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## **An Analysis of Sustainability Approaches of Malaysian Public Universities**

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### **Abstract**

The Sustainable Development Goals Report (2022) highlights the urgent need for concerted action on a global scale to put the world on track to sustainability. Universities are the primary social actor of civil society and are essential in facilitating the world to achieve sustainable development goals (SDGs). This study clarifies the sustainability approaches of Malaysian public universities. Analysis of the sustainability reports revealed several key insights. First, there was varying focus on the SDGs between the universities. Secondly, three similar themes of the sustainability approach were found, namely: (1) impart knowledge, (2) technology breakthrough, and (3) strategic alliance.

**Keywords:** Sustainability; Sustainable Development Goals; Public Universities; Malaysia

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### **1.0 Introduction**

The Sustainable Development Goals Report (2022) reveals that the 2030 Agenda for Sustainable Development is in grave danger due to a confluence of crises dominated by COVID-19, climate change, and conflicts. These have been creating spin-off impacts on food and nutrition, health, education, the environment, and peace and security, consequently affecting the acceleration of the Sustainable Development Goals (SDGs). The report highlights the urgent need for concerted action on a global scale to put the world on track to sustainability.

Universities are the primary institutions for the dissemination of knowledge and the generation of new knowledge. They provide cutting-edge research, high-quality education, and groundbreaking innovation (European University Association, 2018). These aspects made universities an essential part of civil society and are regarded as having a unique and critical role in facilitating the world to achieve the SDGs, a compass in a world defined by volatile, uncertain, complex and ambiguous conditions (Purcell et al., 2019). A Global Survey Report on Higher Education and Research for Sustainable Development by the International Association of Universities (2023) reveals that higher education is essential to address the global challenges identified in the United Nations Agenda 2030 and the SDGs and build a more sustainable future together.

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In a developing country such as Malaysia, the university is an impetus for establishing a civic-minded society and an engine for societal transformation, which drive meaningful progress towards more sustainable and promising outcomes for humanity in the country. Placing sustainability as a central strategic agenda can connect the different constituencies within the university and with others outside the university to progress the achievement of the SDGs with networks convened around a shared purpose (Purcell et al., 2019). However, sustainability often sits on the margins of mainstream subjects, with academic work in the field largely separate from campus operations and community service such that universities struggle to integrate sustainability into their governance and business models (Purcell et al., 2019). In response to this concern, this study explores the route Malaysian public universities take to frame sustainability as the aspiration corresponding to sustainable development represented by the UN's SDGs. The study intends to specifically illuminate the efforts and strategies of Malaysian public universities in anchoring sustainability for their teaching, research, innovation and operation agendas.

## 2.0 Literature Review

### 2.1 Sustainability

The term sustainability is derived from the Latin, 'sub + tenere' where 'sub' means under or towards and 'tenere' means to hold or keep (The University of Nottingham, n.d.). Sustainability is not just environmentalism but also embedded concerns for social equity and economic development. This holistic approach considers ecological, social and economic dimensions, recognising that all must be considered together to find lasting prosperity (McGill University, n.d.). According to Klarin (2018), sustainability means "a capacity to maintain some entity, outcome, or process over time" and carrying out activities that do not exhaust the resources on which that capacity depends. Many have regarded sustainability as the practices that responsibly meet the needs of the present without compromising the ability of future generations to meet their own needs (e.g. Hasim, 2011; Saadatian et al., 2009). It is thus not surprising to note that the concept of sustainability has become the keystone of the global dialogue about the human future (Orr, 2002).

