

令和 2 年 6 月 30 日現在

機関番号：32612

研究種目：基盤研究(C) (一般)

研究期間：2017～2019

課題番号：17K00687

研究課題名(和文) Indigenous environmental worldviews, ethics and environmental sustainability:
the critical connections研究課題名(英文) Indigenous environmental worldviews, ethics and environmental sustainability:
the critical connections

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交付決定額(研究期間全体)：(直接経費) 3,000,000円

研究成果の概要(和文)：本研究は、環境保護が、環境にまつわる信念や価値観と不可分の関係にあることを明らかにする。そして、人類が自然環境の経済的な利用にあたって、道徳的、倫理的な観点からその最適化を図っていたならば、地球環境は今日のそれとは異なるものになっていたはずであるという、重要な事実を指摘する。さらに、ストックホルム会議以来の数十年にわたって積み重ねられてきた環境問題にまつわる条約などの数々にもかかわらず、地球環境破壊をなぜ食い止めることができていないのか、その確かな理由を説明する。そして、人類が今日直面する環境問題を克服するためには、「人間中心主義」から「環境中心主義」への転換が急務であることを強調した。

研究成果の学術的意義や社会的意義

This research establishes an encyclopedic perspective for the understanding of the dynamic implications of environmental stewardship premised on ecocentrism in mitigating the perversity of the tragedies of the commons confronting humanity today.

研究成果の概要(英文)：This research contributes significantly to our understanding of the inextricable links between environmental beliefs, value judgements and environmental protection in our individualistic age of capitalism. It asserts that the global environment would not be what it is today had it embraced a moral and ethical engagement with nature when optimizing its economic use. It also provides a cogent explanation of why international and regional environmental treaties, laws, regulations, conventions and conferences created and relentlessly adopted for the past few decades since Stockholm have, paradoxically, not been able to prevent or even slow down the rapid acceleration of worldwide environmental decline - which includes, inter alia, ecological impoverishment, biodiversity degradation and greenhouse gases emissions. Addressing these problems necessarily involves man's conscious recognition of the exigency need to move away from anthropocentrism to ecocentrism.

研究分野：Social Science

キーワード：Environmental ethics Environmental worldviews Sustainability

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様式 C - 19、F - 19 - 1、Z - 19 (共通)

1 . 研究開始当初の背景

The Stockholm Conference, the first world conference on the environment, was convened in 1972 by the United Nations with the aim to call on the international community to intensify actions to address global environmental decline. Since then, countless environmental summits and conferences have been convened and thousands of regional and international environmental treaties and conventions have been adopted for the purpose of halting earth's decline. In response, leaders across the world have established comprehensive legal systems and a wide range of environmental regulations to promote global environmental sustainability.

Yet, despite this, over almost the past half century since Stockholm, the overall global environment has in fact *deteriorated* and new environmental threats and challenges continue to unfold. Global *environmental degradation* now poses a serious existential threat to humanity. This raises some of the most pertinent questions: Why, despite more than four decades of national, regional and global attention, our global environment has not progressed towards achieving environmental sustainability? And, how this environmental paradox may best be addressed?

2 . 研究の目的

The aim of the research is to critically examine the paradox of environmental sustainability and the role of environmental philosophy in breaking this paradox. Specifically, it elevates environmental morality and ethics into a perspective for understanding human environmental behavior, attitude and action and places ethics of sustainability and moral philosophy at the center stage of sustainable development in addressing worldwide environmental problems. It also seeks to evaluate the practical importance of indigenous environmental worldviews in directing man's behavior towards embracing environmental and moral philosophy when optimizing the economic use of nature.

3 . 研究の方法

The research uses an integrated, multidisciplinary and interdisciplinary approach to examine global environmental sustainability. This comprises a mixture of in-depth content analysis, both quantitative and qualitative, theoretical evaluation, empirical and actual case studies premised on solid data, and actual field work.

