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**MASUDEM**

MASTER STUDIES IN SUSTAINABLE DEVELOPMENT AND MANAGEMENT

## MAPPING STUDY REPORT

### Prepared by

Master of Business Administration,  
Faculty of Economics and Business,  
Universitas Gadjah Mada  
(MBA FEB UGM)

### Participating Partner Institutions:

Master of Business Administration, Faculty of Economics and Business, Universitas Gadjah Mada (MBA FEB UGM)	International College of National Institute of Development Administration (ICO NIDA)
Master of Management, Faculty of Economics and Business, Universitas Trisakti (MM USAKTI)	Master of Economics, Faculty of Economics Srinakharinwirot University (SWU)
Master of Management Faculty of Business and Economics Universitas Islam Indonesia (MM UII)	Faculty of Logistics and Digital Supply Chain, Naresuan University (NU)

### Authors:

Prof. Nurul Indarti, Ph.D.  
Sari Sitalaksmi, Ph.D.  
Boyke Rudy Purnomo, Ph.D.  
Rocky Adiguna, Ph.D.

### Contributors:

Prof. Dr. Asep Hermawan, Dr. Leila Husna Yuran, Prof. Farah Margaretha,  
Dr. Maria Utha, Dr. Reny Rizkiani, Dr. Yosephine  
Wiryo Rahardjo, Ph.D, Abdul Moin, Ph.D, Anjar Priyono, Ph.D  
Aweewan Panyagometh  
Kullapa Soratana, Ph.D  
Suppanunta Romprasert, Ph.D

### Reviewers:

Prof. Eng. Sebastian Kot, Ph.D  
The Faculty of Management  
Czestochowa University of  
Technology  
Poland

Durgesh Tripathi, PhD  
University School of Mass Communication  
Incharge-School of Film Making  
Guru Gobind Singh  
Indraprastha University (GGSIPU)  
India

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## Executive Summary

This mapping study is the initial stage of the Master of Sustainability and Development Management (MASUDEM) project and was conducted by three universities in Indonesia (UGM, UII and USAKTI) and three universities in Thailand (ICO NIDA, SWU, and NU). This report is expected to provide common understanding on the existing situation of sustainability-based higher education practices among universities in Indonesia and Thailand.

In the Indonesian context, government initiatives to promote sustainability are also responded to by some universities. The Master's programs in Indonesia typically face common issues, namely poor integration of sustainable development into existing curricula, lack of interdisciplinary approaches, lack of practical application, and limited global perspectives. In UGM, the sustainability education has been conducted by the Master of Business Administration in the Faculty of Economics and Business which started in 2021 by a tripartite global collaboration among UGM, the Norwegian government and the ASEAN University Network for Business and Economics (AUN-BE). In UII, there is currently no specific program for teaching sustainability management but there is a plan to develop a new concentration in sustainability management at the Master of Management program Faculty of Business and Economics in collaboration with the Faculty of Environmental Engineering. In USAKTI, there was a sustainability concentration on their Master of Management program. However, they perceived the need to improve the existing curriculum to address current societal and environmental challenges, and also the changing job market.

In the Thailand context, the adoption of sustainability into education was reflected by the Sufficiency Economy Philosophy which was initiated by the Late King Bhumibol Adulyadej, and which then be included into the National Economic and Social Development Plan. Thailand's leading higher educations have translated differently the initiative on sustainability. In ICO NIDA, the Master of Management program is to include Sustainable Business in the program. However, this program has not opened yet due to the limited demand from the students. In SWU, a concentration on sustainability was conducted by the Master of Economics. The main goals of this concentration are to provide students with an understanding of sustainable development and how the economic system can facilitate or impede SDGs. In NU, sustainable education was provided by the Master Program on Logistic and Supply Chain Management. NU proposed a new concentration in sustainable development and management, also made sustainability as one of the research focus.

Findings from leading universities in Indonesia and Thailand show that sustainable management education is a promising strategy in an effort to support the government and industry in dealing with a dynamic business environment on one side and achieving SDGs on the other side. However, universities face some critical issues in providing sustainability education. First, the program was seen as unappealing to many students and also more funding-reliant from other sources. Second, the curriculum of sustainability education is varied and still evolving, and more based on the availability of resources of each university. Third, the availability of teaching materials on sustainable management can be considered limited. Finally, the self-assessment to teachers and administrative staff shows that readiness to conduct education on sustainability are at a low to moderate level. Therefore, to address such challenges various types of capacity building programmes are required.

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## I. INTRODUCTION

The concern on improving the quality of people and the environment has never been as crucial as before. Although this is a never-ending issue, nevertheless it received a greater momentum since the launch of Sustainable Development Goals (SDGs) by the United Nations (UN) in 2015 (United Nations, n.d). One of the landmarks is to achieve the 2030 Agenda for Sustainable Development which captures seventeen goals. All 189 UN member states are urged to adopt the agenda in which the UN also began to develop the SDG index. This index portrays the extent to which a country adopts and achieves the goals. Using the classification of the UN, the latest 2022 index depicts that the top 25 countries are all developed European countries. Japan is a special case where it sits at rank 19. Meanwhile, within the East and South Asian region, Thailand performed the best at rank 44. Indonesia, on the other, is quite far at rank 80. This clearly shows the discrepancies within the Asian region and moreover between the developed and developing countries.

As in Europe, the importance of corporations disclosing information on sustainability matters has been acknowledged by the European Parliament, particularly in the purpose to identify the sustainability risks and opportunities. Moving toward a sustainable global economy is also determined by non-financial information provided by corporations. As such, a company's performance and its impact on society, including environmental protection, is considered essential. The EU then adopted a new Directive 2014/95/EU concerning the sustainability disclosure of large companies and groups, which amended the previously issued Directive 2013/34/EU. In 2023, the new Corporate Sustainability Reporting Directive (CSRD) will replace the Directive 2014/95/EU also called the Non-Financial Reporting Directive (NFRD). In 2021, the Commission adopted a proposal for CSRD which would amend the existing reporting requirements of the NFRD.

The massive shift toward addressing sustainable management has also attracted much attention from researchers and educators. Elkington is recognized as the guru of sustainable management and financial performance who coined the 'triple bottom line' theory in 1994 (Farooq et al., 2021). The framework captures three essential ma, namely economic, social and environment. In many cases, the economic element has become the highest priority at the expense of the other two elements. In response to this situation, businesses began to introduce more environmentally and socially responsible approaches. Nevertheless, while some research starts to recognize promising company practices where focus on both elements is crucial (e.g. Liute & De Giacomo, 2021), the priority toward the bottom of the pyramid may not automatically lead to ecologically sustainable

performance at this level (Verwaal et al., 2022). This line of argument in the area of sustainable management calls for a deeper understanding and involvement of all parties.

The focus on addressing the quality of human and environment brings sustainable management at the centre stage. With the diverse institutional situations spread across the globe, bridging the differences between developing and developed countries are considered fruitful and partnership is one of the ways in doing so. To this extent, global partnership initiative has been massively campaigned by multilateral organizations with individual countries. The Master of Sustainability and Development Management (Masudem) project focuses on curriculum development and academic and administration staff capacity building at partner universities in Indonesia and Thailand (Region 5) addressing the priority green deal and sustainable growth and jobs.

### **I.1. The Indonesian Context**

Indonesia is a large archipelago country in Southeast Asia with a population of over 270 million people in 2023, making it the world's fourth most populous country. The country has a diverse range of ecosystems, including tropical rain forests, and coral reefs. As reported by the World Bank (n.d), the country embodies 94.1 million hectares of tropical rainforest (the third largest in the world), 14.9 million hectares of tropical peatlands and mangrove forests (the largest in the world).

Despite its rich natural resource endowment, Indonesia has been facing serious challenges in environmental sustainability. The first challenge is climate change. Indonesia is vulnerable to climate change impacts, such as rising sea levels, extreme weather events, and changes in rainfall patterns. These changes potentially have significant economic, social, and environmental consequences. The World Bank (2022) predicted that it may lead to a further serious impact on water supply, health and nutrition, disaster risk and urban development. The economic and social consequences began to emerge, namely an increase of inequality and poverty in coastal zones. It is important to note that Indonesia has the largest coastline in the world with 54.72 thousand kilometres (Statista, n.d.) and yet some of the coastal areas are characterized with extreme poverty (Setkab, 2021). Second, deforestation. Indonesia has one of the world's highest rates of deforestation, which has led to substantial biodiversity loss, carbon emissions, and soil erosion (Nurbaya, 2010). Third, waste management. Indonesia produces a lot of waste, and the current waste management system is ineffective. Most of the waste ends up in landfills or is illegally dumped, polluting waterways and causing health problems. Fourth, persistent lack of law enforcement. Indonesian government agencies and civil society organizations may have limited capability to effectively address issues of sustainable

management, lack of law enforcement, and also higher prioritization of economic growth over environmental protection. This can result in insufficient policy development and implementation, inadequate law and regulation enforcement, and insufficient public awareness and engagement.

In addressing these challenges, the government actually aims at striking a balance between developmental and environmental goals. The government has primarily focused on developing the islands of Java and Sumatra. This has been largely driven by economic and demographic factors, as these islands are the most populous and economically significant in the country. In the last few years, the government has become more aware of the need for more balanced and inclusive growth across the nation. The government has started a number of programs and policies to help Kalimantan, Sulawesi, Papua, and the eastern part of Indonesia to grow their economies and become more developed. Indonesia's economy depends a lot on its natural resources, especially wood, palm oil, and minerals. Unfortunately, they also lead to deforestation, the destruction of habitats, and pollution. Meanwhile, in addition to these domestic issues, Indonesia is expected to play a role in protecting the global environment. As noted above, Indonesia is in a huge possession of natural resources which consequently store a large amount of carbon. As such, these resources can potentially mitigate the impact of climate change.

The effort to achieve SDGs, however, has been distracted by the sudden attack of Covid-19 pandemic. The immediate impacts were more tightening monetary policies in various countries, the emergence of the potential for a world debt crisis, and increasing global inflation. To recover the economy, Indonesia needs to at least return to the pre-pandemic economic growth of 5% (Coordinating Ministry of Economic Affairs, 2023). However, one of the challenges faced by Indonesia is the potential increase in current government debt which can limit the government's ability to allocate expenditures for development, especially in poverty alleviation, climate change, depletion and degradation of natural resources. The President specifically addressed this condition and gave directions through strategies: (i) fiscal, monetary and real sector synergies, (ii) maintaining people's purchasing power, (iii) increasing exports, (iv) increasing investment, and (v) expanding downstream and energy green. To support the achievement of government targets in facing global challenges, collaboration between the government, the private sector, the community, NGOs, associations and other related parties is needed.

