

ISBN :



CONFERENCE PROGRAMS AND ABSTRACT

**ADVANCING SUSTAINABLE SCIENCE AND TECHNOLOGY
THROUGH EFFECTIVE COLLABORATION**

OCTOBER 20-21, 2021

**Palembang, Province of South Sumatera
Indonesia**

Organized By :



FOREWORD FROM GENERAL CHAIR 5th FIRST 2021 INTERNATIONAL CONFERENCE



Assalamu'alaikum wr wb,

Alhamdulillahirrobbil 'alamin, Thank to the God, almighty, due to His bless and love, we are granted good health and opportunity so that we can meet here in the event of the 5th FIRST and the 3rd SNAPTEKMAS 2021.

The honorable keynote speakers of the 5th FIRST and the 3rd SNAPTEKMAS 2021

Dra. Nana Yuliana, MA., Ph.D., as The Indonesian LBBP Ambassador for the Republic of Cuba, concurrently with the Commonwealth of the Bahamas, Jamaica, the Dominican Republic and Haiti

Prof. Ramaraj Boopathy. from U Alcee Fortier Distinguished Service Professor of Biological Sciences At the Nicholls State University, USA

Dr. Ing. Ahmad Taqwa, the Director of State Polytechnic of Sriwijaya.

The honourable keynote speakers, distinguished guests, all participants, ladies and gentlemen,

For the beginning of my speech, let me welcome all of you with my great warm hug. It is a great honor for me that you choose the 5th FIRST and the 3rd SNAPTEKMAS 2021 as your conference. I am so proud that the authors still become enthusiastic to develop the knowledge although in this pandemic situation. Let us still work hard to support the development of the world through the research, science, and technology in many parts of the knowledge, as what has been purposed by the FIRST conference itself.

In this occasion, I would like proudly to inform you that the 5th FIRST and the 3rd SNAPTEKMAS 2021 as the forum to share knowledge, to search, to find, and to enlarge the link with other industries and universities has attracted so many authors from abroad, such as from: Politeknik Tun Syed Nasir Syed Ismail; MARA University; Politeknik Mukah Sarawak; University Sultan Zainal Abidin, Terengganu, Malaysia; Politeknik Melaka (PMK) Malaysia; Iloilo Science and Technology University (ISAT-U) Philipina; Politeknik Kota Kinabalu; Universiti Teknologi Malaysia; The National University of Malaysia; National Chin-Yi University of Technology (NCUT); Accounting Research Institute UiTM-Malaysia; Management and Science University Malaysia; AlBaha University, KSA, Saudi Arabia; Politeknik Melaka (PMK), Malaysia; Kuantan Community College, Pahang, Malaysia; Universiti Brunei Darussalam; and Ferdowsi University of Mashhad, Iran.

Welcome to all of the researchers that become the collaborators in our research and community service. It is our great honour to have you as our collaborators and participants in the 5th FIRST and the 3rd SNAPTEKMAS 2021.

The honourable keynote speakers, distinguished guests, all participants, ladies and gentlemen,

In this chance, I would like to say thank you very much to the Director of State Polytechnic of Sriwijaya for his full support in the development of the Research and Service Community programs. Due to his hard work and his belief to all of the committee so that this event can be held.

In this occasion, I also would like to convey my big thank to all of the keynote speakers, invited guests, all the participants, all reviewers, and all committee of the 5th FIRST and the 3rd SNAPTEKMAS 2021. Without you all, this event will be nothing. May Allah SWT gives His reward for your sincerity. As the time goes by, it is hoped that our cooperation and coordination in the FIRST and SNAPTEKMAS can be maintained and improved. I hope that you can enjoy this conference and can get a big benefit from this event. I also wish that we can meet again in the forthcoming FISRT ad SNAPTEKMAS

Wassalamu'alaikumwaraahmatullahi wabarakatuh

FOREWORD FROM DIRECTOR OF STATE POLYTECHNIC OF SRIWIJAYA



The honorable, FIRST 2021 and SNAPTEKMAS 2021 keynote speakers,

Dra. Nana Yuliana, MA., Ph.D., as The Indonesian LBBP Ambassador for the Republic of Cuba, accredited to the Bahamas, Republic of Dominican, Republic of Haiti and Jamaica