4 . 研究成果

(1) In 2017, research efforts were basically confined to crafting a theoretical framework for the explanation of human-nature relationships, and its implications for the promotion of global environmental sustainability. Part of the findings of the study have been published in the following journal:

(a) Choy Yee Keong, Sustainable Development: The Nexus of Environmental Sustainability, Values, and Ethics, European Journal of Sustainable Development

The following presentations have also been delivered:

(a) Choy Yee Keong, "Sustainable Development: From the Birth of the United Nations' Green Era to the Emergence of the Age of Anthropocene", 12th Conference of the European Society for Ecological Economics, Corvinus University of Budapest, Hungary

(b) Choy Yee Keong, "From Stockholm Declaration to the Millennium Development Goals: The United Nations' Journey to Environmental Sustainability 45 Years Later", The 10th International Conference on Development (New Series), The Institute of Economic Sciences, Belgrade, Republic of Serbia

(c) Choy Yee Keong, "Human Values and Global Environmental Change in the Anthropocene: The Challenges of Environmental Philosophy", European Conference on Ethics, Religion & Philosophy, Jury Inn, Brighton, East Essex, United Kingdom

(d) Choy Yee Keong, "Humanity in the Age of Anthropocene: The Crisis of Ethical Thinking and the Indigenous Worldview", Fifteenth International Conference on New Directions in the Humanities, Imperial College London, United Kingdom

(e) Choy Yee Keong, "Protected Areas and Biodiversity Protection: the African Conservation Paradox", European Conference on Sustainability, Energy & the Environment, Jury Inn, Brighton, East Essex, United Kingdom

(f) Choy Yee Keong. "Sustainable Development: A Review. Opening Address at the European Center of Sustainable Development 4th International Conference on Sustainable Development, Gregorian University of Rome, Piazza delle Pilotta, Rome, Italy (Invited Lecture)

(g) Choy Yee Keong, "The United Nations Convention on Biological Diversity (CBD), Nature Conservation and Biodiversity Protection: the Asian Green Imperialism", European Center of Sustainable Development 5th International Conference on Sustainable Development, Gregorian University of Rome, Roma Eventi-Piazza delle Pilotta, Rome, Italy

(h) Choy Yee Keong, "Nurturing a Sustainable Earth System in the Age of Science and Technology: From Francis Bacon's Conquest of Nature to Albert Schweitzer's Ethics of Reverence for Life", The 7th International Conference on Environment and BioScience (ICEBS 2017), Busan University, Busan, South Korea

(i) Choy Yee Keong, "The Nexus of Sustainable Energy System and Nuclear Technology in the Post-

Fukushima Era: The Case of Vietnam's Nuclear Dream and its Implications for Nuclear Energy Policy in Southeast Asia", The 3rd International Congress on Social and Economic Sciences (ICES), The President Hotel, Athens, Greece

(j) Choy Yee Keong, "The United Nations Environmental Education for a Sustainable Future: The Green Failures and Policy Implications", The 3rd International Congress on Education Sciences and Learning Technology (ICESLT), The President Hotel, Athens, Greece

(k) Choy Yee Keong, "Sarawak Vision 2030 and Beyond: Making the Quantum Leap to Sustainable Socio-economic Development", Institute of Biodiversity and Environmental Conservation (IBEC), University Malaysia Sarawak (UNIMAS), Malaysia (Invited Lecture)

(2) In 2018, the research fundamentally sought to assess why, despite more than four decades of national, regional and global environmental efforts, the world has not progressed towards achieving environmental sustainability. The findings of these studies have been published as book chapters as follows:

(a) Choy Yee Keong, From Stockholm Declaration to Millennium Development Goals: The United Nation's Journey to Environmental Sustainability, In: Kartik Roy, Sandip Kar (eds.), Developmental State and Millennium Development Goals. Country Experiences. London. World Scientific Publishing, New Jersey, pp. 209-256, 2018

(b) Choy Yee Keong, Sustainable Development and Environmental Stewardship: The Heart of Borneo Paradox and its implications on Green Economic Transformations in Asia. In: Sara Hsu (ed.), Routledge Handbook of Sustainable Development in Asia. Routledge, Oxon. New York, pp. 532-549, 2018.

