G20, Infrastructure Tourism, and Renewable Energy Tourism: Indonesia and World Trend

Muhammad Ikhsan Setiawan¹, Agus Sukoco¹, Dahlan Abdullah², Cut Ita Erliana², Paisal Halim³, Syamsiah Badruddin³, Hery Budiyanto⁴

Department of Civil Engineering, Narotama University, Jl. Arif Rahman Hakim No.51, Kota Surabaya, Jawa Timur 60117, Indonesia¹

Universitas Malikussaleh, Aceh Utara, Blang Pulo, Muara Satu, Lhokseumawe City, Aceh, Indonesia²

Universitas Nasional, Jakarta, Jl. Sawo Manila No.61, Pejaten Bar., Ps. Minggu, Kota Jakarta Selatan, Daerah Khusus Ibukota Jakarta 12520, Indonesia³

Universitas Merdeka Malang, Jalan Terusan Dieng No. 62-64 Klojen, Pisang Candi, Kec. Sukun, Kota Malang, Jawa Timur 65146, Indonesia⁴

Corresponding Author*: <u>ikhsan.setiawan@narotama.ac.id</u>, <u>agus.sukoco@narotama.ac.id</u>, <u>dahlan@unimal.ac.id</u>, <u>paisalhalim@civitasunas.ac.id</u>, <u>syamsiah_badruddin@civitas.unas.ac.id</u>, hery.budiyanto@unmer.ac.id

ABSTRACT

Purpose: The tourism industry has made an enormous difference in terms of jobs, foreign exchange, and the building up of infrastructure. On the other hand, many infrastructures can make natural places look less attractive, which calls for sustainable tourism. It's vital to help small businesses get money through excellent digital infrastructure and to use public fiscal tools to ensure that natural resources are used sustainably.

Design/methodology/approach: Infrastructure tourism was used as the title, abstract, and keywords in 6,377 documents from 1968 to 2023 found in the scopus.com database. It also shows 704 papers with the title, abstract, and article keyword "Renewable Energy Tourism" from 1990 to 2022. Based on research papers on scopus.com, Indonesia is ranked second in Asia for renewable energy tourism and first in ASEAN for infrastructure tourism. It's a perfect sign for the growth of tourism infrastructure and renewable energy tourism in Indonesia. Indonesia has many affiliations, including the University of Indonesia, the Bandung Institute of Technology, Gadjah Mada University, Bina Nusantara University, Diponegoro University, Brawijaya University, IPB University, Padjadjaran University, and Hasanuddin University.

Findings: Research publications in Indonesia have received funding from the Ministry of Technology Research, the Directorate General of Higher Education, the Research and Service Institute, the Bandung Institute of Technology, the University of Indonesia, Airlangga University, and Diponegoro University. So, the infrastructure and Renewable Energy Tourism research are on track and in an excellent place to be published. Indonesia will lead the world.

Paper type: Research paper

Keyword: Indonesia Trend, Infrastructure Tourism, Renewable Energy Tourism, The World Trend Received : January 7th Revised : January 18th Published : March 31th

I. INTRODUCTION

Infrastructure has been a focus of many G20 Presidency terms. In 2014, the Global Infrastructure Hub (GI Hub) was set up by the G20. As an organization based on multilateralism and relies on collaboration between the public and private sectors, GI Hub will work closely with the Indonesian Presidency to solve infrastructure problems and help the world get back on its feet. The tourism industry has made an enormous difference in

terms of jobs, foreign exchange, and the building up of infrastructure. On the other hand, natural destinations lose some beauty when they have many infrastructures, which calls for sustainable tourism. It's essential to help small businesses get money through excellent digital infrastructure and to use public fiscal tools to ensure that natural resources are used sustainably.