Prof. Ramaraj Boopathy., from U Alcee Fortier Distinguished Service Professor of biological sciences at the Nicholls State University, USA

Dr. Ing. Ahmad Taqwa, MT., as Director of Politeknik Negeri Sriwijaya

Assalamualaikum wr wb,

Let us extend our gratitude to Allah SWT, the most gracious, the most merciful. Due to His bless, we can gather here, at the Opening Ceremony of the FIRST 2021 and SNAPTEKMAS 2021

First of all, Please let me deliver my warm welcome to all keynote speakers and all participant of FIRST 2021 and SNAPTEKMAS 2021. It is my great pleasure to meet and see you in this event.

Although, there are so many obstacles that should be faced in the pandemic situation, however, as young generation, we should be optimistic, stay strong and be active in searching and finding the solution. The FIRST 2021 and SNAPTEKMAS 2021 as the DIES of State Polytechnic of Sriwijaya annual event will become one of the media to support those activities. The researchers could share knowledge, find partners, and enlarge the collaboration through this event.

Based on the change in the model of the teaching learning activity that focuses on the MERDEKA BELAJAR, State Polytechnic of Sriwijaya has a big desire in getting acceleration in the internationalization of the institution. One of them by improving the overseas and industrial collaboration, especially in joint research and joint publication. In the beginning of 2021, the research and community service unit in Politeknik Negeri Sriwijaya has launched new schemes of research and community service, namely the Overseas Collaboration Research and Overseas Collaboration Community Service. Thanks to God, those schemes have attracted researchers not only from Asia but also several other countries outside Asia, such as: research and community service collaboration with Al Baha University from Saudi Arabia, with Ferdowsi University of Mashhad from Iran, and with Princess Sumaya University of Technology from Jordan, as well as several other foreign universities.

In this occasion, I also would like to welcome all the researchers that become the collaborators in our new scheme of research and community service. It is our great honour to have you as our collaborators.

The honourable participants,

At this time, State Polytechnic of Sriwijaya has held 5 times of FIRST. FIRST publications from previous conferences have been successfully indexed not only in SCOPUS, but also in WOS. This 5th FIRST seminar will be conjugated with the 3rd National Seminar on Community Service SNAPTEKMAS. (National seminar of applied technology for public). All of these are the efforts to improve the quality of Polsri lecturers which significantly have a positive effect on the learning process of Polsri students.

Before ending my speech, I would like to congratulate the participants of The FIRST 2021 and SNAPTEKMAS 2021. May the noble efforts, support, and cooperation of researchers in this conference will continue. Special thanks to the organizer and co-organizer committee of The FIRST 2021 and SNAPTEKMAS 2021 for the hard work and the commitment in realizing this conference. Do maintain the spirit of working in a team and continue to unite in order to display a culture of excellence in the eyes of the country and the world.

With Bismillahirrahmanirrahim, I officiate The FIRST 2021 and SNAPTEKMAS 2021.
Wassalamu'alaikum warrahmatullahi Wabarakatu

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KEYNOTE SPEAKER



Dra. Nana Yuliana, MA., Ph.D.

The Indonesian LBBP Ambassador for the Republic of Cuba, concurrently with the Commonwealth of the Bahamas, Jamaica, the Dominican Republic and Haiti

Her Excellency Ambassador Nana Yuliana, Ph.D arrived in Havana, Cuba on December, 23rd, 2020 to serve her duties as the Ambassador Extraordinary and Plenipotentiary of the Republic of Indonesia to Republic of Cuba, Commonwealth of Bahamas, Dominican Republic, Republic of Haiti and Jamaica. She was appointed by the President of the Republic of Indonesia on October 19th, 2020. Prior to her position as Ambassador Extraordinary and Plenipotentiary, she was Consul General of the Republic of Indonesia in Houston, Texas, United States of America from 2017 –2020, after she was the Director of Mid-Career Diplomatic School at the Ministry of Foreign Affairs of Indonesia from 2014 – 2017. Her first diplomatic assignment was as First Secretary of Political Affairs at the Embassy of Indonesia in Manila from 2001-2005. From 2008 to 2012, she was the Counsellor of Economic Affairs of the Embassy of Indonesia in Bangkok and Permanent Representative of Indonesia to the United Nations Economic and Social Commission for Asia and Pacific (UNESCAP). She attended several meetings related to Millennium Development Goals (MDGs) or Sustainable Development Goals (SDGs) issues. Her bachelor's degree was English Education from Institute of Teacher's Training in Jakarta, then she pursued her Master Degree in Applied Linguistics for Macquarie University in Sydney, Australia and also International Relations from University of Indonesia in Jakarta, Indonesia. She completed her Doctoral Degree in Development Studies from the University of Santo Tomas, Manila, Philippines in 2006. While serving as a diplomat since 1995, her passion in teaching and learning encourages her as well to share her knowledge and teaches at the University in Jakarta, Indonesia. During her tenure as Consul General, she was very active in promoting Trade, Tourism, Inbound and Outbound Investments and very keen to engage with Universities for cooperation in human capital development.