The research further examined the conceptual setting that underpins the design of a model of human-nature relationship and environmental sustainability based on the concept of value as well as the moral causes of environmentally destructive human practices rooted in Francis Bacon's stance of human supremacy over nature and in the context of Albert Schweitzer's reverence for life ethics.

The findings of the above research have been published in the following journals:

(a) Choy Yee Keong, Cost-benefit Analysis, Values, Wellbeing and Ethics: An Indigenous Worldview Analysis. Ecological Economics

(b) Choy Yee Keong, Nurturing a Sustainable Earth System in the Age of Science and Technology: From Francis Bacon's Conquest of Nature to Albert Schweitzer's Ethics of Reverence for Life and International Journal of Environmental Science and Development

Various presentations as listed below have also been delivered:

(a) Choy Yee Keong, "Behind the Veil of Sustainable Development: The Reality (the Case of Southeast Asia)", 11th International Conference on Business, Education, Humanities and Social Sciences Studies (BEHSSS-18-Istanbul), Holiday Inn Istanbul City, Istanbul, Turkey

(b) Choy Yee Keong, "From the Holocene to the Human-induced Anthropocene: Re-conceptualizing Environmental Value Orientations", 5th ASM International Congress on Social Science, Hotel Konyaalti Öğretmenevi, Antalya, Turkey

(c) Choy Yee Keong, "Ocean Sustainability and the Long-term Future of Humanity - Between Despair and Hope", International Academic Conference on Multidisciplinary Approaches in Social Science, Business and Economics (MASE-18), Titania Hotel, Athens, Greece

(d) Choy Yee Keong, "Value Pluralism, Environmental Worldviews and Ethics: The Interface. 6th International Academic Conference on Social Sciences", Hotel Jurys Inn Prague, Prague, Czech Republic

(e) Choy Yee Keong, "Degrowth in the Age of Humans: Indigenous Perspectives", 6th International Degrowth Conference, ABF Community Hall, Malmö, Sweden

(f) Choy Yee Keong, "Containing the World's Environmental Problems: An Interdisciplinary Approach", 15th Congress of the International Society for Ecological Economics 2018, Building Aduana Vieja, City of Puebla, Puebla, Mexico

(g) Choy Yee Keong, "The Ocean Carbon Sink and Climate Change: A Scientific and Ethical Assessment", 2018 8th International Conference on Environment and BioScience, Best Western (Premier) Guro Hotel, Seoul, Republic of Korea

(h) Choy Yee Keong. "Tropical Rainforest Destruction and Climate Change: The Interface and its Implications for Sustainable Forest Conservation Policy", The 5th International Conference on Energy and Environmental Research (ICEER 2018) held at Masarykova kolej-ČVUT, Prague, Czech Republic

(3) In 2019, research was mainly concentrated on the evaluation of human-nature relationships and their implications for promoting environmental sustainability. Designing sustainable environmental policy not only call for the needs for human kinds to embrace environmental philosophy but also, to have a critical understanding of the interconnectedness between human and nature and the destructive man-induced environmental impacts of resource exploitation. To pervade all areas of human thought in these perspectives necessitates the promotion of environmental and moral education in the shaping of man's environmental ideas and values, economic behavior and moral practices. These were the main subjects of investigation in the final year of the research period. Furthermore, two field trips were made to Malaysia and Indonesia to conduct face-to-face interviews with the indigenous people concerning their environmental worldviews. Its

main purpose was to gauge to what extent their environmental philosophy can help to influence man's environmental behavioral patterns and action. The findings indicate clearly that there exists a positive relationship between environmental beliefs and environmental sustainability and thus, reinforced the study thus far concluded. The author is currently working on a new article based on the findings of this field work. Part of the above studies have been published in the following article and book chapters:

