國立東華大學

永續發展委員會
113 學年度第 1 學期第 2 次會議會議紀錄

壹、會議時間：民國 114 年 1 月 8 日（週三）12:30-12:50

貳、會議地點：壽豐校區行政大樓三樓 303 會議室

參、會議主席：徐輝明校長

肆、出席委員：

朱景鵬副校長（請假）、郭永綱副校長兼教務長、
張文彥副校長兼環境暨海洋學院院長、秘書室張德勝主任秘書、
學生事務處林俊瑩學務長、總務處何俐眞總務長、
研究發展處林楚軒處長、國際事務處蘇銘千處長、
圖書資訊處陳偉銘處長、教學卓越中心高台茜中心主任
技術服務中心何彥鵬中心主任、永續發展中心李俊鴻中心主任、
校務研究辦公室陳鴻圖執行長、人事室莊文靜主任、
主計室鄭雪娟主任、理工學院黃武元院長、
人文社會科學學院吳冠宏院長、管理學院許芳銘院長、
花師教育學院潘文福院長、藝術學院廖慶華院長、
原住民民族學院石忠山院長（日宏煜主任代理）、
洄瀾學院朱嘉雯院長（張文彥副校長代理）、
東華學生自治會 陳椗豐會長（臺灣文化學系四年級）
學生代表 陳杰威（自然資源與環境學系四年級）（請假）
學生代表 邱泓維（社會學系四年級）（請假）

列席人員：

永續發展中心治理策略組陳筱華組長、李莉莉助理
永續發展中心實踐推動組洪耀明組長、張元銘助理
@里山里海辦公室 李光中教授（請假）、孫夏天副研究員（請假）

紀錄：永續發展中心治理策略組李敏賢
聯絡電話：03-890-5919

伍、會議議程

一、永續發展事務報告。（略）

陸、討論提案

一、本中心擬聘下列人員為兼任研究人員，提請 審議。

說明：

1. 依據國立東華大學永續發展中心兼任研究人員聘用辦法辦理。

2. 名冊如下，詳細資料如附件一：

編號	姓名	職級	擬聘職別	起聘日
1	I Wayan Koko Suryawan	博士	兼任副研究員	114.1

議決：照案通過。

柒、臨時動議

附件一

國立東華大學

Adjunct Research Fellow Appointment Form
Center for Sustainable Development, National Dong Hwa University

Name	I Wayan Koko Suryawan	**Gender**	☐ Female ☑ Male	**Date of Birth**		
Title	Adjunct Associate Research Fellow	**ID (or Passport) No.**			**Tel / Mobile**	
Initial / Renewal	☑ Initial ☐ Renewal					
Employment Period (Year / Month / Date)	From the date of approval until December 2027					

Proposed Research Field for Appointment

Adaptive Environmental Management in Indonesia

Background

Indonesia faces unique sustainability challenges as a vast archipelago with over 17,000 islands, influenced by its geographical diversity, high population density in certain areas, and significant biodiversity. The country's energy sector heavily relies on fossil fuels, with coal and oil dominating the energy mix, and faces logistical challenges in distributing cleaner energy sources due to its geography. There is a significant gap in access to electricity between rural and urban areas. In waste management, rapid urbanization and economic growth have led to increased waste generation, outpacing the development of adequate waste management infrastructure. Indonesia struggles with high rates of plastic pollution, inadequate waste segregation systems, and limited recycling facilities. Tourism, a major economic driver, often leads to environmental degradation, including coral reef damage, depletion of natural resources, and pollution, particularly in popular destinations. The blue economy, despite vast marine resources, contends with issues like overfishing, destruction of mangrove habitats, and pollution. Finally, the nature-based solutions sector is crucial as deforestation, illegal logging, and land conversion for agriculture pose significant threats to ecosystem services and biodiversity.

Objective

The primary objective of this research is to develop adaptive management strategies tailored to Indonesia's unique environmental, economic, and cultural landscapes, harmonizing economic development with environmental conservation for societal and ecosystem benefits.