In a more practical domain, aggressive campaigns on the other hand are quite massive and work quite well. At least three motives can be identified for this movement: (a) to respond to public needs; (b) to be globally legitimate and (c) to remain competitive. Numerous awarding initiatives are given to the best practices. To name a few are the



Indonesian Green and Sustainable Companies Award by SWA Magazine (one of the leading business magazines), Green Industry Award by the Ministry of Industry, and Green PROPER Award by the Ministry of Energy and Forestry. On the other hand, the effort toward sustainability by the government sector may be characterized by a wide range of campaigns and global collaboration. One of the big campaigns launched by the Ministry of Industry is "Indonesia to become the Green Energy of the World" in 2022. One of the global collaborations is for example between the Ministry of Energy and Mineral Resources with its foreign counterpart, namely 'Solar Energy and Green Mining'.

The pressure on companies also comes from the investors. The trend of investors paying more attention to organizations from their sustainability practices has encouraged organizations/industry to participate in sustainability practices. Consequently, businesses are expected to play a bigger role in addressing sustainability challenges. This certainly puts a greater pressure on company management to be active and able to manage funds in adapting the investment strategy to the challenges and opportunities ahead will be important for better investment performance. In addition, the increasing risk of litigation related to environmental, social and governance (ESG), which also includes disclosure of sustainability reports, is another challenge for companies and investors.

Sustainability has become an important and global commitment to ensure survival and quality of life both now and in the future. Nevertheless, the application of sustainability practices in addressing environmental, social and governance issues is still limited in a number of sectors mainly where the pressure groups are present. It can be stated that environmental sustainability has become an unresolved issue because public awareness, the state and other stakeholder participation is very limited. For sustainable management, however, there needs to be a shift toward more sustainable economic models, such as eco-tourism, renewable energy, and sustainable agriculture. Indonesia's cultural and social diversity must be taken into account for the country to be able to keep going. Overall, sustainable management in Indonesia needs a broad approach that takes into account how economic, environmental, and social factors interact with each other. It needs a long-term view and a commitment to working together, coming up with new ideas, and making improvements all the time. These strategic steps will be effective if they are supported by the involvement of all parties in protecting and maintaining the environment. In an effort to achieve the target of the Sustainable Development Goals (SDG), community participation is very crucial because planned programs will never succeed optimally.

The rather low quality of sustainable management in developing countries, including Indonesia, has called for a close involvement of the educational sector. Education has

become a form of human investment which has a long impact on the nation's prosperity (Kumalasari 2013). One particular successful global campaign in raising awareness on sustainability is the UN initiative on Higher Education Sustainability Initiative (HESI). Its specific aim is 'to provide higher education with an interface between higher education, science, and policy making by raising the profile of higher education's sector in supporting sustainable development, convening multi-stakeholder discussions and action, and sharing best practices' (HESI, nd). Clearly, to support government programs in environmental sustainability, the role of educational institutions is strategic. Education is an entry point to convey education and literacy to the public about the importance of environment and sustainability. More specifically, education at the Master's level has the potential to educate policy makers in both the government and private sectors as agents of change in the context of providing education regarding the environment and sustainability.

In the context of higher education in Indonesia, programs that specifically promote sustainability are increasingly popular. Almost all leading universities in the country have such departments, programs, or at least concentration in sustainable management. These universities have traditionally had schools in the area for decades. However, four weaknesses are identified by the current Masters' programs in addressing sustainable management.

1. *Poor integration of sustainable development into existing curricula.* While many universities and colleges have begun introducing sustainability-related courses and programs, sustainable development is still not integrated into mainstream education. Effective sustainable development integration into curricula can help students comprehend and recognize the long-term impact of sustainability where various components are involved in addressing sustainable challenges, especially mentality and cultural concerns.
2. *Lack of interdisciplinary approaches.* Sustainable development requires a multidisciplinary approach, yet most Masters' programs tend to be siloed within specific disciplines. This can lead to a fragmented understanding of the subject and limits opportunities for collaboration between disciplines.
3. *Lack of practical application.* The focus of many Masters' programs tends to be theoretical and research-oriented, with little emphasis on practical application. This can limit the ability of students to apply their knowledge in real-world settings, which is essential for addressing the challenges of sustainable development.

4. *Limited global perspectives.* Many curricula and case studies focus on Indonesia in particular, which limits students' opportunities to learn diverse perspectives and experiences around the world.

The educational sector, particularly Masters' programs, has the potential to play a critical role in driving long-term development. Here are some ways that education can become the primary driver of sustainability:

1. *Providing knowledge and skills.* Master' programs can provide students with advanced and applicable knowledge and skills they need to address sustainability issues. Sustainable development, renewable energy, social environmental policy, and green technologies are examples of such topics.
2. *Research and innovation.* Master' programs can drive research and innovation in the field of sustainable development. Students can participate in research projects that investigate new approaches to sustainability, develop new technologies, or analyse existing systems to identify areas for improvement. Case studies can also be produced which propel further learning in the program.
3. *Fostering collaboration.* Master's programs can lead to greater collaboration among many relevant stakeholders to address sustainability challenges. In specific, the educational sector can foster collaboration among academia, small medium enterprises, industry, government and the community at large.
4. *Leadership.* Master's programs can prepare students to become agents of change and leaders for sustainable development. Students and alumnus can apply their knowledge and skills to use in their organizations, communities, and governments to promote sustainability.
5. *Sustainable mindset and sustainable culture.* Master's programs can assist students in developing a sustainable mindset that leads to sustainable culture. Understanding the interconnectedness of social, economic, and environmental issues and its impact in long-term perspective are crucial, and that mindset becomes embedded in everyday decision-making.

Given the huge challenges faced by the country and the massive opportunities the educational sector, particularly Masters' program, can provide, it is crucial to improve and revitalize the existing Masters' program on sustainability in the Indonesian universities. Three Masters' programs in three leading universities in Indonesia are selected to participate in this project, namely Master of Management - Universitas Gadjah

Mada, Master of Management - Universitas Trisakti, and Master of Management - Universitas Islam Indonesia.

***1.1.1. Master of Business Administration, Faculty of Economics and Business, Universitas Gadjah Mada (MBA FEB UGM)***

Universitas Gadjah Mada is a public university which has been in the top five leading universities in Indonesia for many consecutive years. One of the progressive Faculties that is consistently engaging with the global environment is the Faculty of Economics and Business. Over the years, the Faculty has successfully developed partnerships with various stakeholders, both national and global. The partnership with various stakeholders has driven knowledge and innovation in an unprecedented manner. This has led the Faculty to earn the first global accreditation amongst all business schools in the country, namely the AACSB (Association to Advance Collegiate Schools of Business). The Master of Business Administration (MBA FEB UGM) program is one of the seven Master study programs offered by the Faculty.

The Faculty endeavours to sustainable management is realized with the development of a concentration under MBA FEB UGM. The initiative is the result of a global partnership of MBA FEB UGM, the Norwegian Ministry of Foreign Affairs, and the ASEAN University Network (AUN), entitled the ASEAN Master in Sustainability Management. The ASEAN Master in Sustainability Management is a three-year fully funded scholarship program and was launched in 2021. This project is supported by 20 faculty members and participated by 24 students annually. In the first batch, all students originated from the ASEAN countries. The diversity increases in the second batch where about 30% of the students are from outside of ASEAN countries, namely Norway, Spain and Hungary. The program is assisted by general administrative staff who also support the regular MBA classes. As a tradition at MBA FEB UGM, the lecturers originate from FEB and other faculties/universities. Detailed information about the structure of the ASEAN Master in Sustainability Management is provided in the Appendix.

The challenges in running the Master's program in sustainability are as follows. At the Faculty level, the initiatives are numerous, from capacity building, joint research to collaboration in developing a study concentration. The initiatives, however, are more fragmented and short-term orientation. It is currently dependent on the availability of sources of funding. At the faculty member level, the competencies and number of the lecturers are still limited. Many lecturers are competent, yet exposure to sustainable management may be considered insufficient. The figure, however, is much better when compared to that of the supporting staff. As a result, the advancement of the teaching materials is believed to be equally insufficient. Despite these internal deficiencies, the

demand for sustainability studies, public policies, and industry practices are in fact growing rapidly. The mapping on UGM therefore focuses on three crucial issues need to be addressed 1) ensuring the sustainability of the Masters' program in sustainability, 2) diversity of participants beyond the predominantly ASEAN countries, 3) involvement of and dissemination to wider relevant stakeholders (e.g. SMEs and industry professionals, academic professionals, students, government officials, and 4) the impact on other academic activities (e.g. research, case studies development).

### ***1.1.2. Master of Management, Universitas Trisakti (MM USAKTI)***

Universitas Trisakti is one of the leading private universities in Indonesia, located in the capital city of Indonesia (Jakarta). Its long history began in 1965 where the first President articulated the name of the university as a sovereignty in politics, independence in economy and identity in culture. Recently, the university highlights its stronger positioning by declaring it as a 'One Stop Learning in Sustainable Management'. To uphold this great tagline, the Master of Management (MM USAKTI) aims to improve its existing curriculum. The MM Sustainability FEB Usakti curriculum has 7 compulsory courses (21 credits), 1 free elective course (2 credits) and 5 concentration courses (15 credits) and 6 thesis credits. The MM study program accreditation is of excellence issued independently in the field of Economic Management and Accounting.

USAKTI Faculty of Economic and Business now holds two international certifications: the Internal Quality Assurance Certification with International Quality (ISO 9001: 2015) in 2019 and the AUN (ASEAN University Network) Quote Assurance Certification (AUN-QA) in 2021.

USAKTI Master of Management has many international collaborations and partnerships with institutions from other countries including Universiti Teknologi Mara Malaysia (UiTM) Malaysia, Universiti Malaysia Terengganu, The University of Economics in Bratislava (Slovakia), Prince of Songkla University in Phuket (Thailand), University of Social Sciences Lodz Poland, Warsaw, PTT Exploration and Production (Oil Company, Thailand), APCO Worldwide (United States), Ford Foundation (United States), and many others.

The Ford Foundation partnership supports many initiatives in the area related to sustainability, including national and international seminars and awards which are connected to sustainability practices adopted by companies.

MM USAKTI has established a Sustainable Concentration in Master Management program. Nevertheless, the Program perceives the need to be more focused in improving the existing curriculum that can effectively address societal and environmental

challenges, preparing graduates for a changing job market, meeting regulatory and stakeholder expectations and also enhancing the reputation of the program and the institution. In more particular, MM USAKTI should more focus on the practical side of things, such as sustainable project and the real case study to strengthen understanding of student on practical side of sustainability. The program is also expected to have global exposure and perspective.