KEYNOTE SPEAKER



Prof. Ramaraj Boopathy

Alcee Fortier Distinguished Service Professor of biological sciences
at the Nicholls State University, USA

Fulbright Scholar Fulbright Senior Specialist World Class Professor-Government of Indonesia. Honorary Visiting Professor, ITB, Indonesia Alcee Fortier Distinguished Service Professor John Brady Endowed Professor in Biological Sciences Nicholls State University Business Address: Alcee Fortier Distinguished Service Professor John Brady Endowed Professor in Biological Sciences Department of Biological Sciences Nicholls State University Thibodaux **EDUCATION:** B.Sc. Zoology, University of Madras, India; 1979 M.Sc. Environmental Biology, Tamil Nadu Agricultural University, India; 1981 Ph.D. Environmental Biology, University of Madras, India; 1986 **UNIVERSITY RESPONSIBILITIES:** Responsibilities include Teaching Environmental Biotechnology, a Senior and Graduate level course, Marine and Environmental Biology (Graduate Course), Microbiology and Environmental Biology courses. Research interests include Bioremediation of Hazardous Chemicals and Anaerobic Microbiology. Service includes advising students, participate in Departmental and University committees and serving the local and regional communities. Advisor to Masters Program in Marine and Environmental Biology. **PROFESSIONAL EXPERIENCE:** January 2013 – Present: John Brady Endowed Professor in Biological Sciences, Department of Biological Sciences, Nicholls State University, Thibodaux. Teaching, Research, and Service to the University and Community. August 2012 – Present: Alcee Fortier Distinguished Service Professor, Department of Biological Sciences, Nicholls State University, Thibodaux. Teaching, Research, and Service to the University and Community. August 2004 – Present: Distinguished Service Professor, Department of Biological Sciences, Nicholls State University, Thibodaux. Teaching, Research, and Service to the University and Community. **MAJOR AREAS OF RESEARCH INTERESTS:** Anaerobic digestion, Composting, Biodegradation of hazardous chemicals. Antibiotic resistant bacteria and Antibiotic resistance genes in the aquatic ecosystem. Isolation and identification of novel bacteria. Anaerobic degradation of explosive chemicals with particular reference to sulfate reducing bacteria. Design and development of biological reactor systems. Microbial immobilization of

heavy metals and radionuclides. Alcohol production from agricultural residues. Water quality in the wetlands. Alternative to sugarcane burning, Biological control of termites. Organic ways to control land loss and coastal restoration.

KEYNOTE SPEAKER



Dr. Ing. Ahmad Taqwa, MT.