Research Questions

The research seeks to understand how adaptive management principles can be applied to improve sustainability practices across various sectors in Indonesia. For example, in the energy sector, implementing adaptive management could involve dynamically adjusting energy policies to promote renewable energy based on technological advancements and market responses. In waste management, developing flexible regulations that encourage innovation in waste reduction and recycling, along with community-based management initiatives, would be crucial. For tourism, adaptive management could involve real-time monitoring of environmental impacts and adjusting practices to prevent long-term damage. The blue economy could benefit from adaptive fishing quotas and marine protected areas that adjust based on scientific monitoring. In nature-based solutions, shifting conservation priorities based on changes in species populations and forest health would allow for more responsive environmental governance.

Another focus is identifying the key factors influencing the effectiveness of these management strategies. These include the involvement of local communities, governments, and businesses which is crucial for the acceptance and success of adaptive management strategies. Effective adaptive management also relies on high-quality, real-time environmental data for making informed decisions. The ability to modify policies in response to environmental feedback and robust enforcement mechanisms significantly impacts the success of adaptive strategies. Additionally, adequate funding and access to technology are necessary to implement and sustain adaptive management practices, while recognizing and integrating local cultural values into management strategies can enhance their acceptance and effectiveness.

Methodology

The methodology for this research will integrate several analytical techniques to provide comprehensive insights into the effectiveness of adaptive management strategies across various sustainability sectors in Indonesia. Importance-Performance Analysis (IPA) will be utilized to conduct surveys that gather stakeholders' perceptions regarding the importance and performance of existing environmental management practices. This analysis will help pinpoint areas needing improvement and validate the impact of newly implemented adaptive strategies. Choice Experiments will be designed to probe into stakeholders' preferences and their willingness to pay for sustainable options in energy consumption, waste management, and eco-tourism. These experiments will make use of econometric models such as Random Parameter Logit (RPL) and Latent Class Model (LCM) to analyze and interpret choice behavior, providing insights into consumer preferences and economic valuations of different sustainable practices. Additionally, other econometric methods including Probit and Logit models will assess the determinants that drive behavioral changes toward sustainable practices. Structural Equation Modeling (SEM) will also be employed to explore the complex relationships between observed variables and latent constructs that influence environmental management.

Case Studies

The research will examine several key sectors through dedicated case studies. In the Energy Sector, the focus will be on initiatives such as the adoption of renewable energy sources and improvements in energy efficiency. The response of consumers to energy-saving policies will be analyzed using econometric models to understand the effectiveness of these policies. Waste Management will be scrutinized through studies on community-based waste reduction programs and innovations in recycling and Waste to Energy (WtE) technologies. The analysis will include evaluating the public's willingness to participate in and financially support improved waste management services. For tourism and the blue economy, the research will assess sustainable tourism practices and their impact on local communities and ecosystems. This will include exploring the economic benefits of preserving marine biodiversity through nature-based solutions and assessing the sustainability of practices that balance economic gains with ecological preservation. Nature-Based Solutions will be evaluated by investigating the effectiveness of reforestation, coral reef restoration, and the development of urban green spaces. Behavioral economic experiments will be utilized to measure community engagement and support for these initiatives.

Expected Outcomes and Impact

The primary goal of this research is to develop adaptive management strategies that are specifically tailored for different sectors in Indonesia, utilizing comprehensive data and insights derived from the methodologies and case studies outlined previously. These strategies will be designed to address the unique challenges of the Indonesian context, enhancing the effectiveness of sustainability practices across the nation. Based on the analytical findings, policy recommendations will be crafted to influence and guide the implementation of sustainable practices. These recommendations will aim to provide actionable solutions that can be integrated into national and local policy frameworks to ensure environmental sustainability and economic viability.

To maximize the impact and reach of the research findings, the results will be prepared for publication in highly regarded journals. The target is to publish in journals indexed in the Web of Science (WoS) Social Science Citation Index (SSCI), Science Citation Index Expanded (SCIE), or Scopus databases. The aim is to publish at least five papers annually, ensuring that the research contributes to the global discourse on adaptive management and sustainability. These publications will serve as a credible source of information for policymakers, practitioners, and researchers, fostering a deeper understanding of adaptive strategies and their implementation in a complex archipelagic region like Indonesia.