A. Objectives

As part of Indonesia's G20 Presidency in 2022, the study aims to look at G20, Infrastructure Tourism, and Renewable Energy Tourism: Indonesia and World Trends. Scopus.com's database shows 6,377 papers on infrastructure tourism from 1968 to 2023. There are also 704 documents on renewable energy tourism from 1990 to 2022, with titles, abstracts, and keyword articles.

B. Literature Review

The tourist-strategic frontier combines domestic and international tourism with special autonomous zones, economic convenience, migration, and connecting infrastructure. It shows how vital geopolitics is every day. Militarization turns tourism into a weapon when it makes strategic sense. Hotel infrastructure is essential to the Ukrainian economy, which depends on extra money from local and state budgets to keep growing. The start of market reforms in Russia greatly affected the work being done to build infrastructure in the Far North. Russia's Arctic tourism isn't growing as fast as it could because there aren't enough places to stay and things to do for tourists, and things aren't organized well. Global warming and obesity are two big problems that hurt people's health and quality of life. The Lisbon City Hall supports a liveable, healthy, and sustainable city by ensuring good infrastructure, green space, and access to shopping and commercial transportation hubs for pedestrians.

Scientists study how recreational and sports tourism worldwide affects beach and sea green infrastructure preservation and management. Cycling infrastructure can lead to long-term improvements in how accessible and connected the countryside is, leading to groups of small towns and villages that are all connected. The current infrastructure needs to be fixed up to encourage community tourism. A sustainable development approach must also use a partnership model to get help from relevant agencies based on their knowledge. WCLH China's overall management is good in planning, protecting cultural heritage, and making money. Still, it's not so good regarding protection costs, infrastructure, valuation, institutions, social performance, and social management. Lack of plans for tourism, lack of investment in tourism, lack of technical infrastructure, and uncontrolled increases in land prices have all hurt the value of this ecologically and culturally sensitive landscape. The beauty of natural destinations is affected by how much infrastructure is there, which calls for sustainable tourism.

II. METHODS

Scopus is a well-known bibliographic database that a group of independent subject-matter experts runs. It doesn't limit its content based on where the original study was done. Academics, libraries, research managers, and funding agencies can use its powerful discovery and analytics tools to help people and organizations develop new ideas. There have been about 1.8 billion referrals since 1970. They have about 84 million entries, 17.6 million author profiles, 94.8 thousand affiliation profiles, 7,000 publishers, and more than 58.5 million references and data published after 1995. In addition, it has over 18.0 million open-access goods, including gold, hybrid gold, green, and bronze, and over 25.4 million recordings from before 1996. About 240 specialized magazines, 10.9 million conference papers, 15.8 million articles with funding data, 47.4 million patent links, 27,000 serial titles, 25,800 peer-reviewed journals, 5,300 gold open access journals, 825 book series, and more than 15 million articles are included. Scopus Author Profiles contain more than 1.06 million preprints from arXiv, bioRxiv, ChemRxiv, SSRN, and SCOPUS.COM, with an average of more than 29 references and 11 citations per work. In addition, there are presently 59,0 thousand titles with a 2020 CiteScore, a rise of about 4% over the past three years. SCOPUS.COM lets you look at about 250,000 monographs, edited volumes, key reference works, textbooks, articles, authors, and journal metrics in the humanities and social sciences (such as CiteScore assessments). About 7,500 books are available in medicine, nursing, dentistry, health professions, and veterinary science. The life sciences are covered in about 5,000 books. It includes neurology, molecular biology, genetics, toxicology, immunology, microbiology, and immunology. The physical sciences include chemical engineering, chemistry, computer science, earth and planetary sciences, energy, engineering, environmental science, materials science, mathematics, physics, and astronomy. In the social sciences section, there are about 11,500 titles on subjects like economics, econometrics, finance, psychology, accounting, and business management.

Researchers uncovered 6,377 articles on Infrastructure Tourism between 1968 and 2022 and 704 articles on Renewable Energy Tourism between 1990 and 2022 on scopus.com.