### 2.2 The United Nations conversations on sustainability

The United Nations (UN) conversations about sustainability began around the weather. During the Human Environment Conference (1972) in Stockholm, Sweden, authorised by the UN General Assembly, there was a major dilemma between the rich nations' interest in environmental protection and the poor nations' interest in economic growth (Brown, 2015). The notion of sustainability has consequently become the key concept for working towards these different national agendas to include both social and environmental concerns, where it brought to the central meaning of sustainability that meeting current needs should not deny future generations the capacity to meet their needs (Brown, 2015). During the Kyoto conference meeting in 1997, the conversation focused on the growing evidence of global warming resulting in a legally binding agreement that industrialised countries would reduce their collective emissions of six greenhouse gases between 2008 to 2012 (Brown, 2015). As some nations have not ratified the Kyoto protocols and to encourage corporate participation in those endeavours, the UN initiated the Global Compact in the year 2000, which invited multinational corporations to commit themselves to a set of core values in the areas of human rights, labour standards, the environment, and anti-corruption, an attempt to address the potential power of multinational corporations to create a sustainable economy – similar themes were tabulated during the Johannesburg Earth Summit in 2002 (Brown, 2015). For corporations that have joined the Global Compact, one of the key obligations is reporting on their environmental and social performance. In the mid-90s, some corporations began reporting on their financial performance alongside environmental and social performance. In 1997, a coalition of international groups, including the United Nations Environment Program (UNEP), established the Global Reporting Initiative (GRI) that provided corporate guidelines for triple-line reporting following the standard practices of accounting, including transparency, inclusiveness and accuracy (Brown, 2015). After that, the practice of triple-line reporting and the Global Compact has tremendously framed the conversation on sustainability in the past decade until today. According to Thompson et al. (2022), using standard reporting frameworks and metrics such as those developed by the Global Reporting Initiative has promoted greater transparency and facilitated benchmarking across firms and industries for the past years. Most major companies have begun to change how they do business, emphasising the use of sustainable business practices that are defined as those capable of meeting the needs of the present without compromising the ability to meet the needs of the future (Thompson et al., 2022).

### 2.3 The United Nations' Sustainable Development Goals

The SDGs provide a common international framework for concrete action that ensures social cohesion, economic prosperity and protection of the environment. Adopted in 2015 by 193 countries, the 17 goals (see Fig. 1) have 169 targets and are part of the United Nations sustainable development agenda aimed at ending poverty, protecting the planet and ensuring prosperity by 2030 (European University Association, 2018). In general, the SDGs is a universal set of goals, targets, and indicators that UN member states will be expected to use to frame their agenda and political policies over 15 years (from 2016 to 2030) in areas of critical importance for humanity and the planet (Ministry of Economy, 2021).



Figure 1: The United Nations SDGs (17 Goals)  
(Source: Ministry of Economy, 2021)

### 2.4 Sustainability and Malaysian universities

Hussin and Kunjuraman (2015) articulate that the research on sustainability and campuses in Malaysia is still in its infancy, with only a few attempts carried out by local researchers. Similarly, Saadatrian et al. (2009) argue that although sustainable higher education is a crucial issue in Malaysia, there have yet to be any comprehensive studies on public higher education initiatives and efforts in sustainability. Existing sustainability studies for Malaysian universities appear to be remarkably grounded in the fields of environment (Anthony Jnr, 2021; Hassim, 2011; Hussin & Kunjuraman, 2015). Nevertheless, sustainability is a concern beyond environmentalism (McGill University, n.d.); thus, a renewed interest in a study that offers a holistic view of sustainability that considers ecological, social and economic dimensions should be warranted. Purcell et al. (2019) highlight that the potential of the university to deliver against the SDG 2030 agenda is profound, and as the university becomes more connected to the society it serves, the sustainability journey can be accelerated. This assertion highlights the university as the primary social actor in facilitating the progress of SDGs.

### 3.0 Methodology

A multiple case study approach was adopted, given its usefulness in obtaining an in-depth appreciation of an area of interest in its natural, real-life context (Purcell et al., 2019). Two cases have been selected (see table 1) to illustrate their journeys towards sustainability agendas. The two cases are Malaysia's top ten ranked public universities (Ministry of Higher Education, 2021). The first case (hereinafter referred to as C1) is a research university where the focus is primarily on research and innovation activities, driven by highly competent academics and competitive student admissions aimed at achieving a 50-50 ratio of undergraduate to postgraduate students (Mohamad Sheriff & Abdullah, 2017). The second case (hereinafter referred to as C2) is a comprehensive university that offers various courses and fields of study, with a ratio of undergraduates to postgraduates 70 to 30 (Centre for Corporate & Quality Affairs, Universiti Malaysia Pahang, 2019).

