

PANATE MANOMAIVIBOOL – CURRICULUM VITAE

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Academic qualifications

Doctor of Philosophy in Engineering (Industrial Environmental Economics), the International Institute for Industrial Environmental Economics (IIIEE), Faculty of Engineering (LTH), Lund University, Sweden Sep 2011

Dissertation: "Advancing the Frontier of Extended Producer Responsibility: the Management of Waste Electrical and Electronic Equipment in Non-OECD Countries"

Licentiate of Engineering in Industrial Environmental Economics, the International Institute for Industrial Environmental Economics (IIIEE), Faculty of Engineering (LTH), Lund University, Sweden Dec 2009

Dissertation: "Making Sense of Extended Producer Responsibility: Towards a Framework for Policy Transfer"

Master of Arts in Public Administration and Public Policy (with Distinction), the Department of Politics, the University of York, United Kingdom July 2007

Thesis: "Network Management and Environmental Effectiveness: The Management of End-of-life Vehicles in the United Kingdom and in Sweden"

Master of Science in Environmental Management and Policy, the International Institute for Industrial Environmental Economics (IIIEE), Faculty of Engineering (LTH), Lund University, Sweden Sep 2005

Thesis: "Municipal Solid Waste Management in Bangkok: The Cases of the Promotion of Source Reduction and Source Separation in Bangkok and in Roong Aroon School"

Bachelor of Arts in Political Science (Public Administration), 1st Class Honour with a gold medal, the Faculty of Political Science, Chulalongkorn University, Thailand Apr 2003

Professional experiences

Nov 2011 – Present Lecturer, School of Science, Mae Fah Luang University, Chiang Rai, Thailand

Mar 2013 – Aug 2013 Research Fellow, Asian Institute of Energy, Environment, and Sustainability (AIEES), Seoul National University, Seoul, Republic of Korea

Oct 2006 – Sep 2011 Research Associate, the International Institute for Industrial Environmental Economics (IIIEE), Lund University, Sweden

Research experiences

I have led almost 20 research projects and served as advisors or specialists in several other projects on sustainability since 2003. Notably I have collaborated with researchers from IIIIE in Sweden, NIES in Japan, SNU in South Korea and others to advance our knowledge on extended producer responsibility (EPR) which has been a driving force behind the reform of solid waste policies in many industrialized countries. I also assisted in a series of projects commissioned by the Pollution Control Department (PCD) in Thailand to translate the policy principle into draft laws for the management of waste electrical and electronic equipment (WEEE).

My recent research has focused in two areas. First, problems and pathways to a more sustainable outlook for municipal solid waste management (MSWM) in developing countries were explored. This set of research funded by the Thai Health Promotion Foundation, the Political Development Council and the Thailand Research Fund (TRF) was the foundation of the action research that was followed under the theme "Chiang Rai Zero Waste" (CR ZW). Together with practitioners and community leaders, we have successfully developed an archetype community in each of the 18 districts in Chiang Rai that can achieve more than 50% waste diversion and be an exemplar for others to model after. For those waste articles that communities cannot manage, an online platform was developed with the support of Chiang Rai Provincial Administrative Organization to monitor hazardous waste. As of June 2017, a month after it was launched, 87% of the 143 local governments were on-lined; and, for the first time ever Chiang Rai will be able to properly dispose of its hazardous waste *en masse* in the coming August.

The second theme is what expanded from my work with local governments and communities in developing countries. Tourism is going to be an important economic powerhouse where the livelihood of many Thai communities will be affected, if not already. It is, therefore, vital to develop a framework that ensures not only competitiveness and efficiency but also sustainability. Towards this end, I have been working with hotels and tour operators and destination managers like DASTA in Thailand on the best ways to adhere to the principles and criteria of the Global Sustainable Tourism Council (GSTC). I am also leading a new research program funded by TRF to estimate the carrying capacity of the tourist destinations. Below is a list of selected articles as references to these bodies of work.