Director of Politeknik Negeri Sriwijaya Indonesia

Director of State Polytechnic of Sriwijaya, other than that, he is still active at Head of The Research and Publication Commission Forum Director of State Polytechnical In Indonesia, Founder of The Online Journalist Board (IWO) Sumsel, Chairman of The Advisory Board of UKM Nusantara Palembang and Assessor of Higher Accreditation Board. **EDUCATION:** Diplom Ingenieur Electrical Engineering HTL, Ingenieurschule Beider Basel, Switzerland; 1994, Magister (2005) and Doctoral (2010) at Electrical Engineering, Bandung Institute of Technology, Indonesia. **RESEARCH:** Head of Research Assignment “Mini PLTS Periodic Cooling System to Overcome Overheating in Palembang City” (2019), Member of The Research Assignment “Effects of Sea Salt Dust Collection on Output Loss and Solar Panel Output Efficiency” (2020), and Head of Research Assignment “Design and Build of Wireless Sensor Network Prototype Detection Of Landslides Based on IOT and LORA” (2020). **DEDICATION:** “The Design and Evaluation of Virus Scan in The E-Mail System in SMA N 5 Palembang” (2018), Assignment Service “Utilization of WSN Technology in Parking Air Monitoring Foundation SMP Harapan Mulia Palembang” (2019), Development of Teaching Materials with Interactive Multimedia with Education Game for Harapan Mulia Junior High School Students” (2020). **AWARD:** Certificate In Participating In The 200 Hour Advanced Technical Teacher Training awarded by FONTYS and PEDC (1998), Satyalancana Karya Satya X Year 2011 And Satyalancana Karya Satya XX Year 2017 by The President of The Republic of Indonesia. **WORKSHOP:** Seminar and Focus Group Discussion Forum The Rector of Indonesia “Economic Stability In The Vuca Area”, Ujung Pandang (2020), Workshop on Using Integrated Resources Information System Applications For Lecturers of State Polytechnical Polytechnic, Palembang (2019) And Workshop of Learning Methodology of Polsri Lecturers and Outside Education Domicile (PDD) as a Source Person, Palembang (2019).

RUNDOWN
The 5th FIRST 2021 INTERNATIONAL CONFERENCE
(FORUM IN RESEARCH SCIENCE AND TECHNOLOGY)
SNAPTEKMAS (Seminar Nasional Aplikasi Teknologi pada Masyarakat) 2021
Palembang, South Sumatera, Indonesia
Thursday, October 21, 20201

		Thursday, October 21, 20201			
No.	Session	Person in Charge	Time Allotment (WIB)	Liaison Officer	
1.	Registration	Event Section Committee	07.00 – 08.00	Doeslohal Djumrianti, S.E.MIS., Ph.D	
2.	The Opening Ceremony				
3.	Do'a				
4.	Indonesian National Anthem				
5.	Chair Report Speech	Event Section Committee	08.00 – 09.00		
6.	Speech and Opening Remarks by Director of State Polytechnic of Srijijaya				
7.	Souvenirs Gift, Group Photos				
PLENARY SESSION					
No.	Keynote Speaker	Affiliation	Time Allotment (WIB)	Moderator	Liaison Officer
1.	Dra. Nana Yuliana, MA., Ph.D.	The Indonesian LBBP Ambassador for the Republic of Cuba, concurrently with the Commonwealth of the Bahamas, Jamaica, the Dominican Republic and Haiti	09.00 – 10.00	Tiur Simanjuntak M.Pd.	Doeslohal Djumrianti, S.E.MIS., Ph.D
2.	Prof. Ramaraj Boopathy	Alcee Fortier Distinguished Service Professor of biological sciences at the Nicholls State University, USA	10.00 – 11.00	Prof. Hasan Basri	Dr. Nyayu Latifah Husni, M.T.
3..	Dr. Ing. Ahmad Taqwa, MT.	Director of Politeknik Negeri Srijijaya, Indonesia	11.00 – 12.00	Jaksen M. Amin, M.Si.	Dr. Martha Aznury, S.Pd., M.Si.

PARALLEL SESSION

No.	Theme	Room	Time	Moderator	Articles
1.	TRACK 1 (Engineering and Science)	1	13.00 – 16.00	Dr. Eng Tresna Dewi, M.Eng./ Ika Sulianti, ST, MT	15
2.	TRACK 1 (Engineering and Science)	2	13.00 – 16.00	Dr. Martha Aznury, M.Si./ Indah Purnamasari, M.Eng.	14
3.	TRACK 1 (Engineering and Science)	3	13.00 – 16.00	Fatahul Arifin, M.Eng, Ph.d./ Dr. Indrayani, S.T., M.T.	13
4.	TRACK 2 (Computer Science, Computer Engineering, Information System, Informatics Management)	4	13.00 – 16.00	Rika Sadariawati, M.Si./ M.Miftakul Amin, S.Kom., M.Eng	13
5.	TRACK 2 (Computer Science, Computer Engineering, Information System, Informatics Management)	5	13.00 – 16.00	Dr. Nyayu Latifah H, MT./ Lindawati, S.T., M.TI	12
6.	TRACK 3 (Social Science)	6	13.00 – 16.00	Doeslohah Djumrianti, S.E.MIS., Ph.D/ Dr. Marieska Lupikawati	13
7.	TRACK 3 (Social Science)	7	13.00 – 16.00	Dr. Sari Lestari ZR/ Dr. Rita Martini	14
8.	SNAPTEKMAS 1	8	13.00 – 16.00	Yumi Oklarina, ST, MT/ Mouland Irwadi, SE. M.Si.	15
9.	SNAPTEKMAS 2	9	13.00 – 16.00	Leni Novianti, M.Kom./ Maivi Kusnandar, M.Kom	15
10	SNAPTEKMAS 3	10	13.00 – 16.00	M Husni Mubarak, M.Si./ Martinus Mujur, ST, MT	15
11	SNAPTEKMAS 4	10	13.00 – 16.00	Dr. Ade Silvia H, MT./ M. Sopian Soim, ST, MT	13