### ***1.1.3. Master of Management Universitas Islam Indonesia (MM UII)***

Similar to Universitas Trisakti, Universitas Islam Indonesia is one of the leading private universities in Indonesia. Its location is in Yogyakarta, the same as UGM. The development of the Master of Management UII (henceforth MM UII) addresses two main points. First, the development direction of the Faculty of Business and Economics as outlined in the strategic plan document 2022-2026. Second, the development direction that has been arranged by the university in strengthening academic excellence and quality. As a way to build an excellent and unique program, MM UII is developed according to the curriculum based on the statement of vision and mission of MM, which refers to the statement of vision and mission and strategic direction of the Faculty and University. Currently, the Master of Management Study Program does not yet have a curriculum related to sustainability. As a business school, MM UII still teaches management courses with five (5) concentrations namely finance, marketing, human resources, strategic management and Islamic finance.

As it has been formulated, MM UII wishes to graduate students having competencies in decision-maker, leadership, innovative thinking, mastery of information technology, skills in using analytical tools, interpersonal communication skills, and Islamic personality. With this competence, the Study Program will become one of the best Master of Management study programs in Indonesia and a professional educational institution in management science that has an international reputation. Supported by adequate infrastructure, with the opportunity to develop through the Erasmus collaboration, MM UII will initiate a Master Study concentration in Sustainability to answer current and future challenges. In this plan, MM will collaborate with Environmental Engineering to initiate and develop this program.

Given the relevance to the demands of stakeholders and the rapidly changing environment, MM UII has considered introducing a curriculum of sustainability and management. This initiative is supported by the collaboration with Environmental Engineering Study Programs of the Faculty of Civil and Planning Engineering which will

later jointly design curricula and share resources. There will be a new experience to support the establishment of the education system within UII in which two study programs undertake an academic collaboration.

As MM UII has not had experience in teaching the concentration on sustainability, we are aiming to formulate and design a curriculum which refers to several leading domestic and international universities. This benchmarking effort is expected to enable the new concentration to deliver knowledge, teaching and learning content at the same quality level as the best business schools.

Based on the initial discussion, several courses in environmental engineering have intersection with sustainability courses that will be designed. Therefore, the proposed design of curriculum is unique, that is, combining the mastery of knowledge of management and the competence of knowledge in environment and sustainability issues. MM UII has a tradition of periodically inviting stakeholders consisting of graduate users, industry, alumni, practitioners, and the government to provide input on curriculum development. Thus, the curriculum initiated and designed by MMUII does not move far from the interests of the stakeholders.

## **I.2. The Thailand Context**

The 'sustainability' concept as we know it today dates back to under 30 years ago. Thailand also has embraced this path of development as it has been included in the 7th National Economic and Social Development plan (1992-1996) for the first time, aiming at sustainable agriculture. Along with SDGs, due to economic crisis in the country known as “*Tom Yum Kung*” crisis in 1997, *Sufficiency Economy Philosophy (SEP)* has initiated by His Majesty the Late King Bhumibol Adulyadej. It relies on wisdom and integrity, as well as the principles of moderation, reasonableness and prudence. The focus of the SEP is sustainability and it has been adopted as the principle of the National Economic and Social Development Plan since 2002.

At present, Thailand is walking on the path of achieving SDGs and SEP goals with the theme of ‘to leave no one behind.’ However, the country is moving at a *slow pace of implementation across all sectors*. According to the SDG Index 2021, the SDGs implementation in Thailand have passed almost three-quarters of the total path. This could reflect from this year's SDG Index score of 74.12 points out of 100. For this reason, robust education programs focusing on sustainable management and practices should be established for public and private sectors as well as the general people.

To achieve Thailand's economic development goals, it is essential for both the public and private sectors to have a comprehensive understanding of the overall economy at macro and micro levels. Thailand economic comprehension provides a vital conceptual framework for the government to implement economic and social development policies suitable for the current economic system, while also enabling the business sector to enhance their analysis and planning of business operations. It is crucial for personnel in government and business sectors to acquire foreign language skills alongside economic understanding, strengthening and developing our workforce capabilities and increasing our ability to compete with foreign countries. Creating opportunities and providing access to benefits stimulate enterprise power, which in turn drives economic growth. However, undesirable consequences such as inflation, unemployment, and poverty must be avoided to ensure social peace and safeguard individual liberties under the law for the achievement of international excellence.

Like the Indonesia's higher education context, Thailand is facing several challenges in addressing sustainable development and management within its higher education system. Some of the key challenges include:

1. *Limited awareness and integration*: There are a need to incorporate sustainability-related concepts and practices into curriculum and research activities across various disciplines within higher education institutions.
2. *Insufficient faculty capacity*: There is a need to enhance faculty members' capacity in sustainable development and related fields through training and professional development programs to ensure that they have the necessary knowledge and skills to teach and conduct research on sustainable development and management.
3. *Inadequate infrastructure and resources*: Infrastructure and resources required to incorporate sustainability pedagogy into their curriculum can be cost-intensive. The availability of funding for sustainability-related laboratories and research facilities must be in place.
4. *Collaboration with external stakeholders*: Due to differences in priorities and interests, collaborations with external stakeholders can be challenges. However, it is essential to build partnerships and collaborations with other higher education institutions, government agencies, businesses and other related organization to expand opportunities in both education and research.

To overcome these challenges, Thailand's higher education system needs to prioritize sustainability education and research, promote interdisciplinary approaches and invest in



faculty development and collaboration platforms to better equip future graduates with sustainable development and management knowledge and skills.

Three Masters' programs in three leading universities in Thailand are selected to participate in this project, namely International College of National Institute of Development Administration, Master of Economics - Faculty of Economics - Srinakharinwirot University and Faculty of Logistics and Digital Supply Chain - Naresuan University.

### ***1.2.1. International College of National Institute of Development Administration (ICO NIDA)***

NIDA was originally established to support national development in Thailand with the aim of producing advanced degree graduates who can serve in the public, business, and non-profit sectors. According to NIDA's long-term plan (Year 2008 – 2022) approved by the NIDA Committee, there are 8 strategies for NIDA to become a leading university in Thailand. The 6<sup>th</sup> strategy is to maintain academic excellence in terms of program courses, research, and academic administration, which should correspond to the society's needs. This establishes strategies in terms of the development of programs and courses that are able to meet the demands of a constantly changing society under various external pressures, and to substantially cover subjects in the area of development administration. The offering of international programs in management will help strengthen the field of development administration studies, which has always been the symbol of NIDA. Also, as the government academic institution open only to graduate students for more than 50 years, NIDA has experience and expertise in administering a graduate school in the field of administration studies. Therefore, in order to fully optimize the available resources, NIDA deems it appropriate to open the Master of Arts in Management Program for managers in the public and private sectors, in non-profit organizations, and social enterprises and for business entrepreneurship.

The Master of Management program of international college (ICO NIDA) was initiated in 2011 from the need to enhance the effectiveness of higher education and training. Ten years from the program initiation many factors have changed including the changes in economic, social, and cultural changes. To be in line with the institution core and the need of the country's development towards SDG and SEP, the challenges of the program can be divided into two aspects: market forces and leadership competencies towards SDGs and SEP.

The first challenge is the market forces. Coming hand in hand with increases in scale and a global environmental concern are a greater diversity in the workforce and deeper

requirements for specific technical expertise. Another challenge is leadership competencies. An ability to manage multiple points of view simultaneously will differentiate the best managers from the rest. Leaders should maintain the high-level goals in sight while managing and tracking day-to-day success as well as foster dynamic change, and keep the spirit of the enterprise vital.

The ICO NIDA Program possess knowledge of management, be able to integrate such knowledge with other fields of study, with integrity and good governance, be capable in communications and technologies, be aware of the changes of the country in terms of economics, business, politics, and society, and be able to analyze and synthesize those factors, It must also be able to maintain good physical and mental health, be willing to develop the personality of its students, and be ready to be a leader in the future. Moreover, ICO NIDA also aims to utilize resources from other faculty and also to provide linkages among different graduate schools of NIDA. Some collaboration from other graduate schools of NIDA for example visiting professors, independent study or thesis advisors, or dissertation committee members.

Other remedial courses arranged for graduate studies introduce the management tools and insights necessary for success and career effectiveness on a global scale. The courses present key aspects of leadership, team building, motivation, ethics, and cross-cultural communication. They also offer self-assessment tools and opportunities to explore career management and job search strategies. Presentations, computer, and analytical skills are also a part of the courses. Students can also study these courses via NIDA e-Learning system. In order to provide the flexibility and linkages among the majors, students of ICO NIDA that would like to study other subjects in other programs or majors can register for such courses as electives.

Recently, in 2023, NIDA adjusted the core value from “Wisdom for change” to “Wisdom for sustainable development”. Therefore, ICO NIDA revised the Master of Management program including Sustainable Business in the program. However, this program has not opened yet. Due to the demand of students enrolled in the program. Mainly most students select marketing or entrepreneur majors. The case study of Thailand can be an example for partner institutions as a representative for developing countries and SDGs and SEP for SMEs and major companies in Thailand.

### ***1.2.2. Master of Economics, Faculty of Economics, Srinakharinwirot University (SWU)***

The program strives to develop graduates’ analytical skills based on 21<sup>st</sup> century learning so that it can apply economic knowledge in the workplace internationally. In order to

achieve the country's economic development goals, the public and private sectors must understand the overall economy at the macro and micro levels. This economic comprehension will be a very important conceptual framework guiding the government in implementing their economic and social development policies that are suitable for the current economic system. At the same time, the business sector can use this comprehension to enhance their analysis and planning of business operations. The personnel in government and business sectors should acquire foreign language skills along with economic understanding. This is to strengthen and develop the workforce capabilities in terms of increasing the ability to compete with foreign countries. Creating opportunities and allowing individuals to access benefits stimulate the enterprise power that will drive economic growth. However, undesirable consequences such as inflation, unemployment and poverty must be avoided to safeguard social peace along with individual liberties under the law of the achievement of international excellence.

Economics can play a vital role in achieving these goals by exploring ways to safeguard our planet's natural resources while promoting economic growth, reducing socio-economic inequalities, and establishing cost-effective public health systems that equitably distribute costs and benefits across society. This master's specialization provides students with an understanding of sustainable development and how economic systems can either facilitate or impede SDGs. While some societal issues may require a single-perspective approach, many SDGs demand a multifaceted understanding of the challenges and the development of policies that account for short- and long- term effects, various intervention levels, and interconnectedness with other SDGs. This specialization uniquely combines these elements, setting it apart from other programs. Upon completing of the course, students will be able to describe the complexity of SDGs in terms of intervention levels, timeframes, and interdependence with other goals; analyse a range of economic perspectives essential to understanding the SDGs; possess comprehensive knowledge of economic policy options for achieving SDGs; and evaluate the costs and benefits of possible economic policy interventions, including their timing effects, intervention levels, and ripple effects. The courses collect information about the operations of the courses offered so that a course performance can be prepared. Data will be analysed to find ways to improve operations for the academic year, and a meeting of course instructors will be arranged to review the summary of the course performance and propose it.

