supporting Bangchak is conducting water scarcity footprint assessment of their refinery. The project is supported by Bangchak Corporation PCL (July 2017 – July 2018).
- ***Application of water footprint for PTT corporate water accounting and resource efficiency.*** The study applied the concept of water footprint assessment for supporting PTT's corporate water accounting. It helped PTT enhance sustainable water use and become aligned with external stakeholders' expectations. It was funded by PTT Plc (Sep 2013 – Aug 2014).
- ***Life cycle assessment of PTT-LPG cylinders.*** The study aimed to assess the environmental impacts and risks on health and safety aspects over the life cycle of composite and steel LPG cylinders of PTT. The project had Kasetsart University as a partner. It was funded by PTT Plc (Mar 2013– Dec 2013).

Book Chapters (selected):

1. Mungkung, R. **Gheewala, S.H.**, (2022), LCA and food and personal care products sustainability: Case studies of Thai riceberry rice products, In: Teodosiu, C., Fiore, S., Hospido, A. (eds.), *Assessing Progress towards Sustainability: Frameworks, Tools and Case Studies*, Elsevier, Amsterdam, Netherlands. [Chapter 14, pp. 289-308.]
2. **Gheewala, S.H.**, Silalertruksa, T. (2021), Life Cycle Thinking in a Circular Economy, In: Liu, L., Ramakrishna, S. (eds.), *An Introduction to Circular Economy*, Springer Nature Singapore Pte Ltd. [Chapter 3, pp. 35-53.]
3. **Gheewala, S.H.**, Silalertruksa, T., Pongpat, P., Bonnet, S. (2019), Sugarcane Biofuels: Status, Potential, and Prospects of the Sweet Crop to Fuel the World, In: Khan, M.T., Khan, I.A. (eds.), *Sugarcane-based Biofuels and Bioproducts*, Springer. [Chapter 8, pp. 157-174.]
4. Bessou, C., Stichnothe, H., Manan, A., **Gheewala, S.H.** (2018), Life cycle assessments of oil palm products, In: Rival, A. (ed.), *Achieving sustainable cultivation of oil palm, Volume 2: Diseases, pests, quality and sustainability*, Burleigh Dodds Science Publishing Limited. [Chapter 10, pp. 1-22.] <http://dx.doi.org/10.19103/AS.2017.0018.38>
5. **Gheewala, S.H.**, Kittner, N., Shi, X. (2018), Costs and benefits of biofuels in Asia, In: Bhattacharyya, S.C. (ed.), *Routledge handbook of energy in Asia*, Taylor and Francis. [Chapter 24, pp. 363-376.]
6. **Gheewala, S.H.**, Bonnet, S., Silalertruksa, S. (2016), Environmental sustainability assessment of sugarcane bioenergy, In: O'Hara, I., Mundree, S. (eds.), *Sugarcane-based Biofuels and Bioproducts*, Wiley-Blackwell. [Chapter 14, pp. 363-378.]
7. **Gheewala, S.H.**, Bonnet, S., Silalertruksa, S. (2014), Environmental and life cycle cost assessment of cassava ethanol, In: Ramawat, K.G., Merillon, J.M. (eds.), *Bulbous Plants: Biotechnology*, CRC Press, Taylor and Francis, LLC.
8. **Gheewala, S.H.** (2013), Environmental sustainability assessment of ethanol from cassava and sugarcane molasses in a life cycle perspective, In: Singh, A., Olsen, S.L., Pant, D. (eds.), *Life Cycle Assessment of Renewable Energy Sources*, Springer.
9. **Gheewala S.H.** (2012), Food, fuel and climate change: policy prospects and performance of biofuels in Thailand, In: Damen, B. and Tvinnereim, S. (ed.), *Sustainable Bioenergy in Asia: Improving resilience to high food prices and climate change*, Food and Agriculture Organization of the United Nations (FAO), RAP Publication 2012/14.
10. **Gheewala, S.H.**, Berndes, G., Jewitt, G. (2011), The bioenergy & water nexus – setting the scene, In: *The Bioenergy and Water Nexus*, UNEP, Oeko-Institut and IEA Bioenergy Task 43

Journal papers (2018 onwards):

1. Supasri, T., **Gheewala, S.H.**, Macatangay, R., Chakpor, A., Sedpho, S. (2023), Association between Ambient Air Particulate Matter and Human Health Impacts in Northern Thailand, *Scientific Reports*, Vol. 13, 12753.