Journal articles

1. **Manomaivibool, P.**, Mongkonkorn, S., Unroj, P., Dokmaingam, P. 2018. Chiang Rai Zero Waste: participatory action research to promote source separation in rural areas. *Resources, Conservation and Recycling*, 136, 142-152.
2. Dokmaingam, P., and **Manomaivibool, P.** 2017. Integrated municipal solid waste management for the highland rural area: case study Patueng sub-district in Chang Rai, Thailand. *Rangsit Journal of Arts and Sciences*, 7(2), 173-180.
3. Chana, T.M., and **Manomaivibool, P.** 2016. Examining co-management of national parks through the lens of common-pool resource design principles: A comparative case study of Liwonde and Majete in Malawi. *Applied Environmental Research*, 38(3): 77-92.
4. **Manomaivibool, P.**, Chart-asa, C., and Unroj, P. 2016. Measuring the impacts of a save food campaign to reduce food waste on campus in Thailand. *Applied Environmental Research*, 38 (2): 13-22.
5. **Manomaivibool, P.**, and Vassanadumrongdee, S. 2016. A hybrid law model for the management of waste electrical and electronic equipment: a case of the new draft law in Thailand. *Applied Environmental Research*, 38 (1): 1-10.
6. **Manomaivibool, P.** 2015. Wasteful tourism in developing economy? A present situation and sustainable scenarios. *Resources, Conservation and Recycling*, 103: 69-76.
7. **Manomaivibool, P.**, and Hong, J.H. 2014. Two decades, three WEEE systems: How far did EPR evolve in Korea's resource circulation policy? *Resources, Conservation and Recycling*, 83: 202-212.
8. Vassanadumrongdee, S. and, **Manomaivibool, P.** 2014. The challenge of promoting greater use of economic instruments in Thailand: lessons learned from the Draft Act on Economic Instruments for Environmental Management. *Applied Environmental Research*, 36: 39-51.
9. **Manomaivibool, P.**, and Vassanadumrongdee, S. 2012. Buying back household waste electrical and electronic equipment: Assessing Thailand's proposed policy in light of past disposal behaviour and future preferences. *Resources, Conservation & Recycling*, 68: 117-125.

10. **Manomaivibool, P.**, and Vassanadumrongdee, S. 2011. Extended producer responsibility in Thailand: Prospect for policies on waste electrical and electronic equipment. *Journal of Industrial Ecology*, 15(2): 185-205.
11. Lawhon, M., **Manomaivibool, P.**, and Inagaki, H. 2010. Solving/ Understanding/ Evaluating the e-waste challenge through transdisciplinarity? *Futures*, 42: 1212-1221.
12. **Manomaivibool, P.** 2010. Extended Producer Responsibility in East Asia: approaches and lessons learnt from the management of waste electrical and electronic equipment. *East Asian Review*, 13: 41-65.
13. **Manomaivibool, P.** 2009. Extended Producer Responsibility in a non-OECD Context: The management of waste electrical and electronic equipment in India. *Resources, Conservation & Recycling*, 53(3): 136-144.
14. **Manomaivibool, P.** 2008. Network management and environmental effectiveness: the management of end-of-life vehicles in the United Kingdom and in Sweden. *Journal of Cleaner Production*, 16(18): 2006-2017.

