

CURRICULUM VITAE

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Date of Birth: February 24, 1962; Place of Birth: Osaka, Japan; Citizenship: Japan

Field of Specialization:

Environmental and resource economics, Economic Dynamics, Economic Theory

Current Professional Services:

- Co-editor. *Environmental Economics and Policy Studies* (since 4/2014)
(<http://link.springer.com/journal/10018>)

Professional Experiences:

● **Positions**

- 4/2002-present Professor, School of Social Sciences, Waseda University.
- 4/2008-9/2008 Visiting Professor, Institute of Economic Research, Kyoto University.
- 4/2002-3/2004 Visiting Scholar, Department of Agricultural & Resource Economics, University of California, Davis.
- 10/1997-3/2015 Part-time lecturer, Faculty of Agriculture, University of Tokyo.
- 4/1997-3/2002 Associate Professor, School of Social Sciences, Waseda University.
- 4/1995-3/1997 Lecturer, School of Social Sciences, Waseda University.
- 10/1990-3/1995 Assistant Professor, Department of Forestry, Kyoto University.
- 4/1989-9/1990 Postdoctoral Fellow. Japan Society for the Promotion of Science.

● **Services**

- **Society for Environmental Economics and Policy Studies:** Board member(4/2006-3/2012; 4/2014-3/2020), President (4/2016-3/2018)
- **East Asian Association of Environment and Resource Economics:** Director (2012/2-2014/2), Scientific Committee (2015), Chair of Program Committee (2016)
- **European Association of Environmental and Resource Economists:** Program Committee (2011, 2013, 2015, 2016 for the annual conferences. 2006, 2010, 2014 for the World Congress)
- **Journal editor:** *Environmental Economics and Policy Studies* : Co-editor

(10/2010/10-03/2014, 10/2018-present), Chief managing editor (04/2014-9/2018)

- **Referee service:** Environmental Economics and Policy Studies, ETRI Journal, International Journal of Global Environmental Issues, Metroeconomica, Resource and Energy Economics, Journal of Economic Dynamics and Control, International Journal of Economic Theory, Journal of Public Economic Theory, Ecological Research, Journal of Forest Research, Journal of Difference Equations and Applications, Mathematical Social Sciences, Applied Economics, Environmental and Resource Economics, American Journal of Agricultural Economics, Social Science Quarterly, Journal of Mathematical Economics, Japanese Economic Review, International Journal of Dynamical Systems and Differential Equations, Environment and Development Economics, Journal of Economic Theory, Journal of Optimization Theory and Applications

EDUCATION

- 1986-1989 Doctoral Program. Department of Forestry, Faculty of Agriculture, Kyoto University.
 Doctoral Dissertation: *Decision-making of forest owners and socially optimal use of forest resources*. Degree conferral date: 23 March 1993
- 1984-1986 Master Program. Department of Forestry, Faculty of Agriculture, Kyoto University
 Master's Thesis: *Forest management under a Timber Depression*.
- 1980-1984 Undergraduate Program. Department of Forestry, Faculty of Agriculture, Kyoto University
 Bachelor's Thesis: *Rural development of a mountainous village near a big city*.

PUBLICATION in English

Chapters in Books

- ✚ Akao, K.-I. and G. Sorger “On the sustainability of a common property resource: An implication from dynamic game theory,” in K. Asano and M. Takata (eds.) *Rural and Urban Sustainability Governance*, United Nations University Press, Chapter 1.
- ✚ Akao, K.-I (2002) Private forestry, in Yoshiya Iwai (ed.) *Forestry and the Forest Industry in Japan*, UBC Press, Chapter 3.

Papers

- ✚ Akao, K.-I. and H. Sakamoto (2018) “A Theory of Disasters and Long-run Growth,” *Journal of Economic Dynamics & Control* 95 89-109 (DOI 10.1016/j.jedc.2018.08.006)
- ✚ Tanaka, K., Y. Kurakawa, E. Sawada, K.-I. Akao, S. Managi (2017) “Energy Conservation and Risk of Electric Outage: Laboratory Experimental Study,” *Journal of Energy Engineering* 143(3) (DOI 10.1061/%28ASCE%29EY.1943-7897.0000386).
- ✚ Akao, K.-I. and G.S. Kim (2017) “The Evolution of Citizen Participation and Regulatory Success,” *International Journal of Economics and Finance* 9(6): 178 – 187 (DOI

10.5539/ijef.v9n6p179)