Ratified and Signed:

Head of Division	Director Center for Sustainable Development	President

Notes:

1. Copies of highest educational qualification, proof of proposed position level, and work experience must be attached.
2. Details of the proposed research field for the Adjunct Research Fellow position must be specified.

	School	Department / Institute	Duration of Study	Graduation or Degree Award Date	Degree Name	Submitted Diploma
Education	Institut Teknologi Sepuluh Nopember	Environmental Engineering	Start (2010 / September) End (2014 / August / 14)	2014 / August (Year / Month)	S.T.	☑ Yes ☐ No
	Institut Teknologi Bandung	Environmental Engineering	Start (2015/ September) End (2017 / October / 17)	2017 / October (Year / Month)	M.T.	☑ Yes ☐ No
	National Dong Hwa University	Department of Natural Resources and Environmental Studies	Start (2021 / September / 01) End (2024 / June / 17)	2024 / June (Year / Month)	Ph.D.	☑ Yes ☐ No

	Employer (School / Organization)	Job Title	Full-Time or Part-Time	Period of Employment (Year/Month)	Position	Submitted Documents	
						Document Name	Quantity
Work Experience	Universitas Universal	Lecturer	Full-Time	July/2018 – August/2019	Assistant Professor		
	Universitas Pertamina	Lecturer	Full-Time	August/2019 – Now	Assistant Professor		
Current Position	Universitas Pertamina	Lecturer	Full-Time	August/2019 – Now	Assistant Professor	☑ Yes ☐ No	

	Job Title	Certificate Number	Starting Year of Experience
Approved Teaching Qualification (Above Junior College)			

List of Publications or Projects:
(Publications or projects within the latest five years)

1. Imelda, S., Lee, C.-H., Wang, H.-J., & Kim, D.-C. (2024). Determinant of importance-performance and willingness to participate in Komodo adaptive conservation programs. Journal for Nature Conservation, 126697. https://doi.org/10.1016/j.jnc.2024.126697 **(Corresponding)**
2. Sianipar, I. M. J., Lee, C.-H., Wang, H.-J., & Kim, D.-C. (2024). Unraveling Factors Influencing Local Willingness to Participate in Sustainable Komodo Conservation and Protected Area Tourism. Forest and Society, 8(2 SE-), 350–371. https://doi.org/10.24259/fs.v8i2.32880 **(Corresponding)**
3. Suhardono, S., Lee, C.-H., & Suryawan, I. W. K. (2024). Trends in citizen influencing willingness to participate in marine debris management and social well-being in Bali metropolitan, Indonesia. Urban Governance. https://doi.org/10.1016/j.ugj.2024.12.005 **(Corresponding)**
4. Suryawan, I. W. K., Gunawan, V. D., & Lee, C.-H. (2024). Assessing the importance-performance analysis of adaptive capacity programs for sustainable mangrove conservation in the Taman Nasional Bali Barat conservation area. Ocean & Coastal Management, 257, 107345. https://doi.org/10.1016/j.ocecoaman.2024.107345
5. Suryawan, I. W. K., Gunawan, V. D., & Lee, C.-H. (2025). The role of local adaptive capacity in marine ecotourism scenarios. Tourism Management, 107, 105039. https://doi.org/10.1016/j.tourman.2024.105039
6. Suryawan, I. W. K., & Lee, C.-H. (2023a). Citizens' willingness to pay for adaptive municipal solid waste management services in Jakarta, Indonesia. Sustainable Cities and Society, 97. https://doi.org/10.1016/j.scs.2023.104765
7. Suryawan, I. W. K., & Lee, C.-H. (2023b). Community preferences in carbon reduction: Unveiling the importance of adaptive capacity for solid waste management. Ecological Indicators, 157, 111226. https://doi.org/10.1016/j.ecolind.2023.111226
8. Suryawan, I. W. K., & Lee, C.-H. (2024a). Achieving zero waste for landfills by employing adaptive municipal solid waste management services. Ecological Indicators, 165, 112191. https://doi.org/10.1016/j.ecolind.2024.112191
9. Suryawan, I. W. K., & Lee, C.-H. (2024b). Importance-performance dynamics and willingness to pay in coastal areas for climate-adaptive marine debris management. Regional Studies in Marine Science, 103596. https://doi.org/10.1016/j.rsma.2024.103596
10. Suryawan, I. W. K., Rahman, A., Suhardono, S., & Lee, C.-H. (2025). Visitor willingness to pay for decarbonizing tourism: Supporting a net-zero transition in Nusa Penida, Indonesia. Energy for Sustainable Development, 85, 101628. https://doi.org/10.1016/j.esd.2024.101628
11. Suryawan, I. W. K., Septiariva, I. Y., Sari, M. M., Ramadan, B. S., Suhardono, S., Sianipar, I. M. J., Tehupeiory, A., Prayogo, W., & Lim, J.-W. (2023). Acceptance of Waste to Energy (WtE) Technology by Local Residents of Jakarta City, Indonesia to Achieve Sustainable Clean and Environmentally Friendly Energy. Journal of Sustainable Development of Energy, Water and Environment Systems, 11(2), 1004.
12. Suryawan, I. W. K., Sianipar, I. M. J., & Lee, C.-H. (2024). Reshaping marine debris management post-COVID-19: Integrating adaptive attributes for enhanced community engagement. Ocean & Coastal Management, 253, 107149. https://doi.org/10.1016/j.ocecoaman.2024.107149
13. Suryawan, I. W. K., Suhardono, S., & Lee, C.-H. (2024). Boosting beach clean-up participation through community resilience hypothetical scenarios. Marine Pollution Bulletin, 207. https://doi.org/10.1016/j.marpolbul.2024.116853 **(Corresponding)**
14. Sutrisno, A. D., Chen, Y.-J., Suryawan, I. W., & Lee, C.-H. (2023a). Building a Community’s Adaptive Capacity for Post-Mining Plans Based on Important Performance Analysis: Case Study from Indonesia. In Land (Vol. 12, Issue 7).