A meeting was held by the curriculum committee for the Master of Economics (International Program) to gather feedback from stakeholders, such as employers, former students, and current students, regarding their opinions and needs. The information gathered was then analysed to inform the development of expected learning outcomes.

To ensure the program remained relevant and met the needs of Generation X and Y students, the committee designed a modular teaching and learning approach. The course uses the results of the teaching evaluation to prepare the report on the course performance by analysing the strengths and identifying the weaknesses that should be improved in that particular course. The promotion of internships was also emphasized to encourage lifelong learning and provide students with the soft skills necessary to meet market demands as well as those associated with the S-curve and new S-curve.

Presently, the Faculty of Economics, Srinakharinwirot University, offers a Master of Economics Program (International Program). The launch of the program means that the Faculty is able to respond to the needs of current students as well as the increasing trend of foreign students who wish to study in Thailand. The program can also be developed as a “Sustainability Management” module with the overseas universities which have academic relationships with the similar module. This is consistent with the policies and strategies of the university and the Ministry of Higher Education, Science, Research, and innovation of developing to the international level.

### ***1.2.3. Faculty of Logistics and Digital Supply Chain, Naresuan University (NU)***

Naresuan University (NU) is a public university located in Phitsanulok, Thailand. It was established in 1990 and has since grown to become one of the top universities in Thailand, with a strong focus on research and innovation. NU comprises 17 faculties and one college, which can be classified into three clusters: the health sciences cluster, the social science cluster, and the science and technology cluster. NU has a vision of *University for Entrepreneurial Society* to become a leading entrepreneurial university in Thailand by utilizing enterprise collaboration and international linkage to boost regional economy. NU's research is focused on five areas: high-value agriculture (e.g., smart farming, functional food, personalized food, and bioinformatics), high-value medical and health services (reinventing and diagnostic medicines, precision medicines, therapeutics and drug discovery, regenerative medicines, and biotechnology), energy and environment for a low-carbon society (frontier energy conversion/ alternative energy, energy storage and elective vehicle, management and sustainability, and climate change/ greenhouse gas emission), quality and sustainable tourism (new paradigm in computing and processing, and new paradigm in exploration), and trading, investment, and logistics (new paradigm in connectivity, communication, and advanced urban management). As a result of their clear vision and commitment to sustainability, NU's SDG index score has increased from 42.3 out of 100 in 2021 to 52.2 out of 100 in 2022. NU's performance in each Sustainable

Development Goal (SDG) improved in 2021 and 2022 when compared to the overall median scores for all SDGs in 2022. NU has consistently maintained the median score for SDG 1, which focuses on eradicating poverty, since 2021. However, starting from 2022, NU managed to increase its scores to align with the median scores for SDG 3 (good health and well-being), SDG 5 (gender equality), and SDG 7 (affordable and clean energy). Although NU's scores for other SDGs have not yet reached the median, they did show improvement in 2022 compared to 2021.

The Faculty of Logistics and Digital Supply Chain (LDSC), NU, offers two types of master's degree programs in logistics and supply chain management - thesis and independent study (IS). Both programs are two-year programs for Thai and international students. The LDSC's curriculum aims to equip students with the necessary theoretical and practical knowledge in logistics and supply chain management, as well as the skills required for a successful career in this field. The courses are taught in English and Thai, with all course materials in English. Approximately, 10 students participate in the program annually.

To obtain the degree, each student must complete a minimum of 15 credits of core courses (such as introduction to logistics and supply chain management, inventory planning and control, strategic transportation and distribution management, logistics quantitative analysis, and supply chain process improvements), at least 9 elective courses, three non-credit courses, and 9 credits of thesis or IS courses. The Sustainable Logistics and Supply Chain course is the only course related to sustainability currently offered by the faculty, and they have limited sustainability-related courses available for master's degree students.

To keep up with the trend of short-course training and certificate programs in Thailand, along with a cross-registration to promote a life-long learning system, the LDSC has introduced a certificate course consisting of four modules, one of which is Life Cycle Thinking with Data Visualization. Upon completing all four modules, students can transfer the credits earned for one 3-credit master's degree program course at LDSC, NU.

The faculty recognizes the importance of sustainability and has proposed sustainability as one of the research focuses, in addition to data analytics and logistics connectivity. The faculty possesses a competent and skilled team of faculty members, along with partnerships with industry leaders and government agencies to provide high-quality education and prepare students for the job market. However, the faculty has limited qualified and experienced faculty members to formulate and teach courses on sustainable development and management. Introducing a new concentration in sustainable development and management at LDSC could be a substantial contribution by LDSC, NU

in creating a workforce with a grasp of the logistics and supply chain market, which is among Thailand's S-curve industries and may potentially drive the country towards its objectives.

The sections above clearly show that each partner has a different level of implementing the sustainable management program as well as institutional circumstances and challenges. While the project objectives are rather similar, yet each partner may apply a unique methodology.

## **II. PROJECT DEVELOPMENT OBJECTIVES**

The main objective of this project is to develop a detailed mapping of the status quo at each partner institution with regard to the resources and capacities for teaching the Master's program in "Sustainable Development and Management" and the existing programs in each individual partner country. Depending on the partner institutions' situations, this research is to also identify the potential of (i) introducing a new Masters' program, (ii) improving the existing Master's program on sustainable management or (iii) introducing a study concentration on sustainable management.

As indicated above, six partner institutions have a variety of status quo in relation to the projected Master's program. Three universities, namely MBA FEB UGM, MM USAKTI and ICO NIDA, are planned to improve the existing Masters programs. Meanwhile, MM UII and NU are expecting to establish a new study concentration.

## **III. METHODOLOGY**

### **III.1. Research Design**

The research adopts two main approaches, namely self-reflecting method and stakeholder study. First, the self-reflecting method. According to the Encyclopaedia of the Sciences of Learning (2012), self-reflection or introspection research is a study that explores thoughts, desires and feelings through self-observation. As an internal individual mechanism, this method therefore requires a particular mental ability to carefully cultivate thinking and reasoning. Although the methodology is originally for individual level examination, this particular research views that similar mode of examination can be aggregated to the organizational level such as universities.

Second, this study adopts a stakeholder study. A stakeholder study is important to capture the needs, demand and situation as perceived by the stakeholders. Using the

understanding of the triple bottom theory, the stakeholders are those representing the important parties in the framework, namely the government, the customers/industries, and the university (the faculty members, staff, and students).

### **III.2. Data Collection Method**

The data used in this research is primarily secondary data and to some extent, supported by primary data.

The secondary data used in this research are:

- a. National education and environmental/sustainability regulations of both countries;
- b. Relevant report and procedures on academic activities at the University level;
- c. Data on programs, curriculum and concentration at the Faculty level;
- d. Data on the readiness of lecturers and administrative staff shown by the proportion and level of competencies;
- e. Data on teaching materials;
- f. Data on the evaluation of the existing program (if available).

The primary data, however, is used whenever the secondary data is unavailable. The data was collected using a simple interview protocol which incorporates three main issues, namely the status quo condition, possibility to initiate a new or improve the existing program, and need assessment.

As for the self-reflection method, the subject matter experts are the relevant management officials of the Faculty or Study Program, namely the Dean/Vice Dean of Academic Affairs, Departments, MM Program and Administration Office.

The general interview guidelines consisted of the following questions:

1. To what extent has the university incorporated the national interest into the academic activities?
2. To what extent does the Faculty/School identify and incorporate the public needs on sustainable management in the program/curriculum?
3. To what extent does the Faculty/Study Program view the importance of subject/curricula on sustainable management?
4. To what extent do the lecturers have interest in sustainable management (any evidence of research publication, thesis/dissertation under their supervision or their own thesis/dissertation)?
5. What are the challenges of introducing a specific concentration/subject/section on sustainable management?

6. Any possibility of collaboration with external (both national and international) institutions in developing the Masters' program in sustainable management?

The specific process in processing the data from both methods is based on four elements of learning outcomes, namely knowledge, skills, character and ethics. The development process are as follows:

1. Customer and stakeholder focus during the course development process, inputs from stakeholders such as prospective students and industry representatives will be obtained through surveys and/or other secondary data. Moreover, the needs, expectations, and even surpassing expectations of the graduate's users should be gathered.
2. Process approach: a well-designed and evaluated process is necessary for the efficient and effective development of a concentration. This process should also be aligned with the learning outcomes of the concentration.
3. Evidence-based decision making: evidence must be collected, examined, and analyzed to demonstrate that graduates have acquired and accomplished all four learning outcomes as designed by the program.
4. Continuous improvement: a process must be in place to consistently modify and enhance the quality of the program. This process intended to ensure the satisfaction and confidence of both current and prospective students, as well as stakeholders.
5. Learning outcomes focus: the goals that pertain to the expected learning outcomes, the designed process, and the evaluation process must be aligned with the learning outcomes.

#### **IV. FINDINGS**

In response to the study objective of mapping the resources and capacities to teach a Master's program in sustainable management, several notes are worth exploring. This research planned to rely more on secondary data. Nevertheless, some partner institutions use predominantly secondary data, while some others rely more on primary data. The rationale for this is that data attributed to specific academic activities on sustainability at the Faculty level are unavailable. Many lecturers are identified to have been very active in engaging in the area but not recorded. As for institutions using primary data, several subject matter experts holding key positions were interviewed. Although not all target experts were prepared to share their insights, key information is undoubtedly gathered. The detailed findings generated from data collection can be categorized into three



sections, namely institutional supports, program availability and curriculum development, and teaching activities and teaching material.

#### **IV.1. Institutional Support**

Institutional support is translated into a series of regulatory frameworks at both the national level and university levels. To this extent, both the Indonesian and Thailand governments are in full support of sustainable management in general, which started decades ago. However, these did not fully permeate to all sectors. As a result, both countries witnessed the movement toward this goal is rather halted or slow pace at best. The momentum to boost the goal further came from the UN with its SDGs. In order to improve its social legitimacy at the global level, the governments were forced to keep up with this demand. This research shows, however, that the ecosystem in each country is yet to impose serious penalties to the non-compliance sector.