On the website scopus.com, these articles have been posted. (Sudapet, Sukoco, Damayanti, Wulandari, Rosyid, Nasihien, Setiawan, Masirin, et al., 2021) did descriptive research using scopus.com and article titles. She found 203 articles published in the last ten years with titles related to digital tourism. Based on data from Scopus, MI Setiawan's 2021a analysis of modern digital transportation technology was a description of 62 articles with captions (2012-2021). (Sudapet, Sukoco, Damayanti, Wulandari, Rosyid, Nasihien, Setiawan, Zulkifli, et al., 2021) did descriptive research with data from Scopus.com. The database found 249 "digital rural publications in the last five years." (Setiawan et al., 2021) a descriptive analysis based on Scopus data, put together 586 papers from the previous ten years (2012-2021). For the study, documents from research countries, organizations affiliated with the research, financial sponsors, and other sources are used. (Sudapet et al., 2019) says that research on tourism and digital tourism in Indonesia is still only done in book chapters and at conferences. So, it's hard for the country to get up to speed with the rest of the world. Setiawan, MI, found 171 documents on scopus.com when he searched for "titles, abstracts, and keywords". One hundred twenty-two books, journals, and other publications discuss the progress in solar cell technology and fish technology. Transportation and Mobility in Indonesia: Studies from 1989 to 2020 When MI (Setiawan, Bin, et al., 2019) Setiawan searched scopus.com, she got 57 results that matched the title, abstract, and keywords she entered. In terms of tourism and marine research, Institut Teknologi Sepuluh Nopember Surabaya (ITS) is ranked fourth worldwide. (Halim et al, 2019) found on scopus.com only five good international articles about sociology and sustainable management research in Indonesia from the past 30 years (1990-2020). Based on the results, the search, and a VOS Viewer analysis of the supply chain and fisheries study, (Setiawan, Sukoco, Mudjanarko, et al., 2019) thinks that the development of portable inflatable solar cold storage house technology is on track for future research and publication in Indonesia.

III. RESULTS AND DISCUSSION

The researchers looked at 6,377 documents about Infrastructure Tourism from 1968 to 2022 and 704 records about Renewable Energy Tourism from 1990 to 2022. They are separated into papers by country or territory, documents by year and source, documents by financial sponsor region, documents by subject, and documents by affiliation.

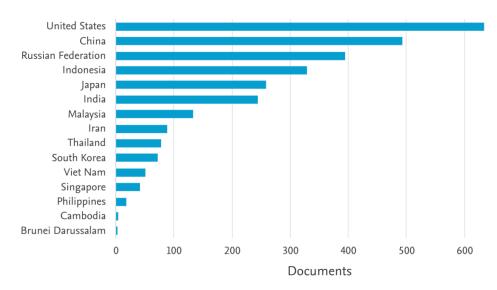


Figure 1. Documents by country or territory, 6,377 Infrastructure Tourism documents results from 1968 to 2023, title, abstract, keyword article include Infrastructure Tourism

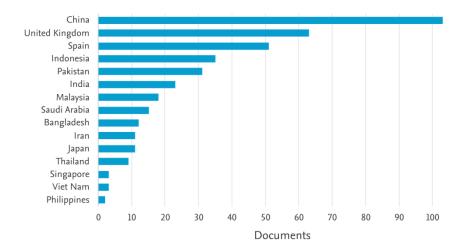


Figure 2. Documents by country or territory, 704 Renewable Energy Tourism documents results from 1990 to 2022, title, abstract, keyword article include Renewable Energy Tourism

Figures 1 and 2 demonstrate how documents are organized by country or territory. This lets researchers compare papers from up to 15 different countries. For Renewable Energy Tourism and Infrastructure Tourism research papers on scopus.com, Indonesia is ranked second in ASIA and first in ASEAN. It's great for the growth of renewable energy tourism and tourism related to infrastructure in Indonesia.