https://doi.org/10.3390/land12071285 **(Corresponding)**

15. Sutrisno, A. D., Chen, Y.-J., Suryawan, I. W., & Lee, C.-H. (2023b). Establishing Integrative Framework for Sustainable Reef Conservation in Karimunjawa National Park, Indonesia. In Water (Vol. 15, Issue 9). https://doi.org/10.3390/w15091784
16. Sutrisno, A. D., Lee, C.-H., & Suhardono, S. (2024). Evaluating factors influencing community readiness for post-mining environmental development strategies. Journal of Environmental Management, 366, 121823. https://doi.org/10.1016/j.jenvman.2024.121823 **(Corresponding)**
17. Sutrisno, A. D., Lee, C.-H., Suhardono, S., & Suryawan, I. W. K. (2024). Empowering communities for sustainable transition: integrating tourism with economic and sociodemographic dynamics in post-mining strategies. Geojournal of Tourism and Geosites, 55(3), 1112–1123. https://doi.org/10.30892/gtg.55312-1284 **(Corresponding)**
18. Sutrisno, A. D., Lee, C.-H., & Suryawan, I. W. K. (2024). Examining community desire to change for adaptive transition in post-mining ecological sustainability: Community transition in post-mining sustainability. The Extractive Industries and Society, 20, 101537. https://doi.org/10.1016/j.exis.2024.101537 **(Corresponding)**
19. Yang, B.-C., Lee, C.-H., & Koko Suryawan, I. W. (2024). Consumers' willingness to pay and importance-performance gaps for resilient e-waste management in Taiwan. Journal of Cleaner Production, 144313. https://doi.org/10.1016/j.jclepro.2024.144313 **(Corresponding)**
20. Yang, B.-C., Lee, C.-H., & Suryawan, I. W. K. (2025). Resilient socio-technical systems for adaptive consumer e-waste management. Sustainable Cities and Society, 106026. https://doi.org/10.1016/j.scs.2024.106026 **(Corresponding)**
21. Yang, B. C., Lee, C. H., & Suryawan, I. W. K. (2024). Financial Support in E-waste Management within a Circular Economy with Structural Equation Modeling Analysis from Taiwan. Circular Economy and Sustainability. https://doi.org/10.1007/s43615-024-00459-2 **(Corresponding)**