This increasing institutional support could have been leveraged by all essential sectors in the country, including the educational sector. However, this research shows that the extent to which higher education takes this concern further is largely left to the universities themselves. Universitas Trisakti is the only one that has declared its involvement in sustainable management as a tagline. Meanwhile, others are more scattered and fragmented. Undoubtedly, the availability of institutional support but with the absence of serious penalties has resulted in a variety of university commitment toward sustainability.

#### **IV.2. Program Availability and Curriculum Development**

The program availability is quite diverse amongst partner institutions, meanwhile the level and need of curriculum development is generally similar. Another interesting finding is the emerging involvement of stakeholders in constructing both the program and curriculum. For partners like MM USAKTI and ICO NIDA, the maturity of the program is reflected in the more integrated environmentally sound business courses. As for the new players like MBA FEB UGM, the business and 'green' courses are less integrated. Meanwhile, MM UII, LDSC, NU and SWU are still proposing to develop a new subject or curriculum.

The issue and importance of sustainable management started to receive an increasing attention from the University, although quite unique amongst partners. UGM and USAKTI, for example, are two partners which have explicit institutional support from the university. UGM initiated a research collaboration with several leading public universities in three main areas, namely digital, blue and green (UGM, 2022). The

program in 2023 is becoming more intense into the ‘green’ area. To this extent, faculties are strongly encouraged to put highest priority and funding to the relevant initiatives. In turn, this may enrich other academic activities including revitalizing the teaching. So far, the initiatives are indeed welcome by many teaching staff. Yet, it does not yet attract broad enthusiasm and extended participation. At the Faculty level, the program remains at the research level and not yet recognized for enriching the teaching activities. Nevertheless, this finding clearly shows that the research idea stimulation from the University and the Faculty still requires more effort to make a Master’s program prevalent and permanent.

Further, at FEB UGM, the Department is in charge of setting up key capabilities to develop and deploy resources. The interview depicted some interesting facts in measuring the teaching prospect in the area. First, all Heads of Departments claim that the demand for sustainability topics at the Master’s level is noticeable. In particular, the Department has sent several staff to training programs in sustainability. Unfortunately, this was still by chance, depending on the availability of such programs offered by the external parties. Despite this half-hearted effort, the Departments have actually captured the increasing demand from both local and international institutions. One of the substantial local institutions is the Central Bank of Indonesia. The Central Bank of Indonesia is particularly interested in being involved in a more structured program and this has been well responded to by the Master of Economics Development (MEP FEB UGM) program. As a result, the ‘green economics program’ has been introduced at the study concentration level. At this initial stage, the program still attracted a very small number of participants.

A much more systematic and well-designed program is the ASEAN Master on Sustainability Management under the MBA FEB UGM. The design of the curriculum was considered a quite lengthy process. The University of Agder – Norway, as a partner university, was heavily involved in preparing the teaching curriculum, structure and materials. Once the curriculum was set, the next process was to construct lecturers’ requirements, students’ requirements, scheduling and infrastructure support. In order to construct the right ingredients for the curriculum, several senior lecturers were interviewed. The lecturers of the partner university are also dedicated to team teaching in almost all courses. In recruiting the students, another partner – AUN-BE, is in charge of this role. If the first batch consisted of students from ASEAN countries only, the second batch is composed of ASEAN and several European students (Norwegian and Spanish).

More detail into the curriculum, this Master’ program is composed of nine general subjects and three concentration subjects. The students are expected to complete the study within five semesters. Four pre-MBA courses for a semester focus on four basic courses,

namely (i) Accounting and Finance, (ii) Business and Management, (iii) Managerial Economics, and (iv) Statistics for Business. Entering the MBA program, the first semester is composed of six courses in management function, leadership and business ethics. The second semester is a combination of compulsory integrated courses (strategic management, general business environment and research methods) and three concentration elective courses. Students are provided the opportunity to choose one of two tracks in concentration which address specific environmental issues. Track A consists of (i) Forests and Conservation Management, (ii) Food Security and Sustainable Agriculture, and (iii) Marine Resources and Coastal Management. Meanwhile, Track B consists of (i) Climate Change Laws and Greenhouse Gas Reduction, (ii) Urban Planning and Management, and (iii) Energy Resource Management. Despite the comprehensive program, the specific courses targeting sustainability are these three elective courses. The core courses are adopting a regular syllabus but with a hint of sustainability concern, for example in the case studies, examples and assignments.

The concern of this ASEAN Master's program is its sustainability. The program is sponsor-reliant. It is a three-year program and we are currently entering the second year. Until recently, MBA FEB UGM has yet to design a more permanent program and is offered on a regular basis.

In short, as for UGM, the initiative made by the Faculty at the Masters' level, particularly the MBA FEB UGM with its ASEAN Master in Sustainability Management has provided the Faculty and the lecturers with crucial exposures on sustainability issues and at an international level. This is certainly a constructive development where the Faculty increasingly gained staff capacity building. The challenge is, however, to make this program permanent and regular.

A more stable program has been offered by MM USAKTI. The Master of Management USAKTI was established in 1992 and has 8 concentrations, and among its management concentrations is one on sustainability. The Sustainability concentration, formerly known as Corporate Social Responsibility, has been available to Master of Management students since 2010, making it the first post graduate program in Indonesia to focus on Corporate Social Responsibility. The Master of Management in Sustainability aligns with Universitas Trisakti 2030 vision, that is to improve the quality of life and civilization. Furthermore, in accordance with the USAKTI tagline which is "one stop learning for sustainable development", USAKTI plays a crucial part in achieving (1) green energy, (2) green urban environment, (3) green society, and (4) green healthy life.

Sustainability concentration courses have 45 credits, these included 27 credits of core courses, 15 credits of concentration elective courses, and 3 credits of free elective courses. The Sustainability concentration elective courses are (i) Sustainability Research, (ii) CSR & Sustainability Communication and Reporting, (iii) Risk Analysis and Social Impact Assessment, (iv) CSR & Sustainable Development: Concepts, Contexts and Issues, and (v) CSR & Sustainability Tools: Design and Application. Following an assessment every two years, all of the above courses can be arranged in a flexible manner. This is specified in the USAKTI Operational Curriculum Guidelines.

The USAKTI Master of Management's curricula in Sustainability are currently running well, but more work is required to improve the curricula so that it can address the challenges of sustainable development and to provide students' opportunities to learn from diverse perspectives and experiences.

Similar to that of MM USAKTI, ICO NIDA has long offered a course on sustainable management. As a result, its maturity is also reflected in the courses which are more 'business sound'. Currently, it has just revised the new master program curriculum in 2022. Consistent with all partner institutions, ICO NIDA will also conduct a minor revision by introducing a new curriculum in the existing Master's program major in Sustainable Business Management. From the challenges mentioned above, ICO NIDA would like to adjust program concentrating on these following aspects: 1) to build the capacity in education, the ability in doing research and, the capability of leading change which will contribute to sustainable development 2) to strengthen the competitiveness of the country to face the future management challenges in an efficient and sustainable manner 3) to foster the exchange of knowledge among students from different cultures leading to more understanding and cooperation in the future. The courses listed under the Sustainable Business Management major are (i) Sustainable Business Management, (ii) Environmental Sustainability and Climate Change Management, (iii) Sustainable Development and Circular Economy, (iv) Holistic Management and Organizational Development, (v) Business Innovation, and (vi) Business Strategy and Strategic Management.

As for MM UII, given that relevant program or concentration is currently non-existent, the curriculum development will be following its academic tradition. The objective and development of this project are actually relevant to the demands and needs of stakeholders. Given the relevance to the demands of stakeholders and the rapidly changing development of the external environment, the Study Program has considered the preparation of the curriculum. The Study Program has a tradition of periodically inviting stakeholders consisting of graduate users, industry, alumni, practitioners, and the

government to provide input on curriculum development. Thus, the curriculum designed by Study Program MMUII does not move far from the interests of the stakeholders. To realize the goals of the program to educate future professional managers, MM UII uses teaching methods with dynamic-participation, diagnostic-solution and applied methods that will provide students with a strong understanding, and mastery of theory.

In line with the initiation of a concentration on sustainability, this curriculum will be designed to produce graduates who have the ability and mastery of knowledge related to the environment and sustainability. The potential to introduce a new concentration of sustainability is open, among others, supported by collaboration with Environmental Engineering Study Programs which will later jointly design curricula and share resources. or supporting the establishment of an education system.

Similar to MM UII, LDSC NU sees the potential to introduce a new Master's concentration in the existing master's program, i.e., Logistics and Digital Supply chain Program. For LDSC NU to launch the new concentration, five elective courses in sustainable development and management are required. The curriculum is composed of three non-credit courses, five core courses and five elective courses. In the new curriculum, the non-credit and five core courses remain unchanged. The proposed yet to be confirmed elective courses have strong content on sustainable management. They are (i) Sustainable Logistics and Supply Chain, (ii) Advanced Sustainable Logistics and Supply Chain, (iii) Lean Management and Manufacturing, (iv) LCA, LCC, DfE, BCG, and Other Sustainability Approaches, and (v) Driving Business towards Sustainability.

In SWU, a concentration on sustainability was conducted by the Master of Economics. The main goals of this concentration is to provide students with an understanding of sustainable development and how the economic system can facilitate or impede SDGs. Further, to ensure the program remained relevant and met the needs of Generation X and Y students, the curriculum committee designed a modular teaching and learning approach, in addition to the internship activities.

Ideally, a Master's program in sustainability shall be supported by curricula which not only integrate environmental into/with business courses, but also address the ultimate goals of SDGs. As reported above, all existing and proposed curriculum is somewhat related to 17 SDGs. However, the need to increase the number of relevant SDGs would be fruitful.

### **IV.3. Teaching Activities and Materials**

The sufficiency condition of competent lecturers and teaching materials in all partner universities is quite similar. The lecturers' composition is mainly a combination of lecturers from the school of business and school of environmental studies (or alike).

In the case of Indonesian partner institutions, the regulation stipulated that the lecturers of a Master's program must hold a doctoral degree. In the case of MBA FEB UGM, additional requirements are imposed by AACSB whereas the lecturers must meet specific faculty qualifications. To provide real and updated practices in the area, some partner institutions invited practitioners as guest lectures. The invited guest lectures, however, are not subject to these criteria. Their practical expertise is more taken into account. Currently, the program is supported by permanent lecturers (18 persons from FEB UGM and 13 persons from non-FEB UGM), practitioners guest lecturers (14 persons), and international guest lecturers (16 persons). Meanwhile, the composition at MM USAKTI consists of permanent lecturers (3 person, 33%), adjunct lecturers (2 person, 23%) and practitioners (4 person, 44%). As of MM UII, the number of lecturers who will be involved in the new program are 6 lecturers. Four lecturers are from MM UII and two others are from the Faculty of Environmental Engineering. The institution, however, has potential to expand the program as it currently has 17 permanent lecturers, all of whom have a doctoral degree.

