

## **Michinori Uwasu (上須道德)**

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### **Education**

Ph.D. Agricultural & Applied Economics, University of Minnesota, 2008

M. A. Asian Studies, School of Social Science, Waseda University, Tokyo, Japan, 1998

B. A. Social Science, School of Social Science, Waseda University, Tokyo Japan, 1996

### **Work Experience**

April, 2011-present: Associate Professor Center for Environmental Innovation Design for Sustainability, Osaka University

September 2010-present: Visiting instructor, Kyoto Gakuen University

August, 2006 - March, 2011: Assistant Professor, Research Institute for Sustainability Science, Osaka University

### **Research Interests / Supporting Fields**

Provision of Public Goods, Institutions and Productivity, Sustainability Assessment, Sustainability Education / Environmental & Development Economics, Econometrics

### **Teaching**

Teaching courses in 2012

- Food security, globalization and sustainability (Graduate; teach in English)
- Frontier of sustainability science (Graduate; co-teach in English)
- Economic development and the environment (Undergraduate; teach in Japanese)
- Global threats and sustainability (Graduate; co-teach in English)

- Valuation methods for sustainability (Graduate; co-teach in Japanese)
- Introduction to sustainability science (Undergraduate; co-teach in Japanese)
- Seminar: Global sustainability from urban and rural perspectives (Undergraduate; co-teach in Japanese)

## Academic Research Papers

- M. Uwasu (2012) "Estimating the experience-weighted-attractions for the migration emission game." *Theoretical Economics Letters*, Forthcoming.
- K. Hara, M. Uwasu, S. Kurimoto, H. Kobayashi, S. Yamanaka, Y. Shimoda, Y. Umeda (2012) "Enhancing meso level research in sustainability science - Challenges and research needs." *Sustainability*, Vol. 4, pp. 1833-1847.
- M. Uwasu., Hara K, Yabar H, Zhang H (2012) "Analysis of energy productivity and determinant factors: A case study of China's provinces." *Journal of Sustainable Development*, Vol. 5, pp. 1-9.
- Yabar H, Hara K, M. Uwasu (2012) Comparative assessment of the co-evolution of environmental indicator systems in Japan and China *Resources, Conservation and Recycling*, Vol. 61, pp. 43-51.
- 上須道徳 (2011) 「サステイナビリティの研究、評価と経済学の役割」 『国際経済』日本国際経済学会機関誌第 62 号, pp. 47-62.
- H. Zhang, M. Uwasu, K. Hara, H. Yabar (2011) "How land use change affects urban sustainable development? – a case study of the Yangtze Delta in China." *Sustainability*, Vol.3 (7), pp. 1074-1089.
- K. Hara, H. Yabar, M. Uwasu, H. Zhang (2011) "Energy intensity trends and scenarios for China's industrial sectors - a regional case study." *Sustainability Science*, Vol. 6 (2) pp. 123-134.
- M. Uwasu, H. Yabar (2010) "Assessment of sustainable development based on the capital approach." *Ecological Indicators*, Vol.11 (2) pp.348-352.
- M. Uwasu, Y. Jiang, T. Saijo (2010) "On the Chinese carbon reduction target." *Sustainability*. Vol. 2 (6), pp. 1553-1557.

- H. Zhang, M. Uwasu, K. Hara, H. Yabar (2010) "Land use change patterns and sustainable urban development in China." *Journal of Asian Architecture and Building Engineering* Vol. 9, pp.131-138.
- 上須道徳、下田吉之 (2010)「大阪大学における融合教育としてのサステイナビリティ学プログラム」『工学教育』Vol. 58-1, pp. 40-45.
- H. Yabar, M. Uwasu, K. Hara, H. Zhang (2010) "Environmental policy and innovation: the Japanese experiences on dioxin emissions and waste recycling." *Proceedings of 2010 International Conference on Innovation, Management and Service*, World Academic Press, Singapore, February, 2010.
- H. Yabar, K. Hara, M. Uwasu, Y. Yamaguchi, H. Zhang (2009) "Integrated resource management towards a sustainable Asia: policy and strategy evolution in Japan and China." *Int. J. Environmental Technology and Management*, Vol. 11, No. 4.
- K. Hara, M. Uwasu, H. Yabar, H. Zhang (2009) "Sustainability assessment with time-series scores: a case study of Chinese provinces." *Sustainability Science*, Vol.4 (1) pp. 81-97.
- M. Uwasu, H. Yabar, K. Hara, Y. Shimoda, T. Saijo (2009) "Educational initiative at Osaka University in sustainability science: mobilizing science and technology towards sustainability." *Sustainability Science*, Vol.4 (1) pp. 45-53.
- H. Zhang, M. Uwasu, K. Hara, H. Yabar (2008) "Analysis on land use changes and environmental loads in the process of urbanization in China" *Journal of Asian Architecture and Building Engineering*, Vol.1, 109-115.
- E. Nelson, M. Uwasu, S. Polasky (2007) "Voting on open space: what explains the appearance and support of municipal-level open space conservation referenda in the United States?" *Ecological Economics*, Vol. 62, 3-4, pp 580-593.