No. : 50437/ITS-110/FTSP.3/S1/2014

KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

dengan ini menyatakan bahwa :

I Wayan Koko Suryawan

lahir di Denpasar, tanggal 27 April 1992

diterima sebagai mahasiswa pada tahun 2010 dengan Nomor Registrasi 3310100009

pada tanggal 14 Agustus 2014 telah menyelesaikan dan memenuhi persyaratan Pendidikan Sarjana (S1)

Program Studi Teknik Lingkungan (SK Dirjen Dikti No. 116/DIKTI/Kep/1984 tanggal 24 September 1984)

Fakultas Teknik Sipil dan Perencanaan

Institut Teknologi Sepuluh Nopember (SK Menteri P.P. dan K No. 93367/U.U tanggal 3 Nopember 1960).

Oleh karena itu kepadanya diberikan gelar

SARJANA TEKNIK (S.T.)

beserta hak dan kewajiban yang melekat pada gelar tersebut.

Diterbitkan di Surabaya pada tanggal 25 Agustus 2014

DEKAN

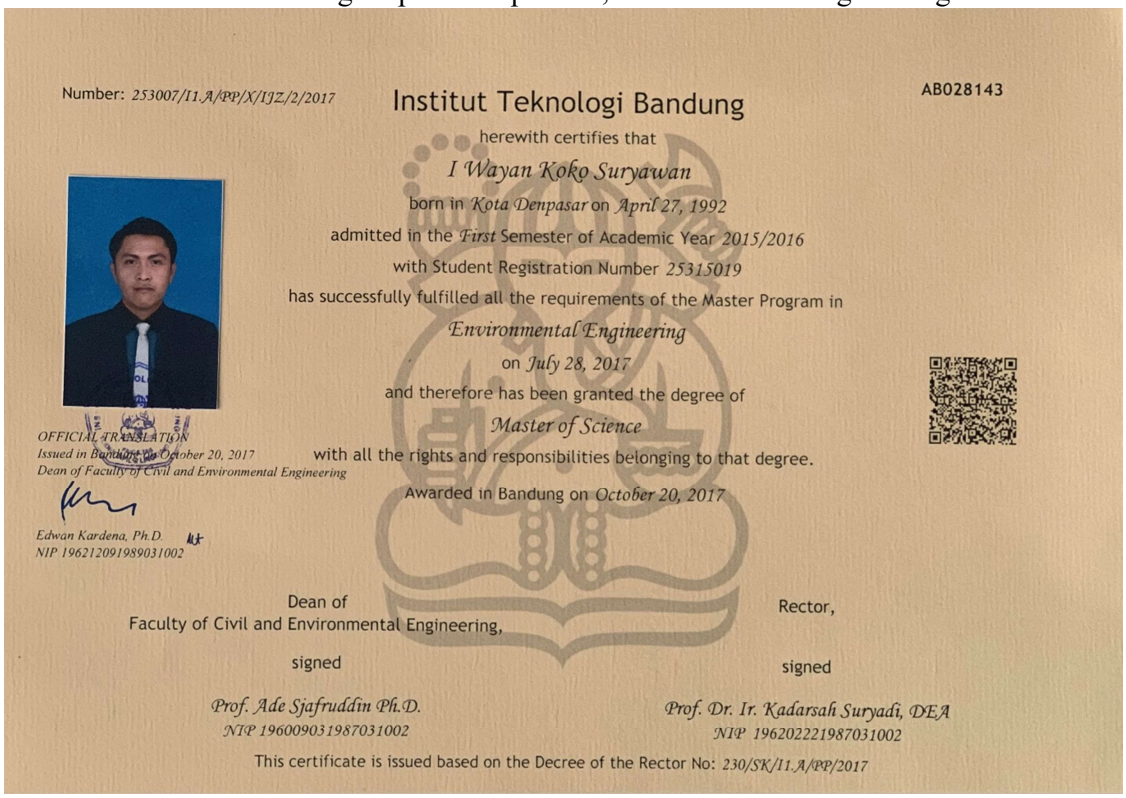
Dr. Ir. Hidayat Soegihardjo Masiran, M.S.
NIP. 19550325 198003 1 004