- ✚ Akao, K.-I (2016) “An economic analysis of the “Home Appliance Eco-Point System” in Japan,” *Environmental Economics and Policy Studies* 19 (3): 483–501 (DOI 10.1007/s10018-016-0156-3)
- ✚ Farzin, Y.H. and K.-I. Akao (2015) “Poverty, social preference for employment, and natural resource depletion,” *Environmental Economics and Policy Studies* 17: 1 – 26. (DOI 10.1007/s10018-013-0074-6)
- ✚ Farzin, Y.H. and K.-I. Akao (2014) “Environmental quality in a differentiated duopoly facing a minimum quality standard,” *Environmental Economics* 4: 1—17.
- ✚ Akao, K.-I. and S. Managi (2013) “A tradable permit system in an intertemporal economy,” *Environmental and Resource Economics* 55: 309—336. (DOI 10.1007/s10640-012-9628-5)
- ✚ Akao, K.-I., T. Mitra and G. Sorger (2012) “Some rationalizability results for dynamic games,” *International Journal of Economic Theory* 8: 361—379. (DOI 10.1111/j.1742-7363.2012.00195.x)
- ✚ Akao, K.-I. “Preference constraint for sustainable development,” *Environmental Economics and Policy Studies*, Online first. (DOI 10.1007/s10018-012-0053-3)
- ✚ Akao, K.-I., T. Kamihigashi and K. Nishimura (2011) “Monotonicity and continuity of the critical capital stock in the Dechert-Nishimura model,” *Journal of Mathematical Economics* 47: 677—682. (DOI 10.1016/j.jmateco.2011.08.005)
- ✚ Akao, K.-I. (2011) “Optimum forest program when the carbon sequestration service of a forest has value,” *Environmental Economics and Policy Studies* 13: 323—343 (DOI 10.1007/s10018-011-0016-0)
- ✚ Akao, K.-I. (2008) “Tax schemes in a class of differential games,” *Economic Theory* 35 (1): 155—174. (DOI 10.1007/s00199-007-0232-9).
- ✚ Akao, K.-I. and S. Managi (2007) “Feasibility and optimality of sustainable growth under materials balance,” *Journal of Economic Dynamics & Control* 31(12): 3778—3790. (DOI 10.1016/j.jedc.2007.01.013)
- ✚ Akao, K.-I. and Y.H. Farzin (2007) “When is it optimal to exhaust a resource in a finite time?” *Ecological Research* 22 (3), 422—430. (DOI 10.1007/s11284-007-0363-2)
- ✚ Akao, K.-I. and S. Managi (2006) Endogenous growth with material balance principle. *International Journal of Global Environmental Issues* 6 (1): 4—28. (DOI 10.1504/IJGENVI.2006.009398)
- ✚ Akao, K.-I. (1996) “Stochastic forest management and risk aversion,” *Journal of Forest Planning* 2: 131—136.

Working Papers

- ✚ Yasuaki Wasa, Ken-Ichi Akao, & Kenko Uchida (2020) “Optimal Dynamic Incentive Contracts between a Principal and Multiple Agents in Controlled Markov Processes: A Constructive Approach,” *RIEEM Discussion Paper Series*, No.2001.
- ✚ Ken-Ichi Akao, Takashi Kamihigashi, & Kazuo Nishimura (2019) “Optimal steady state of an

economic dynamic model with a nonconcave production function,” *RIEEM Discussion Paper Series*, No.1907.