## **Book Chapters and Other Papers**

- M. Uwasu, M. Kimura, K. Hara, H. Yabar, Y. Shimoda (2011) "Practices and barriers in sustainability education: A case study of Osaka University." in *Sustainability Science: A Multidisciplinary Approach*, Edited by H. Komiyama, K. Takeuchi, H. Shiroyama, T. Mino, United Nations University Press, Tokyo.

- M. Nakagawa, M. Uwasu, N. Tanaka (2011) "Overview of sustainability education." in Sustainability Science: A Multidisciplinary Approach, Edited by H. Komiyama, K. Takeuchi, H. Shiroyama, T. Mino, United Nations University Press, Tokyo.
- M. Uwasu (2011) "Global sustainability: the current states and challenges." in Achieving Global Sustainability: Policy Recommendations, Edited by T. Sawa, S. Iai, and S. Ikkatai, United Nations University Press, Tokyo.
- 上須道徳 (2011) 「サステイナビリティと経済学」 IR3S 季刊誌『サステナ』第 17 号.
- 上須道徳 (2010) 「グローバルサステイナビリティの現状と課題」第一章『グローバルサステイナビリティの構想と展望』井合進、植田和弘、佐和隆光、小西博之、一方井誠司編著、日経 BP 出版.
- 上須道徳 (2010) 「サステイナビリティ学とは」『持続可能な社会への視点』GLOCOL・RISS 編 (ISBN978-4-904609-04-0) .
- 上須道徳 (2009) 「大阪大学におけるサステイナビリティ教育の試み」 IR3S 季刊誌『サステナ』第 11 号, pp.43-47.
- E. Nelson, M. Uwasu, S. Polasky (2006) "Voting on open space: an analysis of the decision to hold a referendum and of referendum results." University of Minnesota Applied Economics Staff Paper Series, St. Paul.

## Papers Under Review

- M. Uwasu "The evolution of environmental cooperation: the effect of players' mobility."
- M. Uwasu, K. Hara, H. Yabar, H. Zhang "Application of a sustainable indicator system for the assessment of Chinese sustainable development."
- M. Uwasu, T. Naito, H. Yabar, K. Hara "Assessment of Japanese recycling policies for home electric appliance: Cost-effectiveness analysis and socioeconomic and Technological Implications."
- M. Uwasu, K. Hara, H. Yabar, H. Zhang "Integrating technological and socioeconomic aspects into energy policy towards a balanced economic growth: an analysis of cement production in China."
- T. Kumazawa, K. Kozaki, T. Matsui, O. Saito, M. Ohta, K. Hara, M. Uwasu, M. Kimura, R. Riichiro "Initial design process of the sustainability science ontology for supporting co-deliberation."