2. Chairat, S., **Gheewala, S.H.** (2023), Life Cycle Assessment and Circularity of Polyethylene Terephthalate Bottles via Closed and Open Loop Recycling, *Environmental Research*, Vol. 236, 116788.
3. Win, C. Z., Jawjit, W., Thongdara, R., **Gheewala, S. H.**, Prapasongsa, T. (2023). Towards More Sustainable Water, Sanitation and Hygiene (WASH) Projects in Myanmar: Projects in Magway Region, Myanmar, *Environment, Development and Sustainability*, Vol. xx, pp. xx-xx.
4. Mahmood, A., **Gheewala, S.H.** (2023), A comparative environmental analysis of conventional and organic rice farming in Thailand in a life cycle perspective using a stochastic modeling approach, *Environmental Research*, Vol. 235, 116670.
5. Gabisa, E.W., Ratanatamskul, C. **Gheewala, S.H.** (2023), Recycling of plastics as a strategy to reduce life cycle GHG emission, microplastics and resource depletion, *Sustainability*, Vol. 15, 11529. <https://doi.org/10.3390/su151511529>
6. Akbar, H., Nilsalab, P., Silalertruksa, T., **Gheewala, S.H.** (2023), Prioritizing major factors affecting groundwater stress using multi-criteria decision methods, *Groundwater for Sustainable Development*, Vol. 23, 100970. <https://doi.org/10.1016/j.gsd.2023.100970>.
7. Jakrawatana, N., Ngammuangtueng, P., Vorayos, N., **Gheewala, S.H.** (2023), Biomaterial Packaging Utilization Scenarios Foresight for Bio-Circular-Green Economy in Thailand and Water-Energy-Climate Nexus Impact, *Sustainable Production and Consumption*, Vol. 39, pp. 506-520.

8. Schoch, M., Lawanyawatna, S., **Gheewala, S.H.** (2023), Environmental impacts of repurposing phone booths as COVID-19 sampling stations, *International Journal of Sustainable Engineering*, Vol. 16(1), pp. 129-139.
9. Ghani, H.U., Ryberg, M., Bjørn, A., Hauschild, M.Z., **Gheewala, S.H.** (2023), Resource Efficiency Analysis through Planetary Boundary-based Life Cycle Assessment: A Case Study of Sugarcane in Pakistan, *International Journal of Life Cycle Assessment*, Vol. xx, pp. xx-xx.
10. Mahmood, A., Ghani, H.U., **Gheewala, S.H.** (2023), Absolute Environmental Sustainability Assessment of Rice in Pakistan using a Planetary Boundary-based Approach, *Sustainable Production and Consumption*, Vol. 39, pp. 123-133.
11. Jaibumrung, K., Nilsalab, P., **Gheewala, S.H.**, Musikavong, C. (2023), Ecological footprint, water scarcity footprint, and benefit to cost ratio analysis towards sustainable rice production in Thailand, *Sustainable Production and Consumption*, Vol. 39, pp. 79-92.
12. Keson, J., Silalertruksa, T., **Gheewala, S.H.** (2023), Land suitability class and implications to Land-Water-Food Nexus: A case of rice cultivation in Thailand, *Energy Nexus*, Vol. 10, 100205. <https://doi.org/10.1016/j.nexus.2023.100205>
13. Akbar, H., Nilsalab, P., Silalertruksa, T., **Gheewala, S.H.** (2023), An inclusive approach for integrated systems: Incorporation of climate in the water-food-energy-land nexus index, *Sustainable Production and Consumption*, Vol. 39, pp. 42-52.
14. Ghani, H.U., Mahmood, A., Finkbeiner, M., Kaltschmitt, M., **Gheewala, S.H.** (2023), Evaluating the Absolute Eco-Efficiency of Food Products: A Case Study of Rice in Pakistan, *Environmental Impact Assessment Review*, Vol. 101, 107119
15. Pongpat, P., Mahmood, A., Ghani, H.U., Silalertruksa, T., **Gheewala, S.H.** (2023), Optimization of food-fuel-fibre in biorefinery based on environmental and economic assessment: The case of sugarcane utilization in Thailand, *Sustainable Production and Consumption*, Vol. 37, pp. 398-411.