- # Ken-Ichi Akao, Takashi Kamihigashi, & Kazuo Nishimura (2019) “Critical capital stock in a continuous time growth model with a convex-concave production function,” *RIEEM Discussion Paper Series*, No.1908.
- # Ken-Ichi Akao, Hitoshi Ishii, Takashi Kamihigashi, & Kazuo Nishimura (2019) “Existence of an optimal path in a continuous time nonconcave Ramsey model,” *RIEEM Discussion Paper Series*, No.1905.
- # Ken-Ichi Akao, Takashi Kamihigashi, and Kazuo Nishimura (2015) Critical Capital Stock in a Continuous-Time Growth Model with a Convex-Concave Production Function. RIEB Discussion Paper Series DP2015(39) 37pp
- # Ken-Ichi Akao and Hiroaki Sakamoto (2013) A Theory of Disasters and Long-run Growth. RIETI Discussion Paper Series 13-E-061/, 39pp.
- # Ken-Ichi Akao and Gerhard Sorger (2012) On the sustainability of a common property resource: An implication from dynamic game theory. Institute for Research in Contemporary Political and Economic Affairs Working Paper Series 1201, Waseda University, 15pp.
- # Ken-Ichi Akao (2010) On the preference constraint for sustainable development to be optimal, Kyoto Sustainability Initiative Communications 2010-005, 24pp.
- # Ken-Ichi Akao and Shunsuke Managi (2008) A tradable permit system in an intertemporal economy: a general equilibrium approach, Kyoto Institute of Economic Research Discussion Paper 658, Kyoto University, 29pp.
- # Ken-Ichi Akao (2008) Optimal forest program when the carbon sequestration service of a forest has value, Multi-Level Environmental Governance for Sustainable Development Discussion Paper 08-01, Kyoto University, 32pp.
- # Ken-Ichi Akao and Shunsuke Managi (2007) A tradable permit system in an intertemporal economy, Global Institute for Asian Regional Integration Working Paper 5, Waseda University, 22pp.
- # Y. Hossein Farzin and Ken-Ichi Akao (2006) Environmental Quality in a Differentiated Duopoly, Fondazione Eni Enrico Mattei Working Paper Series 138.06, 24pp.
- # Y. Hossein Farzin and Ken-Ichi Akao (2006) Non-pecuniary Value of Employment and Natural Resource Extinction, Fondazione Eni Enrico Mattei Working Paper Series 24.06, 25pp.
- # Y. Hossein Farzin and Ken-Ichi Akao (2006) Non-pecuniary Work Incentive and Labor Supply, Fondazione Eni Enrico Mattei Working Paper Series 21.06, 31pp.
- # Ken-Ichi Akao (2001) Some results for resource games, Institute for Research in Contemporary Political and Economic Affairs Working Paper Series 2009, 19pp.
- # Ken-Ichi Akao (1997) Maximal program of a forest absorbing atmospheric carbon dioxide, Institute for Research in Contemporary Political and Economic Affairs Working Paper Series 9705, 26pp.

Translation into Japanese

- ✚ Eiji Hosoda, Ayumi Onuma, Ken-Ichi Akao (2005) はじめての環境経済学, Toyokeizai shinpou sha. (Geoffrey Heal Nature and the Marketplace: Capturing the Value of the Ecosystem, Island Press, 2001)
- ✚ Tatsuji Owase, Tetuya Misawa, Kenichi Akao, Hiroshi Oaku, and Masanori Yokoo (1998) 進化ゲームの理論, Bunka shobo hakubun sha. (Jorgen W. Weibll, Evolutionary Game Theory, MIT Press, 1995)
- ✚ Ryohei Kada, Ken-Ichi Akao, Kota Asano, Ichiro Fujikake, Hiroshi Kameyama, Koichi Kuriyam, Mineo Nakagawa, and Teruyuki Shinbo (1994) 環境評価の経済学 Taga shuppann(Per-Olov Johansson, The economic theory and measurement of environmental benefits , Cambridge University Press, 1987)

PUBLICATION in Japanese

Asterisk "*" means a tentative translation in English

Books

- ✚ Ken-Ichi Akao (1997) 地球環境と環境経済学 (Global Environmental Issues and Environmental Economics*), Seibun-do, 342pp. (in Japanese).
- ✚ Ken-Ichi Akao (1993) 森林経済分析の基礎理論 (Economic Theories for Forestry*), Faculty of Agriculture, Kyoto University, 203pp. (in Japanese).