- Y. Kishita , K. Hara, M. Uwasu, Y. Umeda “Research agenda and prospects for integrated scenario design - Emerging challenges in sustainability science.”
- 熊澤輝一、上須道徳、原圭史郎、木村道徳、齊藤修「分野横断型研究教育における専門家間協働デザインの検討－サステナビリティ学を事例に」

## Conference Papers

- K. Tsuda, K. Hara, M. Uwasu (2012) “Research challenges and needs for disseminating life cycle thinking towards consumers’ environmental conscious behaviors.” The 9th International Conference on EcoBalance, November 2012, Tokyo.
- M. Uwasu, K. Hara, H. Yabar, H. Zhang (2012) “Spatiotemporal Analysis of Sustainability Components - Application of an Indicator System for Chinese Provinces.” The 9th International Conference on EcoBalance, November 2012, Tokyo.
- H. Yabar, M. Uwasu, K. Hara (2012) “Tracking the impact of environmental regulations on development and diffusion of innovations: evidence from waste management technologies in Japan.” The 9th International Conference on EcoBalance, November 2012, Tokyo.
- B. C. McLellan, K. Hara, M. Uwasu (2012) “Sustainability communication in the life cycle – gates and gaps.” The 9th International Conference on EcoBalance, November 2012, Tokyo.
- J. Han, H. Liang, K. Hara, M. Uwasu (2012) “A subjective-objective hybrid model for the assessment of urban quality of life: case study of Shanghai, China.” The 9th International Conference on EcoBalance, November 2012, Tokyo.
- K. Hara, T. Kumazawa, M. Uwasu, H. Yabar (2012) “Sustainability indicator system with visualized causal-links information – application of ontology and a case study.” The 9th International Conference on EcoBalance, November 2012, Tokyo.
- I. Susanto, K. Hara, M. Uwasu, T. Nakakubo, A. Tokai (2012) “Application of system dynamics model for energy policy analysis at local governmental level: A review and case study.” 環境システム論文集, 2012年10月
- 上須道徳、原圭史郎、ヤバルヘルムート (2012) 「世界のセメント生産の予測とその環境資源的影響の分析」『第31回エネルギー・資源学会研究発表会講演論文集』、pp. 37-40.

- ・ 原圭史郎、上須道徳、ヤバルヘルムート、張海燕 (2012)「産業システムの発展シナリオとエネルギー消費：中国江蘇省の鉄・セメント製造業を例に」『第 31 回エネルギー・資源学会研究発表会講演論文集』、pp. 217-220.
- ・ H. Zhang, M. Uwasu, K. Hara (2011) "The assessment framework of the returning farmland to forestland/grassland policies - a case study of Loess Plateau in Shaanxi province, China." 第 39 回環境システム研究論文発表会.
- ・ M. Uwasu, T. Naito, H. Yabar, K. Hara (2011) "How policy instruments for electric home appliances recycling have economic and technological implications: a case study of Japan." International Conference on EcoMates2011.
- ・ H. Yabar, M. Uwasu, K. Hara (2011) "How policies stimulate innovations along the lifecycle of products- Evidences from dioxin emissions and electric home appliances recycling." International Conference on EcoDesign2011.
- ・ H. Kobayashi, K. Hara, M. Uwasu, Y. Umeda (2011) "A framework for comprehensive sustainability research by focusing on the meso-level." International Conference on EcoDesign2011.
- ・ Y. Kishita, K. Hara, M. Uwasu, Y. Umeda (2011) "Integrated scenario design for sustainability research- concept, framework and challenges." International Conference on EcoDesign2011.
- ・ M. Uwasu, K. Hara, H. Yabar, H. Zhang (2011) "Scenario analysis of cement production in China: the role of policy and technology in the pathway to sustainable society." International Conference on EcoDesign2011.
- ・ M. Uwasu, K. Hara, H. Zhang, H. Yabar (2010) "Analysis of energy productivity in China." The 8th International Conference on EcoBalance, pp96-99.
- ・ H. Yabar, M. Uwasu, K. Hara (2010) "Exploring the benefits of environmental policy on innovation and market behavior." The 8th International Conference on EcoBalance, pp166-169.
- ・ K. Hara, M. Uwasu, H. Yabar, H. Zhang (2010) "Analysis of energy consumption patterns and scenarios for development of industrial sectors - cases of Shanghai city and Jiangsu province." The 8th International Conference on EcoBalance, pp697-700.
- ・ 木村道徳、原圭史郎、上須道徳 (2010)「ネットワーク分析を用いた循環型社会概念の俯瞰的整理」『第 38 回環境システム研究論文発表会講演集』 Vol. 38, pp.401-406.