CLOSING SESSION

Event	Time	Room
<ul style="list-style-type: none">- Closing Ceremony- Announcement of:<ol style="list-style-type: none">1. Best Paper FIRST IC 20212. Best Paper SNAPTEKMAS 20213. Best Presenter FIRST IC 20214. Best Presenter SNAPTEKMAS 2021- Quiz Online	16.00– 17.00	Main Room

TRACK 3 (Social Science)

ROOM : 6
 TIME : Thursday, 21 October, 2021/ 13.00 - 16.30
 ARTICLES : 13
 MODERATOR : Doeslohal Djumrianti, S.E.MIS., Ph.D/ Dr. Marieska
 Lupikawati

NO	Time	ID	AUTHORS	TITLE	AFFILIATION
1	13.00-13.10	3847	Ayu Chotibah, Bainil Yulina, Desi Apriyanty, Evada Dewata, Pridson Mandiangan	THE INNOVATION OF SOUTH SUMATERA TRADITIONAL BATIK E-COMMERCE APPLICATIONS	State Polytechnic of Sriwijaya
2	13.10-13.20	3683	M. Thoyib, Riza Wahyudi, Firmansyah, Darul Amri	THE ANALYSIS OF COST QUALITY ON PRODUCTIVITY OF IRON RAILING PRODUCTS IN SMALL AND MEDIUM BUSINESS IN PALEMBANG	State Polytechnic of Sriwijaya
3	13.20-13.30	3757/3756	Nelly Masnila, Firmansyah, Jovan Febriantoko, Riana Mayasari, Jamaliah Said	Quality of Financial Reporting and Impact of GGG Implementation: Study on Local Government in Indonesia	State Polytechnic of Sriwijaya
4	13.30-13.40	3796	Evi Agustina Sari, Sri Gustiani, Yusri, Tiur Simanjuntak	An Error Analysis of English Sentence Construction in Writing Subject Made by the Students of the English Department at Sriwijaya State Polytechnics	State Polytechnic of Sriwijaya
5	13.40-13.50	3827	Edwin Frymaruwah, Farah Aida Ahmad Nadzri, Periansya, Evada Dewata	DISCLOSURE OF SUSTAINABLE PERFORMANCE IN HIGHER EDUCATION IN INDONESIA	State Polytechnic of Sriwijaya, UiTM
6	13.50-14.00	3976	Hendra Hadiwijaya Febrianty Rezania Agramanisti Azdy	Improvement of LPKA Class 1 Palembang Electronic Dashboard with Field Performance Monitoring	Palcomtech Polytechnic, STMIK PalComTech
7	14.00-14.10	3853/4034	Neneng Miskiyah, Purwati, Yulia Pebrianti, Keti Purnamasari, Nyimas Miftahul Jannah,	OPTIMIZATION OF INCOME PARAMETERS OF SONGKET CRAFTSMEN ON KOPERASI SONGKET PALEMBANG	State Polytechnic of Sriwijaya

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Disclosure of Sustainable Performance in Higher Education in Indonesia

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ABSTRACT

This aim of this study is to examine the level of disclosure of the implementation of Sustainability Performance, especially for state higher education in Indonesia (profile, economic, environmental, social, educational). State universities with PTNBH status were the population, and 9 universities were the research samples for the period of 2017-2019. Data were collected using the Campus Sustainability Instrument or Graphical Assessment of Sustainability in Universities (GASU) and content analysis as an analytical technique covering the stages of decontextualization, recontextualization, categorization and compilation. The findings of this study show that the average level of disclosure on the Sustainability Performance of Indonesian universities is still low (42% of all dimensions and indicators) with the highest level of disclosure on the educational dimension, followed by economic, profile, social and environmental dimensions, respectively. This research has practical implications for higher education management to strengthen disclosure as a form of commitment, transparency and credibility to stakeholders and to support the government for sustainable environmental development.