As for the Thailand partner institution, the assessment was only reported by ICO NIDA. At ICO NIDA, for the lecturer in the existing Master program, the internal lecturers are 9 in total of which 3 have an environment, sustainable business and policy background. At NIDA, we have a school of Environmental development administration and Sustainable Development and Sufficiency Economy Studies Centre; for this reason, lecturers who have a related background for Master's program major in Sustainable Business Management are sufficient enough. However, more trained staffs especially for 6 lecturers at ICO NIDA are requirement for extended capacity

In relation to the numbers and competency levels of the lecturers, they are considered sufficient for serving the existing programs. As this project aims to improve the program further, the numbers and competency levels may also need to be developed. Nevertheless, the need for permanent lecturers at all partner institutions to be trained and developed in the area of sustainability concentration is crucial. Training for certification, either national or global, is also expected.

As for the administrative staff, the circumstances are quite different. For partners with a mature program, the need of staff may already be properly measured and evaluated.

Meanwhile, for partners with new or moreover non-existent programs, requires more comprehensive capacity building. At MBA FEB UGM, the administrative staff also serve general MBA students. This research revealed, however, that in general, the sufficiency of competencies and numbers of staff is also quite limited. In general, the existing staff requires improvement in communication skills in foreign languages and in student services. The administrative personnel need more training to improve their qualification, especially when it comes to serving international students and sustainable management topics.

Slightly different to the other aspects. The availability of teaching materials on sustainable management can be considered limited and similar situations are encountered across the partner institutions. The existing programs offered by the partner institutions rely more on the general textbooks and use advanced country contexts. As such, the availability of recent and country context case studies are almost non-existent. The general materials needed are updated sustainability textbooks and recent sustainability case studies.

#### **IV.4. Summary of the Mapping by Partner Institutions**

The summary of the mapping which highlights the status quo, the ideal situation, the gaps and the supports needed of each partner university is available in the matrices following the conclusion and recommendation section (see Table 1 to Table 6).

**Table 1. Mapping Result of MBA FEB UGM**

	<b>Status Quo Situation (1)</b>	<b>Ideal/ Expected Standards (2)</b>	<b>The Gaps between the Status Quo and the ideal/expected standards (3)</b>	<b>Proposed Resources (4)</b>
<b>Institutional Situation</b>				
Regulations, rules and procedures within the institutions/national level as well as the interests of the external stakeholders	<b>(Moderate)</b> Regulatory support at the national and university levels are available. At the University level, however, it is somewhat scattered and fragmented.  The demand from external stakeholders is high but not fully solicited by the Faculty/Program.	<b>(High)</b> The program may solicit institutional support and leverage from the university initiative as well as the optimum utilization of university resources.	Consolidate opportunities and stakeholders' interests.	Training in designing curricula that incorporate the opportunities and stakeholders' interest for 1 lecturer and 1 course coordinator.
Existence of identical/similar program at the partner institutions	<b>(Moderate)</b> A similar concentration is available at another Master program, but is still at its infancy (just enter the first semester with only 4 students).	<b>(High)</b> A regular program with a high number of students.	Promote the program more aggressively to institutional stakeholders and prospective students.  Collaborate more intensively with MBA FEB UGM.	<b>Not available (N/A)</b>
Institutional/school arrangement under which the program is currently offered	<b>(Moderate)</b> 1. The Faculty fully supports the project, but it is quite fragmented and scattered.	<b>(High)</b> 1. Well-coordinated resources within Faculty and across Faculties	1. Promote sustainable management more aggressively. 2. Promote the concentration to the first-year students to	Workshop on sustainable management for 1 Faculty management and 1 course coordinator.



	<b>Status Quo Situation (1)</b>	<b>Ideal/ Expected Standards (2)</b>	<b>The Gaps between the Status Quo and the ideal/expected standards (3)</b>	<b>Proposed Resources (4)</b>
	2. A concentration can be run with a minimum of 15 students. Not every concentration can be formed every semester.	2. A sustainable and permanent concentration on sustainability can be run.	increase participation.	
<b>Program/Curriculum Development (*Fill in the relevant situation)</b>				
Developing a new study program*	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>
Improving the existing Master's program on sustainable management*	<b>(Moderate)</b> An existing concentration is available, but may not be sustainable. It currently relies on external funding.	<b>(High)</b> A permanent concentration offered regularly to students and external stakeholders	Promote and disseminate the program more aggressively to institutional stakeholders and prospective students.	Training in promoting and disseminating an environmentally concerned study program for 1 administrative staff.
Introducing a new study concentration on sustainable management*	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>
Alignment of the existing program/curriculum with the sustainable development and management curriculum	<b>(Moderate)</b> The current curriculum is sufficient in terms of scope of the topics. Yet, the courses are quite 'separated' between the classical content and the environmental one.	<b>(High)</b> The curriculum is well integrated between business and environmental issues.	The need to add the number of lecturers with integrated competencies.	<i>Consistent with the resources requested for improving lecturers' quality below.</i>

	<b>Status Quo Situation (1)</b>	<b>Ideal/ Expected Standards (2)</b>	<b>The Gaps between the Status Quo and the ideal/expected standards (3)</b>	<b>Proposed Resources (4)</b>
<b>Lecturers and Administrative Staff Readiness</b>				
Number of qualified lecturers	<b>(Moderate)</b> 1. Relatively sufficient for running the current program. 2. Limited exposure of the lecturers on general sustainability issues.	<b>(High)</b> All lecturers possess specific training and competence in accordance with the sustainability issues.	1. Add more lecturers. 2. Improve lecturers' competencies in the area of sustainability.	1. Training in the specific area of sustainability for 4 lecturers. 2. Providing certification in the area of sustainability for 2 lecturers.
Number of qualified administrative staff	<b>(Low)</b> MBA FEB UGM does not have dedicated staff to assist the program moreover if the program is to be offered as an international course.	<b>(High)</b> The availability of dedicated staff who are competent in serving various domestic/global stakeholders and students.	Add more competent staff with proficient English competencies and some knowledge in sustainability.	Training in English communication and sustainability for 2 administrative staff.
<b>Teaching Materials</b>				
Availability of teaching materials (teaching notes, case studies)	<b>(Moderate)</b> 1. The program is currently using regular textbooks for the core courses. Specific materials on sustainability are taken from practitioner journals. As for the concentration elective, the materials are	<b>(High)</b> 1. The teaching materials for the core course are predominated with sustainability textbooks. 2. The availability of various recent business case studies on sustainability in	1. Obtain sustainability textbooks to enrich the classical management text books. 2. Construct contextual case studies (sustainability issues in the Indonesian setting)	1. Workshop on case study development for all lecturers 2. Funding support for developing case studies through empirical research. 3. Collection of relevant text books and case

	<b>Status Quo Situation (1)</b>	<b>Ideal/ Expected Standards (2)</b>	<b>The Gaps between the Status Quo and the ideal/expected standards (3)</b>	<b>Proposed Resources (4)</b>
	<p>sufficiently specific.</p> <p>2. Case studies used are very limited and taken from general business literature.</p>	<p>businesses in the Indonesian context.</p>		<p>studies from the European counterparts.</p> <p>4. Inviting guest lecturers from Masudem European partners.</p>

**Table 2. Mapping Result of MM USAKTI**

	<b>Status Quo Situation (1)</b>	<b>Ideal/ Expected Standards (2)</b>	<b>The Gaps between the Status Quo and the ideal/expected standards (3)</b>	<b>Resources Required (4)</b>
<b>Institutional Situation</b>				
Regulations, rules and procedures within the institutions/national level as well as the interests of the external stakeholders	<b>(Moderate)</b> 1. Regulatory support at national and university level is available but needs improvement in implementation level.  2. There is a lot of interest coming from external stakeholders, but the Faculty and program has not completely adapted to it.	<b>(High)</b> Optimum Faculty and University support for implementation needed regarding regulations, rules and procedures, as well as the interest of the stakeholders	Consolidating opportunities and stakeholder's interests.	Training on curriculum development for 2 lecturers.
Existence of identical/similar program at the partner institutions	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>
Institutional/school arrangement under which the program is currently offered	<b>(Moderate)</b> 1. The faculty fully supports this project which is in line to the institution's vision and mission	<b>(High)</b> According to Faculty regulation, the minimum number of students per concentration are	1. Promote sustainable management concentration more aggressively to the public (externally)  2. Promote this concentration	Workshop on curriculum development for 2 lecturers and 1 administrative staff.

	2. The MM Sustainability concentration remains open even though the participants are less than 8 students per semester	15 people per semester	to existing first-year students (internally)	
<b>Program/Curriculum Development</b>				
Developing a new study program	<b>Not applicable (n/a)</b>	<b>Not applicable (n/a)</b>	<b>Not applicable (n/a)</b>	<b>Not applicable (n/a)</b>
Improving the existing Master's program on sustainable management	<b>(Moderate)</b> Currently there are 5 sustainable elective courses, but they have not been fully delivered according to the expectations of stakeholders.	<b>(High)</b> A more integrated curriculum (build more sustainability-focused courses/triple bottom line). The main objective of these curricula is to empower students to become active and engaged citizens who can contribute and be agents of change to a more sustainable global community.	<ol style="list-style-type: none"> <li>1. Environmental impacts were not particularly incorporated in a new focus course including social and economic factors.</li> <li>2. Updated Learning materials.</li> <li>3. Promote intensely and share widely about the sustainable program among relevant institutions, stakeholders and potential students.</li> </ol>	<ol style="list-style-type: none"> <li>1. Textbook, articles, and case study.</li> <li>2. A training in promoting and disseminating sustainability programs for 1 administrative staff.</li> </ol>
Introducing a new study concentration on sustainable management.	<b>Not applicable (n/a)</b>	<b>Not applicable (n/a)</b>	<b>Not applicable (n/a)</b>	<b>Not applicable (n/a)</b>