Chapters in books

- ✚ 赤尾健一・阪本浩章 (2013) 災害と経済成長：理論上の諸結果, 馬奈木俊介編著「環境・エネルギー・資源戦略」日本評論社。第12章(pp. 269-280).
- ✚ 高橋卓也・赤尾健一 (2012) 森林資源：国内林業をどう設計するか, 馬奈木俊介編著「資源と環境の経済学：ケーススタディで学ぶ」昭和堂。第5章(pp. 61-77).
- ✚ 赤尾健一 (2012) 持続可能な開発と世代間の衡平, 細田衛士編著「環境経済学」ミネルヴァ書房。第12章 (pp.281-312).
- ✚ 倉増啓、鶴見哲也、赤尾健一、馬奈木俊介 (2011) 生物多様性における支払意思, 馬奈木俊介・地球環境戦略機関編「生物多様性の経済学：経済評価と制度分析」昭和堂。第5章 (pp. 70-97) .
- ✚ 赤尾健一 (2010) 予防原則と不確実性の経済理論, 植田和弘・大塚直 (監修) 損保保険ジャパン・損保ジャパン環境財団編「環境リスク管理と予防原則」有斐閣, 第10章 (pp.209-225).
- ✚ 赤尾健一・西村和雄 (2009) レジーム・シフトのマクロ経済分析, 浅野耕太編著 「自然資本の保全と評価」 (環境ガバナンス叢書5) ミネルヴァ書房, 第3章 (pp.51-66).
- ✚ 赤尾健一 (2009) 温暖化対策と都市ガス産業, 竹中康治編著 「都市ガス産業の総合分析」 NTT出版, 第12章 (pp.253-276).
- ✚ Ken-Ichi Akao (2006) 環境と経済成長 (Environment and economic growth*),環境経済・政策学会編「環境経済・政策学の基礎知識」所収(in, the Society of Environmental Economics and Policy Studies (ed.) Dictionary of Environmental Economics and Political Science.) 有斐閣 (Yuhikaku).
- ✚ Ken-Ichi Akao (2002) 持続可能な発展と環境クズネツ曲線 (Sustainable development and environmental Kuznets curve*), in Shinichiro Nakamura (ed.) 廃棄物経済学をめざして

(Towards Waste Economics*), Waseda University Press, 52-78 (in Japanese).

- ✚ Ken-Ichi Akao (2001) 単調政策と価値損失 (Monotonic policy and the value loss*), in Ryo Nagata (ed.) 経済学の数理と論理 (Mathematics and Logic in Economics*), Waseda University Press, 113-157 (in Japanese).
- ✚ Ken-Ichi Akao (1996) 環境資産の価値と評価手法 (Values of and valuation methods for environmental assets*), in Eiji Hosoda and Michio Terade (eds.) 持続可能性の経済学 (Economics of Sustainable Development*), Keio University Press, (in Japanese).
- ✚ Ken-Ichi Akao (1995) 山村への助成について (How can we justify subsidies to rural area? *), in Izumi Kitagawa (ed.) 森林林業と中山間地帯問題 (Forest Resources, Forestry and Development Issues in Rural Areas*), Nihon Ringyo Kyokai, 315-330 (in Japanese)
- ✚ Ken-Ichi Akao (1993) 森林資源の社会的最適利用と公的機関の役割 (Socially optimal use of forest resource and the role of government*), in Sumiyoshi Ariki (ed.) 国際化時代の森林林業問題 (Emerging Issues of Forest Resource and Forestry in the globalization age*), Nihon Ringyo Chosakai, 290-303 (in Japanese).

Papers

- ✚ Ken-Ichi Akao (2017) 社会が持続可能な発展から離れていくとき (When society moves away from sustainable development). ソシオサイエンス (Waseda Review of Socio-Science) 23, 95-106.
- ✚ Ken-Ichi Akao, Ayumi Onuma, and Hiroaki Sakamoto (2016) 割引率は何を意味しどのように発展してきたか (The discount rate: the signification and its evolution) 環境経済・政策研究 (Japanese Journal of Society of Environmental Economics and Policy Studies) 9(2) 1—20.
- ✚ Ken-Ichi Akao, Shinichi Kusanagi, Shunsuke Managi (2008) 温暖化対策の中でのエネルギー生産・節約の経済評価 (Economic Analysis of Energy Production and Saving in Climate Change Policy). 環境経済・政策研究 (Japanese Journal of Society of Environmental Economics and Policy Studies) 1(1) 65—78.
- ✚ Ken-Ichi Akao (2008) ダイナミック・ゲームと環境経済学 (Dynamic game and its application to environmental economics*). 三田学会雑誌 (Mita Journal of Economics) 100(4) 951—967.
- ✚ Ken-Ichi Akao (2006) 生物多様性の経済分析：多様性関数と不確実性に関する最近の研究 (Review of economic analysis on biodiversity*). 環境経済・政策学会・年報 (Annals of Society of Environmental Economics and Policy Studies) 11, 136-147.
- ✚ Ken-Ichi Akao (2000) 環境問題の発現と自然志向：一つの計量経済分析 (Environmental issues and nature-oriented attitude of citizens: an econometric analysis), 早稲田人文自然科学研究 Waseda Journal of General Sciences 57, 1-25 (in Japanese).
- ✚ Ken-Ichi Akao (1999) 森林都市構想：社会的費用便益分析の練習問題 (The design of forest city: an exercise of the social cost-benefit analysis), 早稲田人文自然科学研究 Waseda Journal of General Sciences 55, 29-88 (in Japanese).
- ✚ Ken-Ichi Akao (1998) 不確実性下の環境資産の価値と評価手法 (Values of and valuation methods for an environmental asset under intertemporal uncertainty), 早稲田人文自然科学研究 Waseda Journal of General Sciences 53, 1-31 (in Japanese).
- ✚ Ken-Ichi Akao (1995), カーボンフォレストのための森林計画 (Maximal programs of a carbon