Keywords: *Disclosure, Sustainability Performance, Higher Education, Universities, Stakeholder.*

1. INTRODUCTION

University management, has a very important role in the application of environmental principles in higher education [2], because it can provide benefits to stakeholders and the larger social community [2] [6], is a "value builder of society" and "organizational organization". which have the effect of sustainable development" [7] and improve the internal quality of business processes within the organization [8].

The New Managerialism Philosophies (NMP) in education has increased the focus of state universities on financial, performance and business-oriented action targets [1]. The issue of sustainability performance in higher education is still showing an early diffusion stage in various regions around the world [2][3][4]. University management has a very important role in the application of environmental principles in higher education [2] because it can provide benefits to stakeholders and the larger social community [2] [6]. It is also a "value builder of society" and "organization which has the effect of sustainable development" [7]. In addition it improves the quality of internal business processes within the organization [8].

In Indonesia, the implementation of the concept of Sustainable Development Goals (SDGs) in higher

education is starting to increase indicated by the implementation of sustainability reports in organizational reports similar to the mandate of Law Number 12 of 2012 that Legal Entity Higher Education Institution (PTNBH) as a university can be independent institution financially and can implement its research results to be used in the community. Legal Entity Higher Education Institutions (PTN-BH) have the highest possible autonomy in providing education. Regular publication is a form of transparency towards the environment and universities. However, the high management has not fully understood that sustainable reporting supports universities to be transparent regarding accountability and service obligations [9].

Thus, as an effort to improve the competitiveness of higher education institutions through increasing transparency and accountability and considering the role of universities in sustainable development such as environmentally friendly campus operations and social initiatives to improve the lives of communities around universities, this research aims to describe and examine the disclosure of the implementation of Sustainability Performance, especially for public higher education in Indonesia using the Graphical Assessment of Sustainability in Universities (GASU) method.

This research is expected to contribute to higher education management in identifying the ability of universities to implement organizational sustainability performance, and for the Government, as information in collaborating with universities in the field of research and sustainable environmental development. This research is expected to contribute to higher education management in identifying the ability of universities to implement organizational sustainability performance. Besides, for the Government, it can be used as information in collaborating with universities in the field of research and sustainable environmental development.

2. LITERATURE REVIEW

Based on Stakeholder Theory, stakeholders have the right to obtain information about organizational activities that can influence their decision making. Higher Education Managers manage and control higher education not only based on economic motives, but also social motives. Higher education leaders must act as agents of all stakeholders and should communicate Sustainability Performance with all stakeholders through Sustainability Reporting [10]. All information on higher education in sustainable development must be accessible to all stakeholders; this can be realized through the disclosure of sustainability reports. In the context of sustainable reporting, universities can carry out Sustainability Reporting to meet information needs and convince stakeholders that universities have carried out operational activities that are in line with stakeholder interests.

Based on Legitimacy Theory, as a basis for reviewing the practice of sustainability reporting [11], organizations practice sustainability for not only social and environmental interests, but also a process of legitimizing (justifying) all activities carried out by the company. Sustainability Performance can be used by universities to build credibility and image of organizations, the community and the government can also assess the suitability of higher education operations with norms and values prevailing in society through sustainability reports. Legitimacy theory emphasizes that for organizations to gain stakeholder legitimacy, need to maintain congruence between stakeholder expectations and organizational goals.

