



# CHEERAWIT RATTANAPAN

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## PROFESSIONAL APPOINTMENT

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**Associate Professor** Present  
ASEAN Institute for Health Development, Mahidol University (Thailand)

## ADMINISTRATIVE APPOINTMENT

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**Deputy Director for Research and Academic Affairs** 2024 - Present  
ASEAN Institute for Health Development, Mahidol University (Thailand)

## EDUCATION

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**Post-doctoral Research (Sustainable development)** 2014  
Vienna University of Economics and Business

**Research Fellowship (Microbial community)** 2013  
Leibniz-Institut für Agrartechnik Potsdam-Bornim e. V. (ATB)

**Ph.D. (Biotechnology)** 2005 - 2009  
Prince of Songkla University, Thailand

**M.Sc. (Environmental Management)** 2003 - 2005  
Prince of Songkla University, Thailand

**B.Sc. in Education (General Science)** 1999 - 2003  
Prince of Songkla University, Thailand

## EXPERTISE / AREAS OF RESEARCH INTEREST

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- Environmental Management
- Environmental Health
- Environmental Biotechnology
- Sustainable Development
- Occupational Health
- One Health

## WORK AND RESEARCH EXPERIENCE

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### Program Director of Ph.D in Health and Sustainable Development

ASEAN Institute for Health Development, Mahidol University (Thailand)

### Editor-in-Chief

Journal of Public Health and Development

## PUBLICATIONS LIST

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- **Rattanapan C**, Arrykul S, Chevakidagarn P. Dephosphorization of Wastewater by Fly Ash from Phuket Incineration Plant. *CMU. J. Nat. Sci.* 2008; 7:115-125.
- **Rattanapan C**, Boonsawang P, Kantachote D. Removal of H<sub>2</sub>S in Down-Flow Biofiltration using Sulfide Oxidizing Bacteria from Concentrated Latex Wastewater. *Bioresource Techno.* 2009; 100:125-130.
- **Rattanapan C**, Boonsawang P, Kantachote D. Effect of H<sub>2</sub>S and air flow rates on pure and consortium culture of sulfide oxidizing bacteria biofiltration for H<sub>2</sub>S. *J. Health Res*, 2010; 24(suppl):1-6.
- **Rattanapan C**, Kantachote D, Yan R, Boonsawang P. Hydrogen sulfide removal using granular activated carbon biofiltration inoculated with *Alcaligenes faecalis* T307 isolated from concentrated latex wastewater. *Int. Biodeter. Biodegr.*, 2010; (64): 383-387
- Rakkamon T, Chaimay B, Woradet S, **Rattanapan C**. Health Risk Assessment or Exposure to Heavy Metals in Tap Water: A Case study of Tamla Village Tap Water System, Lankhoy sub-district, Paprayoom district, Phatthalung province. *J. Pub Health Develop*, 2010, 8(2): 44-54 (in Thai).
- Wijaya S, **Rattanapan C**, Chompikul J, Factor Effecting Patients' Satisfaction with General Practitioners Consultations at Palembang Health Centers, Indonesia, *J. Health Res*, 2011 25(2): 77-81.
- Do M, **Ratanapan C**, Suksaroj T, Health Risk from Exposure to Trihalomethanes in Swimming Pool, *J. Pub Health Develop*, 2011 9(2): 208-222 (in Thai).
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- **Rattanapan C**, Sawain A, Suksaroj T, Suksaroj S. Enhanced efficiency of dissolved air flotation for biodiesel wastewater treatment by acidification and coagulation processes. *Desalination*, 2011; 280(1-3): 370-377.
- **Rattanapan C**, Boonsawang P, Kantachote D. Hydrogen Sulfide Removal from Biogas using Pure and Mixed Cultures of Sulfide Oxidizing Bacteria Biofiltration. *Int J Green Energy*, 2011, (8): 1-10.
- **Rattanapan C**, Ounsaneha W. Removal of Hydrogen Sulfide Gas using Biofiltration - a Review. *Walailak Journal of Science and Technology*, 2012, 9(1): 9-18.