Conference papers and presentations

1. **Manomaivibool, P.**, Kang, M., Noithammaraj, P., and Sangsnit, N. 2017. Sustainability Benchmarking and Lessons Learned for Tourist Destination Development in Thailand: A Case of Sukhothai Historical Park. Presented at the 7th International Conference on Tourism (ICOT2017) Place and the Tourist Experience: Heritage, Sustainability and Economy, 28 June-1 July, Chiang Mai, Thailand.
2. **Manomaivibool, P.**, Mongkonkorn, S., Unroj, P., Dokmaingam, P. 2016. Chiang Rai Zero Waste: implementing a sufficient economy framework for sustainable lifestyle in rural Thai communities. Presented at the 12th Biennial International Conference on EcoBalance, 3-6 October, Kyoto, Japan.
3. Yoshida, A., Tomohiro, T., **Manomaivibool, P.**, and Aoyagi, M. 2016. Household energy use of electrical appliances in rural and suburban households of Thailand. Presented at the 12th Biennial International Conference on EcoBalance, 3-6 October, Kyoto, Japan.
4. **Manomaivibool, P.** 2015. Progress of Thai WEEE legislation: 15 years in the Asian perspective. Presented at the International Conference on WEEE & Used Battery Management and EPR Principle, Tongji University, 20-22 May, Shanghai, China.
5. Aye, K.L., **Manomaivibool, P.** 2014. Factors influencing on household's recycling behaviors: a case study of separation of saleable materials in Pyay City, Pyay District, Bago Region, Myanmar. In *Proceedings of the 3rd International Conference on Environmental Engineering, Science and Management*, 26-28 March, Bangkok, Thailand.
6. **Manomaivibool, P.**, and Hong, J.H. 2013. The evolution of recycling policies in Korea in the past two decades: drivers and impacts of an extended producer responsibility program for complex waste products. Presented at the 7th International Society for Industrial Ecology's 2013 Conference, 25-28 June, Ulsan, Republic of Korea.
7. **Manomaivibool, P.** 2013. Quantifying waste from tourism: a case of Golden Triangle in Chiang Rai Province, Thailand. Presented at the 17th Korea-Japan Joint International Session on Waste & Resources Circulation, Korea Society of Waste Management, 9-11 May, Danyang, Republic of Korea.
8. **Manomaivibool, P.**, and Hong, J.H. 2013. The adoption of EPR for the management of WEEE in Northeast Asia: towards an integrated framework of policy diffusion. Presented at the 17th Korea-Japan Joint International Session on Waste & Resources Circulation, Korea Society of Waste Management, 9-11 May, Danyang, Republic of Korea.
9. Wikee, A., **Manomaivibool, P.** and Intralawan, A. 2013. Waste disposal behaviors and demand for waste management services of highland households: the case of Mae Sa-long Nai Sub-district, Chiang Rai Province. In *Proceedings of the Twenty Seventh National Graduate Research Conference*, 28 February-1 March, Phitsanulok, Thailand, (available in Thai, abstract in English).
10. Vassanadumrongdee, S. and **Manomaivibool, P.** 2013. E-waste management system in Thailand: strategies and suggestions. Presented at the Ninth NIES Workshop on E-waste, 31 January-1 February, Bangkok, Thailand.
11. **Manomaivibool, P.** 2013. Practical e-waste management scheme for Thailand. Presented at International Conference on Electronic Waste Technologies and Management: E-waste Tech 2013, 24 January, Bangkok, Thailand.

12. Kongbuamai, N., **Manomaivibool, P.** and Remmen, A. 2012. Biomass to energy in Thailand: an institutional perspective on the challenge of very small projects in Chiang Rai. In *Proceedings of the First Mae Fah Luang University International Conference 2012*, 29-30 November, Chiang Rai, Thailand.
13. Vassanadumrongdee, S. and, **Manomaivibool, P.** 2012. Estimating the costs of direct government intervention in the recycling of waste electrical and electronic equipment. Presented at *the Third International Society for Industrial Ecology's Asia-Pacific Meeting*, 20-21 October, Beijing, China.
14. **Manomaivibool, P.** 2012. Predicting disposal behaviours of the next e-waste generators in Thailand using multinomial logit model. Presented at *the Third International Society for Industrial Ecology's Asia-Pacific Meeting*, 20-21 October, Beijing, China.
15. **Manomaivibool, P.** 2011. An Evaluation Framework for Policy Learning and Transfer: Extended Producer Responsibility Programs. Presented at *2011 EEN Forum – Environmental Evaluation: Navigating Complexity*, 23-24 June, Washington, D.C., USA.
16. **Manomaivibool, P.** 2011. The WEEE laws: an international comparison. Presented at *International Society for Industrial Ecology's 2011 Conference*, 7-11 June, California, USA.
17. **Manomaivibool, P.**, and Tojo, N. 2010. The management of used mobile phones in the United Kingdom – Is exporting for re-use a sufficient solution? In *Proceedings of Going Green—CARE Innovation 2010*, 8-11 November, Vienna, Austria.
18. Murakami-Sazuki, R., Tojo, N., **Manomaivibool, P.**, Terazono, A., and Murakami, S. 2010. The collection and recycling systems of used mobile phone in European countries and Japan. In *EcoBalance2010*, 9-12 November, Tokyo, Japan.
19. **Manomaivibool, P.** 2010. Beyond OECD: The prospect of EPR in a wild WEEE world. Presented at *Canada's 6th National Workshop on Extended Producer Responsibility*, 27-29 April, Toronto, Canada.
20. **Manomaivibool, P.** 2009. The making of Thai WEEE policy: what can be the role of EPR? Poster presented in *International Society for Industrial Ecology's 2009 Conference*, 21-24 June 2009, Lisbon, Portugal.
21. **Manomaivibool, P.** 2008. Extended producer responsibility in East Asia: approaches and lessons learnt from the management of waste electrical and electronic equipment. In *Proceedings of 5th International Conference on East Asian Studies*, 21-22 September 2008, Osaka, Japan, pp. 267-286.
22. **Manomaivibool, P.**, Lindhqvist, T., and Tojo, N. 2008. EPR in non-OECD context: an introduction to research projects on the management of WEEE. Paper and poster presented in *8th Asia Pacific Roundtable for Sustainable Consumption and Production*, 18-19 September 2008, Cebu, Philippines.
23. **Manomaivibool, P.** 2006. Network Management and Environmental Effectiveness: The management of end-of-life vehicles in the UK and in Sweden. In *Proceedings of 1st International Conference on Green and Sustainable Innovation*, 29 November – 1 December 2006, Chiang Mai, Thailand, pp. 224-233.