3. RESEARCH METHOD

This is a qualitative research using a case study research design at state universities in Indonesia. The research population was 12 state universities with the status of Legal Entity State Universities (PTNBH) in Indonesia, and the research sample was 9 PTNBH, namely the Institut Teknologi Bandung (ITB), Institut Teknologi Sepuluh Nopember (ITS), Institut Pertanian Bogor (IPB), Universitas Indonesia (UI), Universitas Gadjah Mada (UGM), Universitas Padjajaran (Unpad), Universitas Airlangga (Unair), Universitas Sumatera Utara (USU), Universitas Pendidikan Indonesia (UPI). Graphical Assessment of Sustainability in Universities (GASU) was used as the research instrument [2] because it has become the main guideline for assessing the sustainability performance of a university [8]. A Likert scale is used to provide an assessment score for instrument disclosure. If information related to indicators does not exist or is not found in the PT report, the score is 0, and if information is available for one indicator, the score is 1. Secondary data for the period 2017-2019 were used with the assumption that if in 1 year, there is information about indicators; it is considered the same for all sample years. Secondary data sources were obtained from Financial Reports, University Annual Reports, Rector's Reports, Guidelines and Regulations related to financial management, university policies in the social and environmental fields and websites. The data were analyzed using content analysis which includes the stages of decontextualization, recontextualization, categorization and compilation.

4. RESULTS AND DISCUSSIONS

The Graphical Assessment of Sustainability in Universities (GASU) [2] provides an assessment of sustainability performance practices consisting of 5 dimensions, namely the profile, economic, environmental dimension, social dimension, and the education dimension. Table 1 provides information on the level of disclosure of each sustainability performance indicator.

Table 1. Disclosure of All Indicators in the Graphical Assessment of Sustainability in Universities (GASU)

Dimensions and Indicators	ITB	ITS	IPB	UI	UGM	UNPAI	UNAIR	USU	UPI	Total (Average)
PROFILE										
Strategy and Analysis Organisational	√	√	√	√	√	√	√	√	√	9
Profile Governance										0
Governance Commitments										0
Engagement Management Approach and Performance	√	√	√	√	√	√	√	√	√	9
Percentage of conformity	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%

Dimensions and Indicators	ITB	ITS	IPB	UI	UGM	UNPAI	UNAIR	USU	UPI	Total (Average)
ECONOMIC										
Economic performance			√	√	√		√	√	√	6
Market presence			√	√	√		√	√	√	6
Indirect economic impact		√	√	√	√	√	√	√	√	8
Percentage of conformity	0%	33%	100%	100%	100%	33%	100%	100%	100%	74%
ENVIRONMENTAL										
Materials										0
Energy										0
Water										0
Biodiversity										0
Emissions, effluents and waste										0
Products and Service		√	√	√	√				√	5
Compliance			√	√	√	√		√	√	6
Transport			√	√	√	√		√	√	6
Overall	√		√	√	√					4
Percentage of conformity	11%	11%	44%	44%	44%	33%	0%	22%	33%	27%
SOCIAL										
Labour Practices and Decent Work			√	√	√		√	√		5
Human rights			√		√					2
Society			√	√	√					3
Product responsibility			√	√	√				√	4
Percentage of conformity	0%	0%	100%	75%	100%	0%	25%	25%	25%	39%
EDUCATIONAL										
Curriculum			√	√	√		√		√	5
Research	√		√	√	√			√		5
Percentage of conformity	50%	0%	100%	100%	100%	100%	100%	100%	100%	100%
Total Indicators	22	22	22	22	22	22	22	22	22	
Total Indicators Reported	4	4	15	14	15	5	7	9	10	9.22
Percentage of conformity	18%	18%	68%	64%	68%	23%	32%	41%	45%	42%

Source: Data Processing, 2021

As shown in Table 1, the results of content analysis indicate that the dimension that has the highest level of disclosure is the educational dimension (100%). This is because the curriculum and research indicators are information that is commonly disclosed by universities. These findings indicate that state universities with PTNBH status already have good sustainability performance in the field of education. Curriculum indicators state that universities already have a curriculum that includes sustainability topics such as social and environmental accounting topics, and this curriculum is a routine activity of universities as education providers in maintaining the quality of education, as supported [4] and [12]. In addition, research indicator is one of the main activities of universities, and research topics or publications have led to the topic of sustainability.

Disclosure of the Economic dimension (74%) is quite high. The results of this study support [8], and prove that most universities have realized the importance of maintaining campus sustainability in order to improve the internal quality of business processes within the organization.