- **Rattanapan C**, TS Thunwadee, W Ounsaneha. Development of Eco-efficiency Indicators for Rubber Glove Product by Material Flow Analysis. *Procedia Soc Behav Sci*, 2012, 40: 99-106.
- S. Charmondusit, K. Bhaktikul, C. Arunlertaree, W. Wisawapipat, **C. Rattanapan**, K. Charmondusit. Problem Based Training Program on Industrial Ecology and Environment for the Sustainability Management of Industry. *Procedia Soc Behav Sci*, 2012, 40: 31-36.
- Muadchim, M, Suksaroj TT, **Rattanapan C**, Suksaroj C. Biogas production and biochemical methane potential of anaerobic co-digestion from pretreated biodiesel processing wastewater and decanter cake. *Thai Environmental Engineering Journal*, 2012 26(1): 15-23.
- **Rattanapan C**, Suksaroj TT, Kantachote D, Rakkamond T, Katemai W. Potential from Biogas Production for Co-digestion of Domestic Wastewater and Food Waste. *Health and The Environment Journal*, 2012, 3(2): 1-9.
- Shrestha N., Mongkolchati A., **Rattanapan C**. and Wongsawass S. Assessment of patient satisfaction at a traditional medicine hospital in Nepal. *J Pub. Health Dev.* 2012; 10(3): 17-29
- **Rattanapan C**, Thunwadee TS, Wongsawass S, Ounsaneha W. Measure on Eco-efficiency of Thai Growing-Fishing Pig Farms. *Int J Environ Sci Dev*, 2013, 4(5): 533-537.
- **Rattanapana C**, Suksaroj TT, Chumpikul J and Choosong T. Health Risk Assessment of Hydrogen Sulfide Exposure among Workers in a Thai Rubber Latex Industry. *Environmentasia*, 2014, 7(1): 25-31.
- William C. Phir P, **Rattanapan C** and Mongkolchat A. Determinants of Postnatal Service Utilisation among Mothers in Rural Settings of Malawi. *Health and Social Care in the Community* 2015, 22(5): 493-50.
- Akai K, Chompikul J, and **Rattanapan C**. Rabies preventive behaviors of dog owners in Nakhon Pathom Province of Thailand. *J Pub. Health Dev.* 2015; 13(1): 17-28.
- Sayavong C, Chompikul J, Wongsawass S and **Rattanapan C**. Knowledge, attitudes and preventive behaviors related to dengue vector breeding control measures among adults in communities of Vientiane, capital of the Lao PDR. *J Infect Public Health* 2015; 8, 466—473.
- Soe KT, Laosee O, Limsatchapanich S, and **Rattanapan C**. Prevalence and Risk Factors of Musculoskeletal Disorder among Myanmar Migrant Workers in Thai Seafood Industries. *International Journal of Occupational Safety and Ergonomics* 2015; 21(4): 539-546.
- Ounsaneha W and **Rattanapan C**. Defining the Eco-Efficiency of Rubber Glove Products Manufactured from Concentrated Latex in Thailand. *Environmental Progress & Sustainable Energy* 2016; 35(3): 802-808.
- Hlaing ZN, Mongkolchati A and **Rattanapan C**. A Household Level Analysis of Water Sanitation Associated with Gastrointestinal Disease in an Urban Slum Setting of South Okkalapa Township, Myanmar. *Environmentasia*, 2016, 9(2): 91-100.
- Lwin, PM, **Rattanapan C**, Laosee, O. Nurses' intention to remain employed in hospitals: Understanding the shortage in the context of Myanmar. *International Journal of Nursing Practice* 2017; 23: e12536.
- Philalai T, Rattanapan C, Laosee O. Alcohol Consumption among Adults in Northern Thailand. *J. Health Res*, 2017; 31(2): 99-107.