16. **Gheewala, S.H.** (2023), Life cycle assessment for sustainability assessment of biofuels and bioproducts, *Biofuel Research Journal*, Vol. 37, pp. 1810-1815.
17. Wahyono, Y., Hadiyanto, H., **Gheewala, S.H.**, Budihardjo, M.A., Adiansyah, J.S., Widayat, W., Christwardan, M. (2023), Life cycle assessment for evaluating the energy balance of the multi-feedstock biodiesel production process in Indonesia, *International Journal of Ambient Energy*, Vol. 44(1), pp. 1255-1270. <https://doi.org/10.1080/01430750.2023.2171485>
18. Ngammuangtueng, P., Nilsalab, P., Chomwong, Y. Wongruang, P., Jakrawatana, N., Sandu, S., **Gheewala, S.H.** (2023) Water-Energy-Food Nexus of Local Bioeconomy Hub and Future Climate Change Impact Implication, *Journal of Cleaner Production*, Vol. 399, 136543.
19. Jarernwong, K., **Gheewala, S.H.**, Sampattagul, S. (2023), Health impact related to ambient particulate matter exposure as a spatial health risk map case study in Chiang Mai, Thailand, *Atmosphere*, Vol. 14, No. 261, <https://doi.org/10.3390/atmos14020261>.
20. Farooq, A., Farooq, N., Akbar, H., Hassan, Z.U., **Gheewala, S.H.** (2023), A Critical Review of Climate Change Impact at a Global Scale on Cereal Crop Production, *Agronomy*, Vol. 13(1), 162. <https://doi.org/10.3390/agronomy13010162>
21. Mungkung, R., Dangsiri, S., Satmalee, P., Surojanametakul, V., **Gheewala, S.H.** (2023), The Nutrition-Environment Nexus Assessment of Thai Riceberry Product for Supporting Environmental Product Declaration, *Environment, Development and Sustainability*, <https://doi.org/10.1007/s10668-022-02892-5>
22. Pimonsree, S., Kamworapan, S., **Gheewala, S.H.**, Thongbhakdi, A., Prueksakorn, K. (2023), Evaluation of CMIP6 GCMs performance to simulate precipitation over Southeast Asia, *Atmospheric Research*, Vol. 282, No. 106522, <https://doi.org/10.1016/j.atmosres.2022.106522>.
23. Rotthong, M., Takaoka, M., Oshita, K., Rachdawong, P., **Gheewala, S.H.**, Prapasongsa, T. (2023), Life Cycle Assessment of Integrated Municipal Organic Waste Management Systems in Thailand, *Sustainability*, Vol. 15, 90. <https://doi.org/10.3390/su15010090>.
24. Wahyono, Y., Hadiyanto, H., **Gheewala, S.H.**, Budihardjo, M.A., Adiansyah, J.S., Widayat, W., Christwardan, M. (2023), Evaluating the Environmental Impacts at the End Point Level of the Biodiesel Production Process from Multiple Feedstocks in Indonesia Through Life Cycle Assessment Methodology, *Waste and Biomass Valorization*, Vol. xx, 115832. <https://doi.org/10.1007/s12649-023-02040-8>
25. Sutthasil, N., Chiemchaisri, C., Chiemchaisri, W., Ishigaki, T., **Gheewala, S.H.** (2022) Life cycle greenhouse gas emissions of emerging municipal solid waste management options: a case study in Thailand, *Journal of Material Cycles and Waste Management*, Vol. xx, pp. 1-12. <https://doi.org/10.1007/s10163-022-01584-6>

26. Silalertruksa, T., Wirodcharuskul, C., **Gheewala, S.H.** (2022), Environmental Sustainability of Waste Circulation Models for Sugarcane Biorefinery System in Thailand, *Energies*, Vol. 15(24), No. 9515, <https://doi.org/10.3390/en15249515>.
27. **Gheewala, S.H.**, Jaroenkietkajorn, U., Nilsalab, N., Silalertruksa, T., Somkerd, T., Laosiripojana, N. (2022), Sustainability Assessment of Palm Oil-Based Refinery Systems for Food, Fuel and Chemicals, *Biofuel Research Journal*, Vol. 36, pp. 1750-1763.