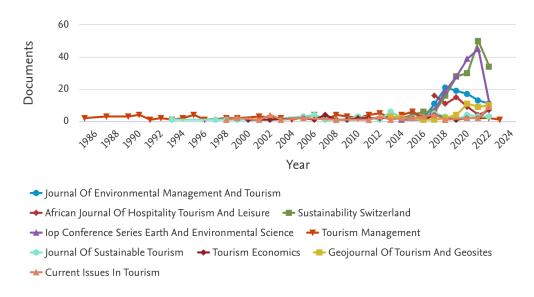


Figure 3. Documents per year by source, 6,377 Infrastructure Tourism documents results from 1968 to 2023, title, abstract, keyword article include Infrastructure Tourism

Page 375

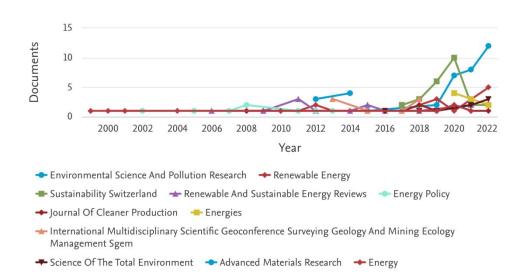


Figure 4. Documents per year by source, 704 Renewable Energy Tourism documents results from 1990 to 2022, title, abstract, keyword article include Renewable Energy Tourism

Figures 3 and 4 show how many papers are written annually by source. Researchers compare the number of documents written from up to 10 references: Environmental Science and Pollution Research, Renewable Energy, Renewable and Sustainable Energy Reviews, Energy Policy, Journal of Cleaner Production, Energies, Science of the Total Environment, Journal of Environmental Management and Tourism, African Journal of Hospitality, Tourism, and Leisure, Sustainability Switzerland, Tourism Management, Journal of Sustainable Tourism, Tourism Economics, Geojournal of Tourism and Geosites, and Advanced Material Research Journal.

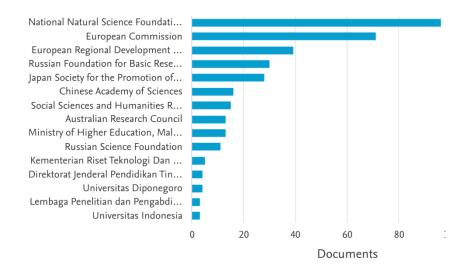


Figure 5. Documents by funding sponsor, 6,377 Infrastructure Tourism documents results from 1968 to 2023, title, abstract, keyword article include Infrastructure Tourism

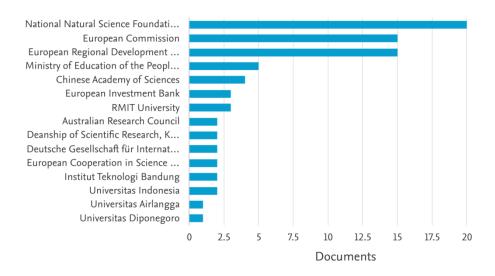


Figure 6. Documents by funding sponsor, 704 Renewable Energy Tourism documents results from 1990 to 2022, title, abstract, keyword article include Renewable Energy Tourism

Figures 5 and 6 show documents by who paid for them. Researchers compare the number of records from up to 15 different sources. National Natural Science, Chinese Academy of Sciences, Social Sciences and Humanities, Ministry of Education, Chinese Academy of Sciences, and Deanship of Scientific Research are all areas where China is in the lead. Europe also has good help: the European Commission, European Regional Development, the Russian Foundation for Basic Research, the European Investment Bank, Deutsche Gesellschaft, the Russian Science Foundation, and European Cooperation in Science. The Japan Society for the Promotion is also well known. The Australian Research Council and RMIT University are there to represent Australia. Funding sponsors support Indonesia: Kementerian Riset Teknologi, Direktorat Jenderal Pendidikan Tinggi, Lembaga Penelitian dan Pengabdian, Institut Teknologi Bandung, Universitas Indonesia, Universitas Airlangga, and Universitas Diponegoro.