- Klunbut P, Mongkolchati A, Ussawarujikulchai A, Ounsaneha W, **Rattanapan C**. Appropriate Option of Market Solid Waste Management based on the Stakeholder Perspectives: A Case Study in a Central Market of Agriculture Products, Thailand. *Journal of Materials and Environmental Sciences* 2017 8(7): 2391-2402.
- Ounsaneha W, **Rattanapan C** and Suksaroj TT. Enhancement of Eco-Efficiency Performance for Tread Product Process by Clean Technology. *The Journal of Industrial Technology* 2017 13(2): 49-63 (in Thai).
- Ounsaneha W, Kraisin P, Suksaroj TT, Suksaroj C, **Rattanapan C**. Health Risk Assessment from Haloacetic Acids Exposure in Indoor and Outdoor Swimming Pool Water, *Environmentasia*, 2017, 10(2): 177-185.
- Taecharungroj V, Suksaroj TT, **Rattanapan, C**. The place sustainability scale: measuring residents' perceptions of the sustainability of a town, *Journal of Place Management and Development*, 2018, 11(4): 370-390.
- Ounsaneha W, Janthaphat P, Suksaroj TT, **Rattanapan C**. Joint benchmarking and eco-efficiency for the sustainable performance of swine production in Thailand, *International Journal of Geomate*, 2018, 15(49): 137-142.
- Ounsaneha W, Chotklang N, Laosee O, **Rattanapan C**. Predictor of behavior intention to develop a green university in the case of an undergraduate university in Thailand, *International Journal of Geomate*, 2018, 15(49): 162-168.
- Soe AK, **Rattanapan C**, Wongsawass S, Laosee O. Use of insecticide-treated nets among pig owners living in Japanese encephalitis endemic area of Northern Myanmar, *International Journal of Geomate*, 2018, 15(50): 45-50.
- Laosee O, **Rattanapan C**, Somrongthong R. Physical and cognitive functions affecting road traffic injuries among senior drivers, *Archives of Gerontology and Geriatrics*, 2018, 78: 160-164.
- Manandhar S, Suksaroj TT, **Rattanapan C**. The Association between Green Space and the Prevalence of Overweight/Obesity among Primary School Children. *International Journal of Occupational and Environmental Medicine*, 2019, 10(1): 1-10.
- **Rattanapan C**, Sinchai L, Suksaroj TT, Kantachote, D, Ounsaneha W. Biogas Production by Co-Digestion of Canteen Food Waste and Domestic Wastewater under Organic Loading Rate and Temperature Optimization. *Environments*, 2019, 6: 16.
- Ounsaneha W, **Rattanapan C**. Enhancing Efficiency of Sugar Cane Production Process by Clean Technology. *Khon Kaen Agriculture Journal*, 2019, 47(SUPPL. 1): 59-66.
- Laosee O, Sritoomma N, Wamontree P, **Rattanapan C**, Sitthi-Amorn C. The effectiveness of traditional Thai massage versus massage with herbal compress among elderly patients with low back pain: A randomised controlled trial. *Complementary Therapies in Medicine*, 2020, 48: 102253.
- Ounsaneha W, Buadit T and **Rattanapan C**. Assessment of human health impact based on life cycle assessment: A case study of Thai retread tire. *IOP Conference Series: Materials Science and Engineering*, 2020, 773: 012038 .