Alignment of the existing program/curriculum with the sustainable development and management curriculum.	<b>(Moderate)</b> The MM Sustainability's existing curriculums are already aligned but need more improvement especially integration into SDG context.	<b>(High)</b> The curriculum that integrated into the management context and the SDGs.	The need to connect Sustainability Concentration Learning Plan with SDGs as well as the course material.	A training on sustainability and SDG for a minimum of 2 lecturers.
<b>Lecturers and Administrative Staff Readiness</b>				
Number of qualified lecturers	<b>(Moderate)</b> 1. Relatively sufficient for running the current program. 2. Limited exposure of the mainstream business lecturers to sustainability issues	<b>(High)</b> All lecturers hold doctoral degrees and have professional competence in accordance with the subjects taught.	The need to equip more permanent lecturers with professional competence in accordance with the sustainability subjects taught	1. A training in the specific area of sustainability for 2 lecturers. 2. International competency certification in the area of sustainability for minimal 2 lecturers.
Number of qualified administrative staff	<b>(Moderate)</b> MM FEB USAKTI does not have dedicated and qualified administrative staff to assist the program. Moreover, if the program is to be offered as an international course.	<b>(High)</b> The availability of dedicated staff who are competent in serving various domestic/global stakeholders and students.	Add more competent staff with proficient English competencies and some knowledge in sustainability	A training in English communication and sustainability-related topics for one administrative staff member.
<b>Teaching Materials</b>				
Availability of teaching materials	<b>(Moderate)</b>	<b>(High)</b>	The need to obtain more international	1. Up-to-date sustainability

<p>(teaching notes, case studies)</p>	<ol style="list-style-type: none"> <li>1. The available learning plans for the five focus courses are yet effective.</li> <li>2. The limited number of relevant and contextual case studies.</li> </ol>	<p>Availability of updated and improved learning plans and teaching material related to the latest issues in sustainable development</p>	<p>textbooks covering contextual and current topics.</p> <p>The need to develop contextual case studies.</p>	<p>textbooks and other teaching materials</p> <ol style="list-style-type: none"> <li>2. Relevant, current case studies.</li> </ol>
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**Table 3.** Mapping Result of MM UII

	<b>Status Quo Situation (1)</b>	<b>Ideal/ Expected Standards (2)</b>	<b>The Gaps between the Status Quo and the ideal/expected standards (3)</b>	<b>Resources Required (4)</b>
<b>Institutional Situation</b>				
Regulations, rules and procedures within the institutions/national level as well as the interests of the external stakeholders	<p><b>(Moderate)</b></p> <p>1. Regulatory support at both the national and university levels are available. However, the University has not specifically made explicit academic rules and procedures regarding the opportunity to add concentrations to a study program.</p> <p>2. The demand from external stakeholders have not been measured yet.</p>	<p><b>(High)</b></p> <p>A stronger support and involvement of the University level to strengthen the existence of new concentration by preparing rules and procedure.</p>	Synchronize the potential market demand and the University support and readiness.	Training on the preparation of both academic and non academic affairs for 1 lecturer and 1 academic staff.
Existence of identical/similar program at the partner institutions	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>



Institutional/school arrangement under which the program is currently offered	A similar Master's program is under the Environmental Engineering study program.	High concerns for the environment and sustainability will certainly be responded to by the UII as an institution by expanding the study program on sustainability under the Faculty of Business and Economics.	The need to promote environmental concern at the University and faculty levels, particularly the Faculty of Business and Economics.	Training and workshop for 1 course coordinator and 2 lecturers to design sustainability program concentration.
<b>Program/Curriculum Development (*fill only the relevant situation)</b>				
Developing a new study program*.	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>
Introducing a new study concentration on sustainable management*.	<b>(Low)</b> MM UII plans to open a new concentration on sustainability study.	<b>(High)</b> A regular program with a concentration on sustainability that attracts many prospective students.	The need to improve both soft (teaching) and hard resources (building curriculum that does not yet have a form and design).	Workshop for 3 to 4 lecturers on teaching and writing case studies.
Alignment of the existing program/curriculum with the sustainable development and management curriculum.	<b>(Moderate)</b> Curriculum related to sustainability has not been formulated, designed, and aligned. However, MM UII has the full commitment to revise and improve the curriculum.	<b>(High)</b> MM UII has established a curriculum on sustainability having international standards and there will be the revised and improved curriculum periodically to align with external challenges.	The need to improve the capability to design a curriculum on sustainability by involving stakeholders.	Workshop or training on designing curriculum for 1-2 management staff.
<b>Lecturers and Administrative Staff Readiness</b>				

Number of qualified lecturers	<b>(Moderate)</b> The number of lecturers are relatively sufficient to teach the new concentration, yet non of them hold relevant certification.	<b>(High)</b> Lecturers have good academic qualifications, especially related to learning on sustainability topics.	The need to equip the lecturers with relevant certification.	Training and certification in the related field for 4 lecturers.
Number of qualified administrative staff	<b>(Moderate)</b> Staff development design and implementation is sub-optimum. Administrative staff still lacks of international certification as a measure of individual quality.	<b>(High)</b> Administrative staff with national (and possibly international) certification.	Shortage of high competent administrative staff.	Training (and or certification) for 1 administrative staff.
<b>Teaching Materials</b>				
Availability of teaching materials (teaching notes, case studies)	<b>(Moderate)</b> The teaching materials and case studies regarding sustainability are not available.	<b>(High)</b> Expanded concentration of sustainability by structuring the curriculum and by compiling and enriching lectures' materials on sustainability topics.	The need to equip the lecturers with writing and compiling case studies and teaching notes related to sustainability. The specific important issues are on local SMEs.	<ol style="list-style-type: none"> <li>1. A training on building teaching notes and case studies for 3-4 lecturers.</li> <li>2. Inviting guest lecturers from Masudem European partners.</li> </ol>

**Table 4.** Mapping Result of ICO NIDA

	<b>Status Quo Situation (1)</b>	<b>Ideal/ Expected Standards (2)</b>	<b>The Gaps between the Status Quo and the ideal/expected standards (3)</b>	<b>Resources Required (4)</b>
<b>Institutional Situation</b>				
Regulations, rules and procedures within the institutions/national level as well as the interests of the external stakeholders	<p><b>(Moderate)</b></p> <p>1. National policy and strategies towards sustainability are quite clear. However, there is a gap between its plan and implementation process. Similarly, at the University level, the philosophy has changed from “Wisdom for change” to “Wisdom for sustainable development”.</p> <p>2. The demand from students’ registration is quite low.</p>	<p><b>(High)</b></p> <p>The MASUDEM project will enhance the quality and uniqueness of the program curriculum; thus increase the interest of student’s registration of the MM in Sustainable Business Management.</p>	Consolidate opportunities and stakeholders’ interests	Training on curriculum development for 2 lecturers.
Existence of identical/similar program at the partner institutions	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>
Institutional/school arrangement under which the program is currently offered	<p><b>(Low)</b></p> <p>A course can be open with a minimum of 5 students.</p>	<p><b>(High)</b></p> <p>Demand from students so the program can be opened every semester</p>	The need to continuously promote sustainable business management more broadly	Workshop on promoting sustainability program for for 1 lecturer and 1 administrative staff
<b>Program/Curriculum Development (*fill only the relevant situation to your institution)</b>				

Developing a new study program*	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>
Improving the existing Master's program on sustainable management*	<b>(Moderate)</b> Minor revision to the existing program.	<b>(High)</b> Demand from students so the program can be opened every semester.	Continuously promote and disseminate the program more broadly to institutional stakeholders and partners	
Introducing a new study concentration on sustainable management.*	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>
Alignment of the existing program/curriculum with the sustainable development and management curriculum	<b>(Moderate)</b> There are only three subjects that emphasize on SDGs and SEP which are MM7901 Sustainable Business Management, MM7902 Environmental Sustainability and Climate Change Management, and MM7903 Sustainable Development and Circular Economy.	<b>(High)</b> More integrated program that capture both theory and practices from EU and Southeast Asian	The need to introduce more integrated subjects.	1. In-house training in the area. 2. Training materials from Masudem project
<b>Lecturers and Administrative Staff Readiness</b>				
Number of qualified lecturers	<b>(Moderate)</b> Only 3 internal ICO NIDA lecturers (33% of total lecturers) have relatively qualified knowledge for sustainable business management.	<b>(High)</b> All ICO NIDA lecturers have a high level of competency in the field.	The need to improve lecturers' competencies towards sustainable business management	The training program/ outputs from the MASUDEM project

Number of qualified administrative staff	<p><b>(Low)</b></p> <p>ICO NIDA administrative staff do not have a relevant background in the areas of sustainability. All of them can communicate in English (100%) and Chinese (33 %)</p>	<p><b>(High)</b></p> <p>The availability of dedicated staff who are competent in serving various domestic/global stakeholders and students.</p>	The need to increase the number of staff trained in sustainability.	Training on sustainability program for 4 administrative staffs (academic coordinators).
<b>Teaching Materials</b>				
Availability of teaching materials (teaching notes, case studies)	<p><b>(Low)</b></p> <p>ICO NIDA lecturers have not yet developed their own teaching materials/textbook/research relevant to sustainable business management.</p>	<p><b>(High)</b></p> <p>Teaching materials that reflect Thai cases can be developed for using in the course.</p>	Peer review teaching materials related to sustainable business management can be developed.	A training on building teaching notes and case studies for 2-3 lecturers.

**Table 5. Mapping Result of SWU**

	<b>Status Quo Situation (1)</b>	<b>Ideal/ Expected Standards (2)</b>	<b>The Gaps between the Status Quo and the ideal/expected standards (3)</b>	<b>Resources Required (4)</b>
<b>Institutional Situation</b>				
Regulations, rules and procedures within the institutions/national level as well as the interests of the external stakeholders	<p><b>Moderate</b></p> <p>SWU recognizes the significance of taking social responsibility seriously and helping society. The university has taken actions to enhance knowledge, provide opportunities, promote education, and transfer technology to local areas in line with the concept “One Province, One University”</p> <p>Regulatory support at both the national and university levels are available. There is a starting interest coming from external stakeholders, but the faculty and program has not completely adapted to it in some aspects/ideas.</p>	<p><b>High</b></p> <p>A stronger support and involvement at University level to strengthen the existence of new concentration by providing the comments and suggestions to make the improvement.</p>	The need to align with the potential market demand particular from the management level and the University support	Training on curriculum development for 2 administrative staff and 2 lecturers.
Existence of identical/similar program at the partner institutions	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>

Institutional/school arrangement under which the program is currently offered	<p><b>Low</b></p> <p>1. The faculty fully supports this project which is in line to the institution’s vision and mission.</p> <p>2. Some subjects in elective courses have taught and related to the Sustainability concentration particularly in “Integrated courses” 3. Some elective courses remain open even though the participants are less than 5 students per semester.</p>	<p><b>High</b></p> <p>High concerns for the environment and sustainability will certainly be responded to by the SWU as an institution by modifying the study subjects on sustainability under the Faculty of Economics.</p>	At the University and faculty level, intense promotion and marketing is needed to introduce new “Elective Courses” under the Faculty of Economics.	Training and workshop on designing sustainability subjects course concentration for 2 lecturers.
<b>Program/Curriculum Development (*fill only the relevant situation to your institution)</b>				
Developing a new study program*	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>
Improving the existing Master’s program on sustainable management*	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>
Introducing a new study concentration on sustainable management*	<p><b>Moderate</b></p> <p>ECON SWU has the determination and potential to open a new subject of concentration on sustainability study.</p>	<p><b>Low</b></p> <p>A regular program with a concentration on sustainability that will educate students to become experts in environmental issues.</p>	The gaps are in both soft (teaching lecturers) and hard (a curriculum that does not yet have a form and design) resources.	Workshop in teaching capability on sustainability for 3 to 4 lecturers.