- K. Hara, K. Yabar, M. Uwasu, H. Zhang, T. Kumazawa, T. Morioka (2009) "Future scenario approach for building a resource-circulating society in the East Asia." IHDP Open Meeting 2009, 7th International Science Conference on the Human Dimension of Global Environmental Change, April 2009, Bonn, Germany.
- H. Zhang, M. Uwasu, K. Hara, H. Yabar (2009) "Impact of human geography transformation on urban sustainability – case study in Yangtze River Delta." Proceedings of International Conference on Sustainability, Human Geography and Environmental Studies, pp. 113-122, Imperia, Italy.
- K. Hara, H. Yabar, M. Uwasu, H. Zhang (2009) "Scenario designs and strategies towards energy-efficient industrial societies - A regional study in China." Proceedings of International Conference on Sustainability, Human Geography and Environmental Studies, pp.130-137, Imperia, Italy.
- H. Yabar, M. Uwasu, K. Hara, H. Zhang (2009) "Scenarios to design a resources-circulating society in Asia – case study in Yangtze Delta industrial sector." 6th International Symposium on Environmentally Conscious Design and Inverse Manufacturing (EcoDesign 2009), pp.565-570, Dec 2009, Sapporo, Japan.
- M. Uwasu, H. Yabar (2009) "Analysis of capital accumulation in terms of sustainable development: the role of institutions." 6th International Symposium on Environmentally Conscious Design and Inverse Manufacturing (EcoDesign 2009), pp.581-586, Dec 2009, Sapporo, Japan.
- H. Zhang, M. Uwasu, K. Hara, H. Yabar (2009) "Proposing a network model for sustainable land use and urban development in Yangtze River Delta." 6th International Symposium on Environmentally Conscious Design and Inverse Manufacturing (EcoDesign 2009), pp. 587-590, Dec 2009, Sapporo, Japan.
- T. Kumazawa, K. Kozaki, T. Matsui, O. Saito, M. Ohta, K. Hara, M. Uwasu, Y. Yamaguchi, Y. Yamamoto, R. Mizoguchi (2009) "Development of ontology on sustainability science focusing on building a resource-circulating society in Asia." The 6th International Symposium on Environmentally Conscious Design and Inverse Manufacturing (EcoDesign 2009), pp. 587-590, Dec 2009, Sapporo, Japan.
- 上須道徳、相阪奈央子 (2009) 「地球温暖化の倫理的考察」応用哲学会第 1 回研究大会予稿集.

- K. Hara, M. Uwasu, H. Yabar, H. Zhang, T. Kumazawa, T. Morioka (2008) "A method for measuring sustainability with integrated scores: application to Asian cities." The 8th International Conference on EcoBalance, pp.150-153, December 2008, Tokyo.
- H. Yabar, M. Uwasu, K. Hara, H. Zhang, T. Kumazawa (2008) "Visioning the future: sustainability pathways and indicators based on the capital approach." The 8th International Conference on EcoBalance, pp.158-161, December 2008, Tokyo.
- T. Kumazawa, T. Matsui, K. Hara, M. Uwasu, Y. Yamaguchi, Y. Yamamoto, K. Kozaki, O. Saito, R. Mizoguchi (2008) "Knowledge structuring process of sustainability science based on ontology engineering." The 8th International Conference on Eco Balance, pp.409-412, December 2008, Tokyo.
- H. Zhang, K. Hara, M. Uwasu, H. Yabar (2008) "Urban sustainable development and the land use in China." The 8th International Conference on EcoBalance, pp.668-671, December 2008, Tokyo.
- H. Zhang, K. Hara, M. Uwasu, H. Yabar (2008) "Urban sustainable development and land use change in Shanghai, Suzhou and Huzhou, China." Proceedings of the 7th International Symposium on Architectural Interchange in Asia (ISAIA), pp 298-302, October 2008, Beijing.
- M. Uwasu (2008) "Estimating experienced weighted attractions for the migration emission game." 29th Australasian Economic Theory Workshop.
- M. Uwasu, K. Hara, H. Yabar, H. Zhang (2008) "Time series sustainability score for Chinese provinces." International Society for Ecological Economics Biennial Meeting, Nairobi (CD-ROM).
- M. Uwasu, K. Hara, H. Yabar, H. Zhang (2007) "Analysis of sustainability scores in China's Provinces." 環境経済政策学会 2007 年年次総会プロシーディングス、滋賀大学