The Profile dimension shows that the level of disclosure is not good enough (50%). This is because most universities do not have documents that contain statements of sustainability policies such as social,

environmental and economic. As stated [14], the greater the number of sustainability-specific terms used in a university's mission statement, the higher the statistical probability that the university has a sustainability disclosure rating. This finding does not confirm [13] that it is important for universities to build institutional profile information and there is a need for a committee responsible for reporting and sustainability issues.

The Social dimension (39%) indicates that universities still have not reported information related to Labor Practices and Decent Work, Human rights, Society and Product responsibility. The results of this study reveal that universities do not focus on social information and university management has not implemented sustainability programs as part of the university's long-term plan. The results of this study support the findings [4] that the low disclosure in universities is because universities do not carry out practices related to information in indicators, and documentation factors are less integrated.

The disclosure of Environmental dimensions (27%) is at the lowest level. Several indicators such as materials, energy, water, biodiversity, and emissions, effluents and waste and other types of environmental costs are relatively rare in educational sector organizations because the core business of universities does not produce products and hazardous waste to the

surrounding environment. The results of the research have not been coherent as proposed by [13]. In addition, there is a tendency for the process of documenting environmental dimension indicators to be continuously carried out and disclosed by universities [2]. The low disclosure of the environmental dimension also happens because the disclosure of information at universities in Indonesia is still in a limited scope, and information can only be accessed by certain parties within the scope.

Table 1 also shows that generally Indonesian universities have disclosed 42% of all dimensions and indicators. This means that the current level of disclosure of Sustainability Performance is not sufficiently broad in scope and information although the results of this study are quite large compared to the findings [12] as 37%.

The universities with the most comprehensive disclosures are Universitas Gadjah Mada (UGM) (68% conforming the indicator), and Institut Pertanian Bogor (IPB) (68% conforming the indicator), and only 33% (3) universities have the percentage of conformity above 50%. It can be concluded that the disclosure of sustainability information by state universities with PTNBH status in Indonesia is still relatively low. This finding indicates that state universities in Indonesia have not fully understood the importance of sustainability in implementing more environmentally friendly policies, as revealed [15] that university management must understand that the concept of sustainability is part of the university's long-term strategic plan.

The results of this study do not support the legitimacy theory that the legitimacy process of all activities carried out by universities practicing sustainability must take sides with social and environmental interests. The results of this study have implications for higher education management to be committed to building the credibility and image of universities by developing education that cares about the environment in accordance with applicable norms and values.

The results of this study also do not support the Stakeholder Theory as of the 9 research samples only a few universities have disclosed sustainability information in one report, because there is no need/obligation for universities to issue an integrated sustainability report. Meanwhile, according to Stakeholder Theory, stakeholders have the right to obtain information about the university's long-term plans and policies. Higher education leaders should communicate Sustainability Performance with stakeholders in a Sustainability Reporting. The findings in the field also show some difficulties related to sustainable development information that is not yet widely accessible. Furthermore, most universities have carried out sustainability, but they rarely report it for the

needs of stakeholders, while universities are obliged to educate the public about the impact of their operations on the environment.

5. CONCLUSION

The results showed that the level of disclosure of Sustainability Performance conducted by state universities with PTNBH status in Indonesia was still low at an average of 47%. State universities in Indonesia do not fully understand the importance of implementing more environmentally friendly policies as part of the university's long-term strategic plan. One of the obstacles in the process of implementing the concept of sustainability in universities is the absence of standards or guidelines for implementing the concept of sustainability in universities. The implication of this research is for university management to continue to be committed to encouraging sustainability accounting practices and disclosures in universities. The limitations of this study are (1) the difficulty of obtaining published data such as universities' annual reports and the rectors' reports, and (2) the needs for adjustment of the GASU instrument to assess the sustainability of higher education institutions because there are several indicators in GASU that are not implemented by universities especially in Indonesia which can be a topic for further research.

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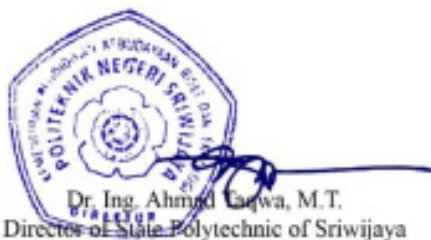
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