- Ounsaneha W, Laosee O, Suksaroj TT, Srisamai P, and Rattanapan C. Tourist Behavior of Plastic Waste Reduction in the Coastal Area of Trang Province, Thailand. *International Journal of Environmental Science and Development*, 2020, 11(4): 165-169.
- **Rattanapan C.** Ounsaneha W. Environmental impact assessment of Thai banana supply chain. *International Journal of Environmental Science and Development*, 2020, 11(7): 341-346.
- Buadit T, **Rattanapan, C.** Ussawarujikulchai, Suchiva, K, Papong, S. Ma, H.-W. 2020. Life cycle assessment of material recovery from pyrolysis Process of end-of-life tires in Thailand. *International Journal of Environmental Science and Development*, 2020, 11(10): 493-498.
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- Ounsaneha W, **Rattanapan C**, Suksaroj T.T, Kantachote D, Klaweche, W, Rakkamon, T. 2021. Biogas production by co-digestion of municipal wastewater and food waste: Performance in semi-continuous and continuous operation. *Water Environment Research*, 2021, 93(2): 305-315.
- **Rattanapan C.** Ounsaneha W. Water Footprint Assessment of Thai Banana Production. *International Journal of Environmental Science and Development*, 2021, 12(5): 151-156.
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- **Rattanapan, C.**, Ounsaneha, W. The potential for value-added banana production waste under circular economy concept. *International Journal of Environmental Science and Development*, 2022, 13(3): 92–96.
- Ounsaneha, W, Parunawin, W, Laosee, O, Isoda, N, **Rattanapan, C.** Household environmental practice for prevent and control dengue fever toward one health framework in an endemic area of central region, Thailand. *EnvironmentAsia*, 2022, 15(2): 34-44.
- Ounsaneha, W., Laosee, O., Suksaroj, T.T., **Rattanapan, C.** Preventive Behaviors and Influencing Factors among Thai Residents in Endemic Areas during the Highest Epidemic Peak of the COVID-19 Outbreak. *International Journal of Environmental Research and Public Health*, 2023, 20(3), 2525.
- Ounsaneha, W, Parunawin, W, Laosee, O, Isoda, N, **Rattanapan, C.** Combined Impact of Omicron Vaccination and Environmental Risk Exposure: A Thailand Case Study. *Vaccines*, 2023, 11(2), 297.
- Buadit, T., Ussawarujikulchai, A., Suchiva, K. Ma, H.-W., **Rattanapan, C.** Environmental impact of passenger car tire supply chain in Thailand using the life cycle assessment method. *Sustainable Production and Consumption*, 2023, 37, 156–168

- Suksaroj, C., Jearat, K., Cherypiew, N., **Rattanapan, C.**, Suksaroj, T.T. Promoting Circular Economy in the Palm Oil Industry through Biogas Co-digestion of Palm Oil Mill Effluent and Empty Fruit Bunch Pressed Wastewater. *Water (Switzerland)*, 2023, 15(12), 2153.
- Buadit, T., Ussawarujikulchai, A., Suchiva, K., **Rattanapan, C.** Green productivity and value chain analysis to enhance sustainability throughout the passenger car tire supply chain in Thailand. *Journal of Open Innovation: Technology, Market, and Complexity*, 2023, 9(3), 100108.
- Trisnasari, Laosee, O., **Rattanapan, C.** Janmaimool, P. Assessing the Determinants of Compliance with Contribution Payments to the National Health Insurance Scheme among Informal Workers in Indonesia. *Journal of Environmental Research and Public Health* 2023, 20, 7130.
- Laosee, O., Sritoomma, N., **Rattanapan, C.**, Wamontree, P. Effect of Fitness-To-Drive and Metacognition on Road Traffic Injury Among Older Taxi Drivers: Hierarchical Modeling. *Journal of Applied Gerontology*, 2024, 10.1177/07334648241241008.
- Ounsaneha, W., Laosee, O., **Rattanapan, C.** Influence of Environmental Risk Exposure on the Determinants of COVID-19 Booster Vaccination in an Urban Thai Population. *International Journal of Environmental Research and Public Health*, 2024, 21, 745.
- Bhatta J, Laosee, O., **Rattanapan, C.** Factors related to preventive measures towards PM2.5 exposure: A systematic review. *Global Transitions*, 2024, 6, 212-220.

## RESEARCH GRANTS / FELLOWSHIPS

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<b>Health Risk Assessment of Exposure to Hydrogen sulfide of staff in Concentrated latex industry</b>	2010 - 2011
Sources: The Asthma Foundation of Thailand	
<b>The Optimization of Biogas Production from Domestic Wastewater by Co-digestion with Food Waste</b>	2011 - 2013
Sources: The Thailand Research Fund	
<b>Enhancement of Concentrated Latex Production Process for Rubber Glove Product by Eco-Efficiency</b>	2011 - 2012
Sources: The Thailand Research Fund	
<b>Enhancing Performance of Tread Product Process and Condom Product Process from Concentrated Latex by Eco-Efficiency</b>	2012
Sources: National Research Cousin of Thailand and The Thailand Research Fund	
<b>Strengthening the Sustainable Development of Pig farms using Eco-efficiency</b>	2012 - 2013
Sources: The Thailand Research Fund	
<b>Microbial community structure in anaerobic co-digestion of domestic wastewater and food waste in the laboratory continuously stirred tank and modified anaerobic baffled reactors</b>	2013
Sources: The German Academic Exchange Service	
<b>Eco-efficiency Evaluation of pig farm in Thailand Using Data Envelopment Analysis</b>	2014