28. Mahmood, A., Varabuntoonvit, V., Mungkalasiri, J., Silalertruksa, T. **Gheewala, S.H.** (2022), A tier-wise method for evaluating uncertainty in Life Cycle Assessment, *Sustainability*, Vol. 14, 13400. <https://doi.org/10.3390/su142013400>
29. Mankong, P., Fantke, P., Phenrat, T., Mungkalasiri, J., **Gheewala, S.H.**, Prapasongsa, T. (2022), Characterizing country-specific human and ecosystem health impact and damage cost of agricultural pesticides: The case for Thailand, *International Journal of Life Cycle Assessment*, Vol. 27, No. 12, pp.1334–1351.
30. Gabisa, E.W., **Gheewala, S.H.** (2022), Microplastics in ASEAN region countries: A review on current status and perspectives, *Marine Pollution Bulletin*, Vol. 184, 114118.
31. Mungkung, R., Sitthikitpanya, S., Chaichana, R., Bamrungwong, K., Santitaweeroek, Y., Jakrawatana, N., Silalertruksa, T., **Gheewala, S.H.** (2022), Measuring sustainability performance of rice cultivation in Thailand using Sustainable Rice Platform indicators, *International Journal of Agricultural Sustainability*, <https://doi.org/10.1080/14735903.2022.2105008>
32. Wahyono, Y., Hadiyanto, H., **Gheewala, S.H.**, Budihardjo, M.A., Adiansyah, J.S. (2022), Evaluating the environmental impacts of the multi-feedstock biodiesel production process using life cycle assessment (LCA), *Energy Conversion and Management*, Vol. 266, 115832.
33. Akbar, H., Nilsalab, P., Silalertruksa, T., **Gheewala, S.H.** (2022), Comprehensive review of groundwater scarcity, stress and sustainability index-based assessment, *Groundwater for Sustainable Development*, Vol. 18, 100782. <https://doi.org/10.1016/j.gsd.2022.100782>
34. Balasuriya, B.T.G., Ghose, A., **Gheewala, S.H.**, Prapasongsa, T. (2022) Assessment of Eutrophication Potential from Fertiliser Application in Agricultural Systems in Thailand, *Science of the Total Environment*, Vol. 833, 154993. <https://doi.org/10.1016/j.scitotenv.2022.154993>.
35. Haputta, P., Bowonthumrongchai, T., Puttanapong, N., **Gheewala, S.H.** (2022) Effects of Biofuel Crop Expansion on Green Gross Domestic Product, *Sustainability*, Vol. 14, 3369. <https://doi.org/10.3390/su14063369>.
36. Gazal, A.A., Jakrawatana, N., Silalertruksa, T. **Gheewala, S.H.** (2022), Water-energy-land-food nexus for bioethanol development in Nigeria, *Biomass Conversion and Biorefinery*, Vol. xx, pp. xx. <https://doi.org/10.1007/s13399-022-02528-8>
37. Abid, L., Saeed, S., Ghani, H.U., Mahmood, A., **Gheewala, S.H.** (2022) Sensitivity analysis of coal and bagasse co-firing in an Integrated Gasification Combined Cycle Power Plant, *Iranian Journal of Chemistry and Chemical Engineering*, Vol. 41, No. 12, pp. 4193-4205.
38. Kongboon, R., **Gheewala, S.H.**, Sampattagul, S. (2022) Greenhouse gas emissions inventory data acquisition and analytics for low carbon cities, *Journal of Cleaner Production*, Vol. 343, 130711.
39. Thuayjan, T., Prasara-A, J., Boonkum, P., **Gheewala, S.H.** (2022) Social Life Cycle Assessment of green and burnt manual sugarcane harvesting in the Northeastern Thailand, *Environment and Natural Resources Journal*, Vol. 20, No. 3, 246-256.