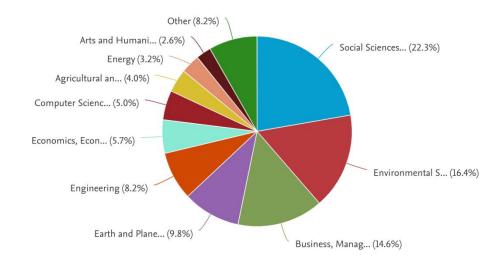


Figure 7. Documents by subject area, 6,377 Infrastructure Tourism documents results from 1968 to 2023, title, abstract, keyword article include Infrastructure Tourism

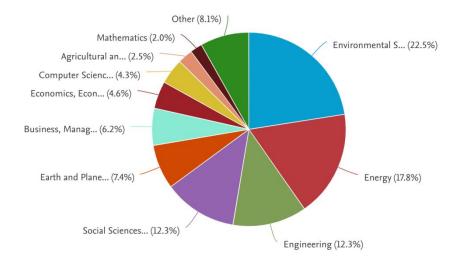


Figure 8. Documents by subject area, 704 Renewable Energy Tourism documents results from 1990 to 2022, title, abstract, keyword article include Renewable Energy Tourism

Figures 7 and 8 show documents by subject area. Researchers compare the record counts from up to 15 sources: Environmental Science is the most popular, followed by Energy, Engineering, Social Sciences, Earth and Planetary Sciences, Business, Management, and Accounting, Economics, Econometrics, and Finance, Computer Science, Agricultural and Biological Sciences, Arts and Humanities, Decision Sciences, Mathematics, Medicine, Physics and Astronomy, and Materials Science.

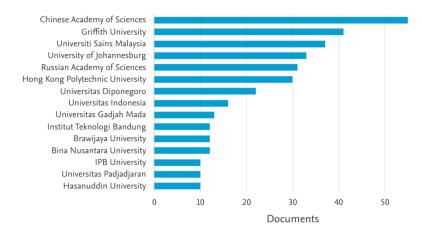


Figure 9. Documents by affiliations, 6,377 Infrastructure Tourism documents results since 1968 to 2023, title, abstract, keyword article include Infrastructure Tourism

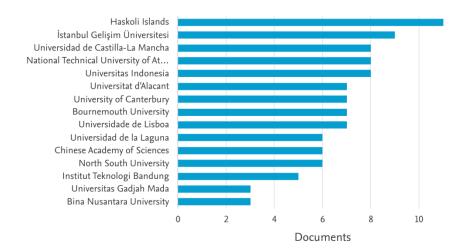


Figure 10. Documents by affiliations, 704 Renewable Energy Tourism documents results from 1990 to 2022, title, abstract, keyword article include Renewable Energy Tourism

Figures 9 and 10 show documents by their affiliations. This lets researchers compare the number of records from up to 15 sources. The Chinese Academy of Sciences is the best in the world. It was followed by Australia's Griffith University and the University of Canterbury, Malaysia's Universiti Sains Malaysia, Africa's University of Johannesburg, Europe's Haskoli Islands, the Russian Academy of Sciences, Istanbul Gelişim Üniversitesi, Universidad de Castilla-La Mancha, Universitat d'Alacant, Bournemouth University, Universidade de Lisboa, Universidade de la Laguna, Bangladesh's North South Indonesia has many connections: Universitas Indonesia, Institut Teknologi Bandung, Universitas Gadjah Mada, Bina Nusantara University, Universitas Diponegoro, Brawijaya University, IPB University, Universitas Padjadjaran, and Hasanuddin University.