Teaching courses

- 2012-2018 Products and Environmental Impact (free elective, Mae Fah Luang University)
- 2018 Science for Life (free elective, Mae Fah Luang University)
- 2017-2018 Academic Literature and Presentation Skills (BEng, Mae Fah Luang University)
- 2016-2017 Material Recycling (BEng, Mae Fah Luang University)
- 2012-2016 Methodology for Natural Resources and Environmental Management Research (MSc, Mae Fah Luang University)
- 2012-2015 Regulations, Policy and Planning for Natural Resources and the Environment (MSc, Mae Fah Luang University)
- 2012 Integrated Environmental Product Policy (MSc, Mae Fah Luang University)
- 2011 Local Natural Resource and Environment Management (BA, Mae Fah Luang University)
- 2008-2011 Applied Research in Sustainable Consumption and Production (MSc, Lund University)
- 2007-2011 Policies and Approaches for Sustainability (MSc, Lund University)

2009 Strategic Environmental Development (MSc, Lund University)

Research projects

- 2018 **Project Leader** in “Analysis of Policies, Measures, and Law Enforcement on Environmental Protection: A Case Study of Electrical and Electronic Equipment in the People’s Republic of China” funded by the Thailand Research Fund (ongoing, Feb 2018-Mar 2019)
- 2017 **Project Leader** in “Smart Solutions for Community Hazardous Waste” funded by the InnoHub (ongoing, Nov 2017-Mar 2018)
- 2017 **Country coordinator** in “Sustainable Consumption and Material Flows of Air Conditioners in Thailand” funded by the National Institute for Environmental Studies, Japan (ongoing, Jul-Dec 2017)
- 2017 **Program Coordinator** in “Efficiency, Competitiveness and Sustainability of Thai Tourism” funded by the Thailand Research Fund (ongoing, May 2017-Apr 2018)
- 2017 **Project Leader** in “Data Supporting System for the Management of Toxic Waste from Communities in Chiang Rai Province” funded by the Chiang Rai Provincial Administrative Organization
- 2016 **Project Leader** in “Framework for the Indicators and Evaluation of Tourist Destination Development according to GSTC Sustainable Tourism Criteria” funded by Designated Areas for Sustainable Tourism Administration
- 2016 **Project Leader** in “Case Studies of Best Practices in Local Employments and Procurements of Local Goods and Services in Tourist Industries” funded by Designated Areas for Sustainable Tourism Administration
- 2016 **Project Leader** in “The Review of Solid Waste Management Cost and the Life Cycle Assessment of Solid Waste Management Systems: Principles and Customization for Local Governments in Thailand” funded by the Thailand Research Fund
- 2016 **Project Leader** in “Deforestation and Reforestation in Naan Provinces” funded by the 100 Year Princess Srinakarin Foundation
- 2016 **Project Leader** in “Evaluation of the Zero Waste Campaign in Chiang Rai Province” funded by the Chiang Rai Provincial Administrative Organization
- 2015 **Project Leader** in “A Stepwise Guide for Sub-district Administrative Organizations to Develop a Municipal Solid Waste Management System” funded by the Thai Health Promotion Foundation
- 2014 **Project Leader** in “Guidelines for Community Participation in Local Government’s Projects Affecting Public Health and the Environment: A Comparative Case Study of Small-scale Waste Disposal Projects in Chiang Rai Province” funded by Political Development Council
- 2014 **Project Leader** in “Raise Awareness and Promotion Actions toward Reducing Food Losses and Food Waste on the Campus” funded by Food and Agriculture Organization of the United Nations (FAO)
- 2014 **Project Leader** in “Measuring the Impacts of Environmental Campaigns on Attitude and Behaviors of New Students at Mae Fah Luang University” funded by Mae Fah Luang University
- 2014 **Project Leader** in “Unit-based Pricing for Waste: A Guideline for Local Governments” funded by the Thai Health Promotion Foundation
- 2014 **Specialist (environment)** in “Drafting a Law for the Management of Waste Electrical and Electronic Equipment and Community Hazardous Waste” funded by the Pollution Control Department, Thailand
- 2013 **Project Leader** in “Forest Biodiversity and Carbon Stock Inventory in Mae Fah Luang University” funded by Mae Fah Luang University
- 2013 **Project Leader** in “Comparing Local Governments' Solid Waste Management Capabilities: The Case Study of Local Governments in Chiang Khong and Chiang Saen Districts, Chiang Rai Province” funded by the Thai Health Promotion Foundation
- 2012 **Project Leader** in “Environmental Services for Tourism Activities: The Case Study of Solid Waste and Wastewater Management in Chiang Khong and Chiang Saen Districts, Chiang Rai Province” funded by the Thai Health Promotion Foundation
- 2012 **Project Leader** in “Green University” funded by Mae Fah Luang University