40. Saosee, P., Sajjakulnukit, B., **Gheewala, S.H.** (2022) Environmental externalities of wood pellets from fast-growing and para-rubber trees for sustainable energy production: A case in Thailand, *Energy Conversion and Management: X*, Vol. 14, 100183. <https://doi.org/10.1016/j.ecmx.2022.100183>
41. Thathsaranee, W.T.R., **Gheewala, S.H.**, Babel, S. (2022) Environmental Impact of Organic Fraction of Municipal Solid Waste Treatment by Composting in Sri Lanka, *Journal of Material Cycles and Waste Management*, Vol. 24, pp. 189-199. <https://doi.org/10.1007/s10163-021-01305-5>
42. Wassmann, R., Nguyen, V.-H., Yen, B.T., Gummert, M., Nelson, K.M., **Gheewala, S.H.**, Sander, B.O. (2022) Carbon Footprint Calculator Customized for Rice Products: Concept and Characterization of Rice Value Chains in Southeast Asia, *Sustainability*, Vol. 14, 315. <https://doi.org/10.3390/su14010315>
43. Chaya, W., **Gheewala, S.H.** (2022) Sustainable livelihood outcomes, causal mechanisms and indicators self-determined by Thai farmers producing bioethanol feedstocks, *Sustainable Production and Consumption*, Vol. 29, pp. 447-466.
44. Gazal, A.A., Jakrawatana, N., Silalertruksa, T., **Gheewala, S.H.** (2022), Water-energy-food nexus review for biofuels assessment, *International Journal of Renewable Energy Development*, Vol. 11, No. 1, 193-205. <https://doi.org/10.14710/ijred.2022.41119>.

45. Jaroenkietkajorn U., **Gheewala, S.H.**, Scherer, L. (2021) Biodiversity Impacts from Land Use of Oil Palm Plantations in Thailand, *Ecological Indicators*, Vol. 133, 108444. <https://doi.org/10.1016/j.ecolind.2021.108444>
46. Jareernwong, K., **Gheewala, S.H.**, Sampattagul, S. (2021) Health Risk Map related to Particulate Matter Exposure in Chiang Mai, Thailand, *Chemical Engineering Transactions*, Vol. 89, pp. 229-234. <https://doi.org/10.3303/CET2189039>.
47. Kamworapan, S., Thao, P.T.B., **Gheewala, S.H.**, Pimonsree, S., Prueksakorn, K. (2021) Evaluation of CMIP6 GCMs for Simulations of Temperature over Thailand and Nearby Areas in the Early 21st Century, *Heliyon*, Vol. 7, e08263. <https://doi.org/10.1016/j.heliyon.2021.e08263>.
48. Thathsarane, W.T.R., **Gheewala, S.H.**, Babel, S. (2021) Environmental Impact of Organic Fraction of Municipal Solid Waste Treatment by Composting in Sri Lanka, *Journal of Material Cycles and Waste Management*, Vol. xx, pp. xx-xx. <https://doi.org/10.1007/s10163-021-01305-5>
49. Chavanaves, S., Fantke, P., Limpaseni, W., Attavanich, W., Panyametheekul, S., **Gheewala, S.H.**, Prapasongsa, T. (2021) Health Impacts and Costs of Fine Particulate Matter Formation from Road Transport in Bangkok Metropolitan Region, *Atmospheric Pollution Research*, Vol. 12, 101191, <https://doi.org/10.1016/j.apr.2021.101191>.
50. Kaoma, M., **Gheewala, S.H.** (2021) Sustainability performance of lignocellulosic biomass-to-bioenergy supply chains for Rural Growth Centres in Zambia, *Sustainable Production and Consumption*, Vol. 28, pp. 1343-1365.
51. Phantha, C., Prasara-A, J., Boonkum, P., **Gheewala, S.H.** (2021) Social Sustainability of Conventional and Organic Rice Farming in North-eastern Thailand, *International Journal of Global Environmental Issues*, Vol. xx, pp. xx-xx.
52. Jaroenkietkajorn U., **Gheewala, S.H.** (2021) Understanding the impacts on land use through GHG-Water-Land-Biodiversity nexus: The case of oil palm plantations in Thailand, *Science of the Total Environment*, Vol. 800, 149425. <https://doi.org/10.1016/j.scitotenv.2021.149425>
53. Jaroenkietkajorn U., **Gheewala, S.H.** (2021) Land Suitability Assessment for Oil Palm Plantations in Thailand, *Sustainable Production and Consumption*, Vol. 28, pp. 1104-1111.
54. Kongboon, R., **Gheewala, S.H.**, Sampattagul, S. (2021) Empowering of Sustainable City Using Self-Assessment of Environmental Performance on EcoCitopia Platform, *Sustainability*, Vol. 13, 7743. <https://doi.org/10.3390/su13147743>.
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