IV. CONCLUSION

For Renewable Energy Tourism and Infrastructure Tourism publications on scopus.com, Indonesia is ranked second in Asia and first in ASEAN. It's great for the growth of renewable energy tourism and tourism related to infrastructure in Indonesia. Indonesia has a lot of affiliations: the University of Indonesia, Bandung Institute of Technology, Gadjah Mada University, Bina Nusantara University, Diponegoro University, Brawijaya University, IPB University, Padjadjaran University, and Hasanuddin University. Indonesia's Ministry of Technology Research, Directorate General of Higher Education, Research and Service Institute, University of Indonesia, Bandung University, and Diponegoro University are all sponsors who give money. So, according to the scopus.com database, research papers on Infrastructure Tourism and Renewable Energy Tourism in Indonesia are on track and in a good place. Indonesia will be the best in the world.

REFERENCES

- Setiawan, M. I., Bin, M. A., Razi, M., Nasihien, R. D., & Talib Bon, A. (2019). Sustainable Mobility and Transportation Research in Indonesia. *Proceedings of the International Conference on Industrial Engineering and Operations Management Riyadh*.
- Setiawan, M. I., Nasihien, R. D., Sukoco, A., Aditya, F., Rosyid, A., Zulkifli, C. Z., & Isradi, M. (2021). Digital Cities Research Trend Analysis (2012-2021). Proceedings of the International Conference on Industrial Engineering and Operations Management Harbin.
- Setiawan, M. I., Sukoco, A., Halim, P., Hermanto, D., Bin, A. T., Bon, Ibrahim, M. H. W., Razi, M. A. M., Binti, N., Othman, Juki, M. I. Bin, Ali, A. Z. B. M., & Utomo, W. M. (2019). Airport, passenger and aircraft supporting to regional growth. *Proceedings of the International Conference on Industrial Engineering and Operations Management Detroit, Michigan, USA*, 1759–1761.
- Setiawan, M. I., Sukoco, A., Mudjanarko, S. W., Nasihien, R. D., Suyono, J., Dwiatmoko, H., Bin Bon, A. T., & Ibrahim, M. H. W. (2019). Indonesia airport, passanger and aircraft impact on regional budget (APBD).

G20, Infrastructure Tourism, and Renewable Energy Tourism: Indonesia and World Trend Muhammad Ikhsan Setiawan¹, Agus Sukoco¹, Dahlan Abdullah², Cut Ita Erliana², Paisal Halim³, Syamsiah Badruddin³, Hery Budiyanto⁴ Proceedings of the International Conference on Industrial Engineering and Operations Management Detroit, Michigan, USA, 1752–1753.

- Sudapet, I. N., Ibrahim, M. H. bin W., Setiawan, M. I., & Bon, A. T. (2019). Indonesia Research in Tourism and Digital Tourism. Proceedings of the International Conference on Industrial Engineering and Operations Management.
- Sudapet, I. N., Sukoco, A., Damayanti, E., Wulandari, A., Rosyid, A., Nasihien, R. D., Setiawan, M. I., Masirin, M. I. M., Isradi, M., Halim, P., & Badruddin, S. (2021, July). Digital Rural Development Research Trend Analysis in Last 7 Years. *Proceedings of the International Conference on Industrial Engineering and Operations Management Harbin*.
- Sudapet, I. N., Sukoco, A., Damayanti, E., Wulandari, A., Rosyid, A., Nasihien, R. D., Setiawan, M. I., Zulkifli, C. Z., Isradi, M., Halim, P., & Badruddin, S. (2021). *Global Digital Tourism Research Article Trend Analysis* (2012-2021). Proceedings of the International Conference on Industrial Engineering and Operations Management Harbin.