(a) Choy Yee Keong. "The Ocean Carbon Sink and Climate Change: A Scientific and Ethical Assessment. International Journal of Environmental Science and Development

(b) チョイ・イ・ケエヨン、「持続可能な開発と先住民の世界観の関係：実証と理論」大沼あゆみ・細田衛士 編著 『環境経済学の政策デザイン』慶應義塾大学出版会, pp. 225 - 250, 2019 年. However, most of the studies have been compiled into a book as depicted below:

(c) Choy Yee Keong. "Global Environmental Sustainability: Case Studies and Analysis of the UN's Journey toward Sustainable Development" which is scheduled to be published by Elsevier in September, 2020 approximately 300 pages

Various conferencing and invited lectures as shown below have also been delivered:

(a) Choy Yee Keong, "Climate Change, Policy-driven Green Transformation and Human-driven Green Orientation: The Nexus" International Symposium jointly organized by Fujian Normal University, China and Ryugoku University, Japan, Hyatt Regency Hotel, Fujian, Invited International Conference

(b) Choy Yee Keong, "Sarawak Vision 2030 and Beyond: Making the Quantum Leap to Sustainable Socio-economic Development, Institute of Biodiversity and Environmental Conservation (IBEC), University Malaysia Sarawak (UNIMAS), Malaysia, Invited Lecture

(c) Choy Yee Keong, "Greenhouse Gas Emissions and Climate Change: Is Taiwan Ready to Adapt?", Department of Materials Science and Engineering, National Taiwan University of Science and Technology (Taiwan Tech), Taipei, Taiwan, Invited Lecture

(d) Choy Yee Keong, "Global Warming: the 1.5°C Danger Zone and its Implications for Green Transformation in Malaysia", Institute for Environment and Development (LESTARI), National University of Malaysia (UKM), Malaysia, Invited Lecture

(e) Choy Yee Keong, "Sustainable Development and Global Environmental Aspirations in the Age of Neoliberalism: The Challenge", School of Geographical Sciences, Fujian Normal University, Fuzhou, Fujian, People's Republic of China, Invited Lecture

(f) Choy Yee Keong, "Entropy, Urban Metabolism and Sustainable Urban Future: The Nexus", Jeffrey Sachs Center on Sustainable Development, Sunway University, Malaysia, Invited Lecture

5. 主な発表論文等

〔雑誌論文〕 計4件（うち査読付論文 4件／うち国際共著 0件／うちオープンアクセス 3件）

1. 著者名 Choy Yee Keong	4. 巻 6
2. 論文標題 Sustainable Development: The Nexus of Environmental Sustainability, Values, and Ethics, European Journal of Sustainable Development	5. 発行年 2017年
3. 雑誌名 European Journal of Sustainable Development	6. 最初と最後の頁 307-323
掲載論文のDOI（デジタルオブジェクト識別子） 10.14207/ejsd	査読の有無 有
オープンアクセス オープンアクセスとしている（また、その予定である）	国際共著 -
1. 著者名 Choy Yee Keong	4. 巻 145
2. 論文標題 Cost-benefit Analysis, Values, Wellbeing and Ethics: An Indigenous Worldview Analysis	5. 発行年 2018年
3. 雑誌名 Ecological Economics	6. 最初と最後の頁 1-9
掲載論文のDOI（デジタルオブジェクト識別子） https://doi.org/10.1016/j.ecolecon.2017.08.005	査読の有無 有
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1. 著者名 Choy Yee Keong	4. 巻 9
2. 論文標題 Nurturing a Sustainable Earth System in the Age of Science and Technology: From Francis Bacon's Conquest of Nature to Albert Schweitzer's Ethics of Reverence for Life	5. 発行年 2018年
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1. 著者名 Choy Yee Keong	4. 巻 10
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1. 発表者名 Choy Yee Keong
2. 発表標題 Sustainable Development: From the Birth of the United Nations' Green Era to the Emergence of the Age of Anthropocene
3. 学会等名 12th Conference of the European Society for Ecological Economics (国際学会)
4. 発表年 2017年