REKTOR

Prof. Dr. Ir. Tri Yogi Yuwono, DEA.
NIP. 19600129 198701 1 001

ITS 0009161

Institut Teknologi Sepuluh Nopember; Environmental Engineering



Number: *253007/I1.A/PP/X/IJZ/2/2017*

AB028143

Institut Teknologi Bandung

herewith certifies that

I Wayan Koko Suryawan

born in *Kota Denpasar* on *April 27, 1992*

admitted in the *First* Semester of Academic Year *2015/2016*

with Student Registration Number *25315019*

has successfully fulfilled all the requirements of the Master Program in

Environmental Engineering

on *July 28, 2017*

and therefore has been granted the degree of

Master of Science

with all the rights and responsibilities belonging to that degree.

Awarded in Bandung on *October 20, 2017*

OFFICIAL TRANSLATION
Issued in Bandung, October 20, 2017
Dean of Faculty of Civil and Environmental Engineering

Edwan Kardena, Ph.D.
NIP 196212091989031002

Dean of
Faculty of Civil and Environmental Engineering,

signed

Prof. Ade Sjafruddin Ph.D.
NIP 196009031987031002

Rector,

signed

Prof. Dr. Ir. Kadarsah Suryadi, DEA
NIP 196202221987031002

This certificate is issued based on the Decree of the Rector No: *230/SK/I1.A/PP/2017*

Institut Teknologi Bandung; Environmental Engineering

國立東華大學

National Dong Hwa University

has conferred upon

I WAYAN KOKO SURYAWAN

the degree of

Doctor of Philosophy in Natural Resources and Environmental Studies

with all the rights and privileges thereto appertaining.

In Witness Thereof, this diploma duly signed has been issued and the seal of the University affixed.

Issued by the President upon recommendation of the faculty of

The College of Environmental Studies and Oceanography

at Hualien, Taiwan, June, 2024.

President of the University

(811054006)
I WAYAN KOKO SURYAWAN

The digital degree certificate is as valid as the paper certificate. This can be verified at the MOE-designated platform.

National Dong Hwa University; Department of Natural Resources and Environmental Studies

24-002002-0315

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI

SERTIFIKAT PENDIDIK

Nomor Registrasi: 24103106204391

Berdasarkan Keputusan Menteri Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia
Nomor 251/M/KPT/2019 tentang Perguruan Tinggi Penyelenggara Sertifikasi Pendidik untuk Dosen,
Rektor Institut Teknologi Sepuluh Nopember menyatakan bahwa:

Ir. I WAYAN KOKO SURYAWAN, S.T., M.T.
Nomor Induk Dosen Nasional: 1027049202

Lahir di Denpasar pada tanggal dua puluh tujuh bulan April tahun seribu sembilan ratus sembilan puluh dua
dosen pada Universitas Pertamina
LULUS Sertifikasi Dosen dan dinyatakan sebagai DOSEN PROFESIONAL

Surabaya, 01 Agustus 2024
Rektor,

Bambang Pramujati, S.T., M.Sc.Eng., Ph.D.
NIP. 196912031994031001

Balai Sertifikasi Elektronik

Current PositionUniversitas Pertamina, Lecturer Full-Time, August/2019 – Now
Assistant Professor

國立東華大學

Universitas Pertamina

WORK CERTIFICATION LETTER
Number: 034/UP-WRS.3/SKET/KP.06/IX/224

To Whom It May Concern,

Directorate of Human Resources and Organization hereby certifies that:

Name: Ir. I Wayan Koko Suryawan, Ph.D
Employee ID: 119033
Date of Birth: Denpasar, 27 April 1992
Gender: Male

is indeed a faculty member at Universitas Pertamina, within the Environmental Engineering program, Faculty of Infrastructure Planning, since 12 August 2019 to present.

This letter is issued for whatever appropriate use it may serve. We thank you for your attention.

Jakarta, 8 December 2024

Director of Human Resources and IT

Universitas Pertamina

Erwin Setiawan, MTI
NIP 116016

附件一