ACKNOWLEDGMENT

The authors gratefully acknowledge the financial contribution offered by KEDAIREKA MATCHING FUND, the Grant of Kementerian Pendidikan, Kebudayaan, Riset dan Teknologi Republik Indonesia during the course of this research by Universitas Narotama, Indonesia, year 2022

BIOGRAPHIES

Muhammad Ikhsan Setiawan received his Bachelor of Civil Engineering (1998) from Universitas Merdeka, Malang, Indonesia, and Master of Civil Engineering (2000) from Universitas Indonesia before pursuing a Doctor of Philosophy (Civil Engineering) at Universitas Tarumanagara, Indonesia (2018). He is currently an Assistant Professor at the Faculty of Civil Engineering, Narotama University, Indonesia, and registered as Engineer Expert Certified. He leads a research team in Sustainable and Digital for Transportation, Tourism, and Regional Economic, a grant from Indonesia's Ministry of Education. His research interests include Smart City and Sustainability. He is also a Chairman of WORLD CONFERENCE. I.D., IPEST commerce, SONGSONG ridt, member of IEEE, editors, and reviewers of some journals indexed in SCOPUS, DOAJ, CROSSREF, and GOOGLE. He is a Vice-Rector of Narotama University, Indonesia

Agus Sukoco is an Assistant Professor at the Faculty of Economics and Business, Universitas Narotama, Surabaya, Indonesia. He earned a Bachelor of Marine Engineering in faculty naval engineering from Institut Teknologi Sepuluh Nopember (1996), Master of Management Business from Narotama University (2006), and Doctoral of Management Business from STESIA Indonesia (2021). He has been recognized as a professional management business consultant with over 18 years of experience working with closely-held businesses. He is also Editor in Chief of IJEBD International Journal of Entrepreneurship and Business Development, indexed International DOAJ, as Head of Department Management, Narotama University, Indonesia.

Paisal Halim received a bachelor's degree in Social Science Education – Pancasila Moral Education (1985) from the Indonesian Teacher Training and Education Institute (IKIP), Masters in Humanities in 1997 from Hasanuddin University Makassar Indonesia, Doctor of Social Science Philosophy (Sociology) 2008 Hasanuddin University, Makassar Indonesia. Currently, he is a lecturer and professor in the postgraduate government administration study program at the National University of Jakarta, Indonesia. Actively providing various training and mentoring for young lecturers in writing journals, books and other scientific works related to the fields of sociology, government science and public policy at several universities in Indonesia. Currently, he is the President of IPEST (an international association of economic, social and technology researchers and founder of various e-journals: JILPR Indonesia Law and Policy Policy, IJESS International Journal of Education and Social Science. His research interests include Human Resource Management, development sociology, public policy, leadership, government science and tourism

Syamsiah Badruddin received her Bachelor of Education Administration (1987) from Institut Keguruan dan Ilmu Pendidikan (IKIP) Ujung Pandang, Indonesia and Master of Population And HR Development from Universitas Hasanuddin, Indonesia (1997), before pursuing Doctor of Social Science at Universitas

Hasanuddin, Indonesia (2004). She currently an Professor at Faculty of Social Science and Political Science, National University, Indonesia and registered as Certified International Human Capital Managemen (CIHCM). She currently leads a research team in Community Social Network As Engineering WFD (Work Form Dieng) The Economy During The Implementation Of PPKM During The Covid-19 Pandemic, grant from National University, Indonesia. Her research interests include Social Enterpreneurship. Managemen and Supplay Chain. Social Engineering and Tourism. She also a Member of IPEST commerce, ADRI, editors and reviewers some Journal of National University indexced GOOGLE, also until now as Chairman of Indonesian Institute of Public Policy Studies (LKKPI), South Sulawesi Province, Indonesia and as Head of International Journal and Publication Clinic at Faculty of Social Science and Political Science, National University, Indonesia.

 G20, Infrastructure Tourism, and Renewable Energy Tourism: Indonesia and World Trend
 Page 380

 Muhammad Ikhsan Setiawan¹, Agus Sukoco¹, Dahlan Abdullah², Cut Ita Erliana², Paisal Halim³, Syamsiah Badruddin³, Hery Budiyanto⁴