1. 発表者名 Choy Yee Keong
2. 発表標題 From Stockholm Declaration to the Millennium Development Goals: The United Nations' Journey to Environmental Sustainability 45 Years Later
3. 学会等名 The 10th International Conference on Development (New Series) (国際学会)
4. 発表年 2017年

1. 発表者名 Choy Yee Keong
2. 発表標題 Human Values and Global Environmental Change in the Anthropocene: The Challenges of Environmental Philosophy
3. 学会等名 European Conference on Ethics, Religion & Philosophy (国際学会)
4. 発表年 2017年

1. 発表者名 Choy Yee Keong
2. 発表標題 Humanity in the Age of Anthropocene: The Crisis of Ethical Thinking and the Indigenous Worldview
3. 学会等名 Fifteenth International Conference on New Directions in the Humanities (国際学会)
4. 発表年 2017年

1 . 発表者名 Choy Yee Keong
2 . 発表標題 Protected Areas and Biodiversity Protection: the African Conservation Paradox
3 . 学会等名 European Conference on Sustainability, Energy & the Environment (国際学会)
4 . 発表年 2017年

1 . 発表者名 Choy Yee Keong
2 . 発表標題 Sustainable Development: A Review. Opening Address at the European Center of Sustainable Development
3 . 学会等名 European Center of Sustainable Development 5th International Conference on Sustainable Development (招待講演)
4 . 発表年 2017年

1 . 発表者名 Choy Yee Keong
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4 . 発表年 2017年

1 . 発表者名 Choy Yee Keong
2 . 発表標題 Nurturing a Sustainable Earth System in the Age of Science and Technology: From Francis Bacon 's Conquest of Nature to Albert Schweitzer 's Ethics of Reverence for Life
3 . 学会等名 International Conference on Environment and BioScience (ICEBS 2017) (国際学会)
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1. 発表者名 Choy Yee Keong
2. 発表標題 The Nexus of Sustainable Energy System and Nuclear Technology in the Post-Fukushima Era: The Case of Vietnam's Nuclear Dream and its Implications for Nuclear Energy Policy in Southeast Asia
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1. 発表者名 Choy yee Keong
2. 発表標題 The United Nations Environmental Education for a Sustainable Future: The Green Failures and Policy Implications
3. 学会等名 The 3rd International Congress on Education Sciences and Learning Technology (ICESLT) (国際学会)
4. 発表年 2017年

1. 発表者名 Choy Yee Keong
2. 発表標題 Behind the Veil of Sustainable Development: The Reality (the Case of Southeast Asia)
3. 学会等名 11th International Conference on Business, Education, Humanities and Social Sciences Studies (BEHSSS-18-Istanbul) (国際学会)
4. 発表年 2018年

1. 発表者名 Choy Yee Keong
2. 発表標題 From the Holocene to the Human-induced Anthropocene: Re-conceptualizing Environmental Value Orientations
3. 学会等名 5th ASM International Congress on Social Science (国際学会)
4. 発表年 2018年

1. 発表者名 Choy Yee Keong
2. 発表標題 Ocean Sustainability and the Long-term Future of Humanity - Between Despair and Hope
3. 学会等名 International Academic Conference on Multidisciplinary Approaches in Social Science, Business and Economics (MASE-18) (国際学会)
4. 発表年 2018年

1. 発表者名 Choy Yee Keong
2. 発表標題 Value Pluralism, Environmental Worldviews and Ethics: The Interface
3. 学会等名 6th International Academic Conference on Social Sciences (国際学会)
4. 発表年 2018年