Sources: Austrian Agency for International Cooperation in Education and Research

**Appropriate Model for Solid Waste Management of Taladd Thai Phatumthani Province** 2014 - 2015

Sources: The Thailand Research Fund

**Eco-efficiency Best Practice of Sugar Cane Production Industry for Sustainable Development by Benchmarking** 2014 - 2015

Sources: National Research Council of Thailand and The Thailand Research Fund

**Direction Determination of Economic Crop Plantation in the Southern of Thailand toward Sustainable Development by Eco-efficiency with Ecological Footprint** 2014 - 2015

Sources: Mahidol University

**Enhancement of Green Productivity for Sustainable Supply Chain Management of Dairy Cooperatives in the Central of Thailand by Value Chain Analysis** 2016

Sources: The Thailand Research Fund

**A framework development to promote collective action in community within One Health principle of household environment practice to prevent and control dengue fever in Central region of Thailand.** 2016 - 2017

Sources: United States Agency for International Development (USAID)

**Biogas Production by Co-digestion of Municipal Wastewater and Food Waste in Semi-continuous Operations** June 2017

Sources: Austrian Agency for International Cooperation in Education and Research and Office of the Higher Education Commission, Thailand

**Enhancement of Green Productivity for Sustainable Supply Chain Management of Tire Industry in Thailand by Value Chain Analysis** 2017 - 2018

Sources: The Thailand Research Fund

**Enhancement of Green Productivity for Sustainable Tire Production and Used Tire Management in Thailand by Value Chain Analysis** 2017 - 2018

Sources: The Thailand Research Fund

**Option of Sustainable Food Waste Management for Large Fresh Markets of Thailand** 2017 - 2018

Sources: The Thailand Research Fund

**An examination of the factors that influence young drivers' willingness to speed and text while driving for sustainable encouragement of safety driving in Thailand.** 2018 - 2019

Sources: Mitsui Sumitomo Insurance Welfare Foundation

<b>Appropriate Model for Plastic Waste Management in Coastal Province toward Stakeholder integration and Sustainability: A Case Study of Trang Province.</b>	2019
Sources: National Research Cousin of Thailand	
<b>Sustainable Supply Chain Management of the Tyre Industry in Thailand by Enhancing Green Productivity with Value Chain Analysis</b>	2020 - 2023
Sources: National Research Cousin of Thailand	
<b>Risk Reduction for Epidemics of the COVID-19 in Thai Urban Cites by Environmental Risk of Exposure Assessment</b>	2022 - 2023
Sources: National Science Research and Innovation Fund	
<b>Critical Success Factors for Epidemics of COVID-19 Prevention and Control in Thai Urban Cities by Environmental Risk of Exposure Assessment</b>	2023 - 2024
Sources: National Science Research and Innovation Fund	
<b>Effectiveness Program of Road Safety Literacy for Foreign Visitor Cyclists in a World Heritage Site of Thailand.</b>	2024
Sources: Mitsui Sumitomo Insurance Welfare Foundation	
<b>Circular Economy Approach in the Optimization of Biogas Production by Co-digestion between Solid and Liquid Wastes from Thai Fresh Markets</b>	2024 - 2027
Sources: National Research Cousin of Thailand and Mahidol University	
<b>Appropriate pathway development for reducing fine particulate matter (PM 2.5) concentration and exposure risk in Thai urban residents</b>	2024 - 2025
Sources: National Science Research and Innovation Fund	

## **AWARDS AND HONORS**

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<b>Major advisor for the outstanding thesis awards promoting Mahidol University's SDGs Policies</b>	2024
Faculty of Graduate Studies, Mahidol University	