- 2012 **Researcher** in “Using Cost Benefit Analysis for Policy Learning at a Local Level: A Case Study of an Incinerator Project at Mae Salong Nai Sub-District, Mae Fah Lung District, Chiang Rai” funded by the Thai Health Promotion Foundation
- 2011 **Advisor** in “Thai Electrical and Electronic Equipment Database” funded by the Pollution Control Department, Thailand
- 2010 **Advisor** in “Rules, Procedures, and Fees of Thailand’s Industrial Waste Management” funded by the Department of Industrial Works, Thailand
- 2010 **Specialist (environment)** in “Drafting a Subordinate Law under the Draft Act on Economic Measures for Environmental Management” funded by the Pollution Control Department, Thailand
- 2009 **Researcher** in “The Management of Used Mobile Phones in Europe” funded by the National Institute for Environmental Studies, Japan
- 2009 **Specialist (environment)** in “Rules, Procedures, and Fees of Thailand’s WEEE Management” funded by the Pollution Control Department, Thailand
- 2007 **Project Leader** in “Spreading the Principle of Individual Producer Responsibility to Non-OECD Countries” funded by Greenpeace International
- 2007 **Project Leader** in “Model Law on Producer Responsibility for WEEE in India” funded by Greenpeace International
- 2003 **Project Leader** in “Analysing Educational and Developmental Rights in Thailand” funded by the Office of the National Human Rights Commission of Thailand
- 2002 **Research Assistant** in “A Strategy for Thai Higher Education” funded by the Office of the Higher Education Commission, Thailand

Awards and Recognitions

- 2017 **Excellence in Review Awards** from Resources, Conservation & Recycling for exceptional contribution as a reviewer to ensure the excellence and high quality of papers published in RCR
- 2016 **National Research Council of Thailand’s Research Award** for the research “structure, vision, and the drivers for well-being, natural resources, and environmental management at a local level” (as a co-author)

Others

- 2016-now Member of the executive board of Solid Waste Association of Thailand (SWAT)
- 2016-now Advisor to MFU Student’s Cycling Club, Mae Fah Luang University
- 2015-now Founder of Chiang Rai Zero Waste Network
- 2015-now Member of Sustainable University Network of Thailand (SUN Thailand)
- 2014-now Chairperson of Green University Development Working Group, Mae Fah Luang University