Alignment of the existing program/curriculum with the sustainable development and management curriculum	The ECON SWU Sustainability existing curriculums need more improvement especially integration into SDG context	The curriculum has not integrated much into the management context and the SDGs.	<ol style="list-style-type: none"> <li>1. Need to modify the Sustainability Concentration Learning in some “Elective Subjects” to connect with the SDGs for elective courses material.</li> <li>2. Need to add the number of lecturers with integrated competencies.</li> </ol>	Training on SDG for 2 lecturers.
<b>Lecturers and Administrative Staff Readiness</b>				
Number of qualified lecturers	<b>Low</b> <ol style="list-style-type: none"> <li>1. Relatively sufficient for running the current program.</li> <li>2. Limited exposure of the mainstream business lecturers to discuss sustainability issues</li> </ol>	<b>High</b> Lecturers hold doctoral degrees and have professional competence in accordance with the subjects taught	There is still a limited number of permanent lecturers who have professional competence in accordance with the sustainability subjects taught	Training and certification on the related field for 2 lecturers.
Number of qualified administrative staff	<b>Moderate</b> ECON SWU has dedicated and qualified administrative staff to assist the program as an international course.	<b>High</b> The availability of dedicated staff who are competent in serving various domestic/global stakeholders and students.	Add more competent staff with proficient English competencies and some knowledge in sustainability	Training in English communication and sustainability-related topic for 1 administrative staff
<b>Teaching Materials</b>				
Availability of teaching materials	<b>Moderate</b> There are learning plans available for	<b>Low</b> Availability of updated and	International textbooks covering	1. Up-to-date sustainability textbooks and



(teaching notes, case studies)	the courses, yet it still needs some improvement.	improved learning plans and teaching material that related to issue in sustainable development	contextual and current topics are rare.	other teaching materials 2. Relevant, current case studies.
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**Table 6.** Mapping Result of NU

	<b>Status Quo Situation (1)</b>	<b>Ideal/ Expected Standards (2)</b>	<b>The Gaps between the Status Quo and the ideal/expected standards (3)</b>	<b>Resources Required (4)</b>
<b>Institutional Situation</b>				
Regulations, rules and procedures within the institutions/national level as well as the interests of the external stakeholders	<b>(Moderate)</b> There are national regulations, rules and procedures to be in compliance with, i.e., the Education Criteria for Performance Excellence (EdPEX), and approvals from 4 NU's committees: Academic Administration Committee, Graduate School Committee, Academic Administration Council and Naresuan University Council. The interests of the external stakeholders must be included in the curriculum development stage.	<b>(High)</b> 1. A more collaborative relationship between the university's management level and program's management level to sustain the program. 2. A template and/or constructive comments for the program to meet the requirements within a program launching period.	1. The lack of effective communication on the committees' demands and expectations resulted in a time-consuming process of program development/ revision. 2. The need to involve external stakeholders to build the platform or process, rather than a personal contact.	1. Training on regulations, rules and procedures for 1 lecturer and 1 administrative staff.
Existence of identical/similar program at the partner institutions	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>	<b>Not available (N/A)</b>
Institutional/school arrangement under which the program is currently offered	<b>(Moderate)</b> 1. The faculty arranges budget, staff and activities to support the program. 2. For the Master Degree Program, LDSC offers both thesis and IS to	<b>(High)</b> Provide half or full scholarships, hybrid classrooms, more experiential-based learning activities and a progressive marketing plan to	The lack of interesting financial offers to attract prospective students.	Scholarship for selected students

	<p>encourage those who are interested in conducting research and going to work in the industry.</p> <p>3. Generally, the program operates with approximately 5-10 students per academic year.</p>	attract prospective students.		
<b>Program/Curriculum Development (*fill only the relevant situation to your institution)</b>				
Developing a new study program*	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>
Improving the existing Master's program on sustainable management*	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>	<b>Not applicable (N/A)</b>
Introducing a new study concentration on sustainable management*	<p><b>(Moderate)</b></p> <p>The university and the faculty fully support the new study concentration. However, the concern is on the number of students interested in the concentration, which is also driven by the job market demand.</p>	<p><b>(High)</b></p> <p>1. Incorporate sustainable development and management subjects and topics in the program.</p> <p>2. Promote the importance of sustainability and SDGs to the students via research and activities.</p>	Marketing and promotion on the importance and job opportunities of sustainable management in logistics and digital supply chain.	<p>1. Training on sustainable management for 2 lecturers.</p> <p>2. Training on marketing for 4 administrative staff.</p>
Alignment of the existing program/curriculum with the sustainable development and	<p><b>(Moderate)</b></p> <p>The sustainable development and management curriculum can be aligned with the existing program by</p>	<p><b>(High)</b></p> <p>The concentration can be integrated into the program.</p>	Insufficient courses in sustainable development and management and SDGs in the program.	Training in developing a sustainable development and management concentration in

management curriculum	introducing five new elective courses in sustainable development and management.			logistics and supply chain for 2 lecturers.
<b>Lecturers and Administrative Staff Readiness</b>				
Number of qualified lecturers	<b>(High)</b> All faculties at LDSC NU hold a PhD degree in various fields related to logistics and supply chain.	<b>(High)</b> 1. Additional lecturers with expertise in sustainability and SDGs in logistics and digital supply chain. 2. Additional lecturers with experiences and strong connection with industry.	There is a limited number of qualified lecturers. Most lecturers earned a degree in engineering, and only few of them conducted research related to sustainability issues.	Training 4 lecturers on sustainability and SDGs in logistics and digital SC.
Number of qualified administrative staff	<b>(Moderate)</b> 1. There is a sufficient number of administrative staff. 2. Our current staff have limited English communication skills.	<b>(High)</b> One or two additional qualified administrative staff in regulations, rules and procedures, IT and communication skills.	Additional number of qualified staff to ease in the concentration operation.	Training in regulations, rules and procedures, IT and communication for 2 administrative staff.
<b>Teaching Materials</b>				
Availability of teaching materials (teaching notes, case studies)	<b>(Moderate)</b> The small numbers of teaching notes and case studies.	<b>(High)</b> Teaching materials that are updated and aligned with industry demands and global trends.	The need to update cases in the teaching notes, regularly and to add more industry's demands and global trends.	Training, seminars, and conference on the relevant topic for 4 lecturers.

## **V. CONCLUSION AND RECOMMENDATION**

### **V.1. Conclusion**

Several conclusions can be drawn from this research as follows:

1. It is imperative to introduce and enhance the Masters' program in sustainable management both in Indonesia and Thailand. This is due mainly to the fact that global pressure, particularly the SDGs, massively permeates the institutional dynamics at the domestic levels. Two sectors are seen to predominate, namely the government and industries. This study highlights that the role of higher education is still widely open and can be optimised.
2. The country institutions, namely regulatory frameworks that in support of sustainable management, are in existence in both countries. Yet, the pressure they provide to the educational sector is yet to be effective. The self-assessment on this aspect is generally moderate.
3. There are currently a limited number of such programs on offer in both countries and these can be put into three groups. First, the program is heavily sponsor-reliant and hence short-lived (i.e. MBA FEB UGM). Second, the program has been long available yet lacking applicants (i.e. MM USAKTI, ICO NIDA). Third, the program is non-existent (i.e. MM UII, SWU, NU). The self-assessment on this aspect ranges from low to moderate.
4. The readiness of lecturers and administrative staff for instituting Masters' programs in sustainable management is generally insufficient. The self-assessment by all six partners shows low to moderate level of readiness in this aspect.

### **V.2. Recommendation**

A number of recommendations can be constructed as follows:

1. A more progressive existing Masters' programs and a new concentration on sustainability management shall be introduced.
2. A combination of capacity building programs which consists of in-country training, in-house training, inviting experts/guest lecturers from Masudem European partners and sending the staff overseas for a short internship/training program.
3. The number of staff subject for capacity building is
  - a. Two to four lecturers in the academic areas, namely study concentration, curriculum, subject development as well as case study development.

- b. One to two administrative staff for each supporting activities, namely program promotion, student admission, general sustainable management knowledge, and English proficiency.
- 4. A series of training to enrich the teaching activities, namely curriculum, course structure, and case studies. In particular, the assistance in building context-based teaching materials is in great need. The main objective is to empower students to become active and engaged citizens who can contribute and be agents of change to a more sustainable global community.
- 5. A series of capability building for the administrative staff to support and promote the program more aggressively. The target stakeholders include prospective students, strategic industry partners and government institutions.

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## Appendix

### A. MBA FEB UGM

#### Program Structure of the ASEAN Master in Sustainability Management Program

Sep – Dec 2022	Feb – Jun 2023	Aug – Dec 2023	Feb – Jun 2024
<b>Pre-MBA (equivalent to 30 ECTS)</b> <ul style="list-style-type: none"> <li>Accounting and Finance</li> <li>Business and Management</li> <li>Managerial Economics</li> <li>Statistic for Business Decision</li> </ul>	<b>Semester 1 (45 ECTS)</b> <ul style="list-style-type: none"> <li>Business Ethics</li> <li>Leadership Communication</li> <li>Marketing Management</li> <li>Financial Management</li> <li>Leadership and Organizational Behavior</li> <li>Technology and Operations Management</li> </ul>	<b>Semester 2 (45 ECTS)</b> <p><b>Part 1 (22.5 ECTS)</b></p> <ul style="list-style-type: none"> <li>General Business Environment</li> <li>Sustainable Business Strategy (HBSO)</li> <li>Research Methods in Concentration</li> </ul> <p><b>Part 2 (22.5 ECTS)</b></p> <p><b>Track A</b></p> <ul style="list-style-type: none"> <li>Energy Resource Management</li> <li>Urban Planning and Management</li> <li>Climate Change Laws and Greenhouse Gas Reduction</li> </ul>	<b>Semester 3 (30 ECTS)</b> <ul style="list-style-type: none"> <li>Internship</li> <li>Master thesis</li> </ul>
			<p><b>Track B</b></p> <ul style="list-style-type: none"> <li>Food Security and Sustainable Agriculture</li> <li>Forest and Conservation Management</li> <li>Marine Resource and Coastal Management</li> </ul>

#### Field visits by Batch 1 students