- forest), 早稲田人文自然科学研究 Waseda Journal of General Sciences 48, 1-22 (in Japanese).
- # Ken-Ichi Akao and Tateki Hata(1995) 森林の生活環境価値の計測：ヘドニック法の応用 (Measurement of living environmental value of forest: an application of the hedonic method), 森林計画学会誌 Japanese Journal of Forest Planning 25, 1-15 (in Japanese with English summary).
 - # Ken-Ichi Akao (1995) 分収造林契約のミクロ経済分析 (Ⅱ) 基本モデルの拡張 (A microeconomic analysis of a profit-sharing reforestation contract (II) the extension of the basic model), 日本林学会誌 Journal of the Japanese Forestry Society 77, 99-106 (in Japanese with English summary).
 - # Ken-Ichi Akao (1993) 分収造林契約のミクロ経済分析 (Ⅰ) 基本モデルとその結果 (A microeconomic analysis of a profit-sharing reforestation contract (I) a basic model and its results), 日本林学会誌 Journal of the Japanese Forestry Society 75, 185-190 (in Japanese with English summary).
 - # Ken-Ichi Akao (1993) 分収造林契約と社会的最適伐期齢：ある森林整備法人の事例分析(The profit-sharing reforestation contract and the social optimal cutting ages: A case study on a local public forest corporation), 京都大学演習林報告 Bulletin of the Kyoto University Forests 65, 194-209 (in Japanese with English summary).
 - # Tateki Hata and Ken-Ichi Akao (1993) 森林レクエリアの経済価値評価の理論と適用：旅行費用法を用いて (Measurement of economic value of a forest recreation area: theory and an application of the travel cost method), 林業経済研究 (Journal of Forest Economics) 123, 125-129 (in Japanese).
 - # Ken-Ichi Akao (1992) 林業経済学における異齢林の取り扱い方について(Uneven-aged forest models in forest economics), 林業経済研究 (Journal of Forest Economics) 121, 85-89 (in Japanese).
 - # Ken-Ichi Akao (1992) 森林レクリエーションエリアの経済的価値評価法について(On an evaluation method of economic value of a forest recreation area), 林業経済 (Forest Economy) 520, 28-32 (in Japanese).
 - # Ken-Ichi Akao (1991) 長伐期低コスト林業の経済分析(Ⅰ)：実質賃金率の浄書に対する森林所有者の対応 (Economic analysis of forest management with a long rotation period and a small labor cost (I) Reaction of forest owners to increase in the real wage rates), 日本林学会誌 Journal of the Japanese Forestry Society 73, 419-425 (in Japanese with English summary).
 - # Ken-Ichi Akao and Yoshiya Iwai (1990) 決定論的最適伐期齢に関する考察 (Studies on deterministic optimal rotation periods of a forest), 京都大学演習林報告 Bulletin of the Kyoto University Forests 62, 122-137 (in Japanese with English summary).
 - # Ken-Ichi Akao and Sumiyoshi Ariki (1989) 最適伐期齢理論の展望と課題 (The review of the optimal rotation period theory), 京都大学演習林報告 Bulletin of the Kyoto University Forests 61, 130-149 (in Japanese with English summary).
 - # Ken-Ichi Akao (1988) 不確実性下の林業経営に関する理論的研究 (A theoretical inquiry of forest management under uncertainty), 林業経済研究 Journal of Forest Economics 113, 86-92 (in Japanese).

- ✚ Ken-Ichi Akao (1987) 資産選択理論による林業経営モデルの研究 (The portfolio selection theory and forest management), 林業経済 (Forest Economy) 470, 23-26 (in Japanese).
- ✚ Ken-Ichi Akao (2000) 持続可能な発展と環境クズネツカーブ (Sustainable development and the Environmental Kuznets Curve*), 早稲田大学現代政治経済研究所 Institute for Research in Contemporary Political and Economic Affairs Working Paper Series 2008, 21pp. (in Japanese)