1. 発表者名 Choy Yee Keong
2. 発表標題 Degrowth in the Age of Humans: Indigenous Perspectives
3. 学会等名 6th International De-growth Conference (国際学会)
4. 発表年 2018年

1. 発表者名 Choy Yee Keong
2. 発表標題 Containing the World's Environmental Problems: An Interdisciplinary Approach
3. 学会等名 15th Congress of the International Society for Ecological Economics 2018 (国際学会)
4. 発表年 2018年

1. 發表者名 Choy Yee Keong
2. 發表標題 The Ocean Carbon Sink and Climate Change: A Scientific and Ethical Assessment
3. 学会等名 2018 8th International Conference on Environment and BioScience (國際学会)
4. 發表年 2018年

1. 發表者名 Choy Yee Keong
2. 發表標題 Climate Change, Policy-driven Green Transformation and Human-driven Green Orientation: The Nexus
3. 学会等名 International Symposium jointly organized by Fujian Normal University, China and Ryugoku University (招待講演)
4. 發表年 2019年

1. 發表者名 Choy Yee Keong
2. 發表標題 Sarawak Vision 2030 and Beyond: Making the Quantum Leap to Sustainable Socio-economic Development
3. 学会等名 Institute of Biodiversity and Environmental Conservation (IBEC), University Malaysia Sarawak (UNIMAS) (招待講演)
4. 發表年 2019年

1. 發表者名 Choy Yee Keong
2. 發表標題 Greenhouse Gas Emissions and Climate Change: Is Taiwan Ready to Adapt
3. 学会等名 Department of Materials Science and Engineering, National Taiwan University of Science and Technology (Taiwan Tech), Taipei, Taiwan, (招待講演)
4. 發表年 2019年

1. 発表者名 Choy Yee Keong
2. 発表標題 Global Warming: the 1.5 °C Danger Zone and its Implications for Green Transformation in Malaysia
3. 学会等名 Institute for Environment and Development (LESTARI), National University of Malaysia (UKM), Malaysia (招待講演)
4. 発表年 2019年

1. 発表者名 Choy Yee Keong
2. 発表標題 Sustainable Development and Global Environmental Aspirations in the Age of Neoliberalism: The Challenge
3. 学会等名 School of Geographical Sciences. Fujian Normal University. Fuzhou, Fujian, People ' s Republic of China (招待講演)
4. 発表年 2019年

1. 発表者名 Choy Yee Keong
2. 発表標題 Entropy, Urban Metabolism and Sustainable Urban Future: The Nexus
3. 学会等名 Jeffrey Sachs Center on Sustainable Development, Sunway University, Malaysia (招待講演)
4. 発表年 2019年

〔図書〕 計4件

1. 著者名 Choy Yee Keong (Kartik Roy and Sandip Kar, editors)	4. 発行年 2018年
2. 出版社 World Scientific Publishing	5. 総ページ数 360
3. 書名 Developmental State and Millennium Development Goals. Country Experiences	

1. 著者名 Choy Yee Keong (Sara Hsu, editors)	4. 発行年 2018年
2. 出版社 Routledge	5. 総ページ数 626
3. 書名 Routledge Handbook of Sustainable Development in Asia	

1. 著者名 チヨイ イー・ケエヨン (大沼あゆみ・細田衛士 編著)	4. 発行年 2019年
2. 出版社 慶應義塾大学出版会	5. 総ページ数 253
3. 書名 環境経済学の政策デザイン	

1. 著者名 Choy Yee Keong	4. 発行年 2020年
2. 出版社 Elsevier	5. 総ページ数 300
3. 書名 Global Environmental Sustainability: Case Studies and Analysis of the UN's Journey toward Sustainable Development	

〔産業財産権〕

〔その他〕

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6. 研究組織

氏名 (ローマ字氏名) (研究者番号)	所属研究機関・部局・職 (機関番号)	備考
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