Table 1. Descriptions for the two cases selected

Case	Category	Label
One	Research university	C1
Two	Comprehensive university	C2

Through the examination of archival documents of the cases, i.e., the sustainability reports for the year 2021 (retrieved from the respective universities' websites), the key insights in each case are drawn out to identify patterns and emerging sustainability approaches across the cases. There were three stages of analysis: (1) familiarisation with the data of the sustainability reports, (2) extraction of themes representing the sustainability approaches initiated for respective SDGs, and (3) refinement of themes to establish specific emerging themes.

### 4.0 Findings

In general, the two cases understudied exemplifies strong efforts to support the UN's 17 SDGs. Nevertheless, there is a presence of slightly different in the SDGs focus between the two cases from the analysis of the sustainability reports. C1 seems to emphasise four specific SDGs, i.e., SDG 3, SDG 4, SDG 10 and SDG 11. The SDGs focus for the C2 is SDG 4, SDG 10, SDG 11, SDG 15 and SDG 16.

Concerning the sustainability approaches, three similar emerging themes were found for both cases, namely: (1) impart knowledge, (2) technology breakthrough, and (3) strategic alliance.

#### 4.1 Impart knowledge

Impart knowledge is the main agenda that roots the sustainability approaches of the two cases. It was reported in most of the 17 SDGs. Webinars, conferences, awards, competitions, symposiums, training, dialogue, roadshow, workshop and exhibitions (predominantly webinars), which are typically regarded as the platform for imparting knowledge, are frequently initiated by the respective individual faculties and centres. C1, through the Faculty of Medicine, initiated a door-to-door technical visit to a local island to raise awareness of vaccine-preventable and communicable diseases to promote healthy living among its people (SDG 3). C1 (via the Faculty of Arts and Social Sciences) conducted a series of gender seminars that evaluated a few areas, including gender equality and refugee women (SDG 5). Meanwhile, a group of students from C2 took the initiative to organise an online campaign to empower the public to take up indoor planting to cultivate planting as a culture at home and expose indoor planting as an easy undertaking (SDG 15).

#### 4.2 Technology breakthrough

The two cases were persistent in pursuing research and consultancy projects that led to establishing technology breakthroughs. The SDGs that were found to be strongly associated with the technology breakthrough are SDG 6, SDG 7 and SDG 9. For example, a remote-controlled water surface robot prototype, fused with artificial intelligence (AI) techniques to track and trap trash and sample lake water for water quality monitoring, was built by C1 in 2021. Meanwhile, C2 researchers were awarded a grant to produce alternative materials for water treatment through the local bamboo charcoal. These two research projects are inspired by SDG 6, which focuses on clean water and sanitation. In support of the green campus aspiration, C1 researchers develop a real-time mobile application for the carpooling system within the campus and a web interface for the stakeholders to monitor the overall carpooling system (SDG 9). As a result of the growth of batteries due to the growing renewable energy sector, and rapid adoption of electronic vehicles and devices, a group of researchers from C1 committed to developing an ultra-battery based on the dual-ion system that is environmentally friendly, safe and associated with low manufacturing cost (SDG 7).

#### 4.3 Strategic alliances

The two cases frequently engaged in cooperative initiatives to accelerate their progress towards the SDGs. The cooperative initiatives were curated through collaborations, partnerships and Memorandum of Understanding (MoU) with diverse involvement across government bodies, corporations, universities and the not-for-profit organisation (NGOs), locally and internationally. These strategic alliances are reported as the typical approaches to address most SDGs. A centre in C1 collaborated with a local private university and a not-for-profit organisation (in biotechnology) to conduct Malaysia's National Banana Congress in 2021 to promote the banana industry to improve nutrition and sustainable growth for the people of Malaysia in its capacity (SDG 2). With initiatives under MoU with the local municipal council, C2 committed to strengthening its low carbon implementation across the campus (SDG 7). In partnership with an international university in the Netherlands, C2 hosted an international online seminar to showcase Malay literature and culture (SDG 11). Through collaboration with a local cafe, the Marine Research Station of the C2 hosted an event at a local island to raise awareness regarding marine conservation (SDG 14).

## 5.0 Discussion

The findings above characterised vast commitments of the two cases corresponding to the UN's SDGs. Specifically, their commitments reflect a sense of resilience using innovative ways through teaching, research and stakeholder engagement, locally and internationally, to foster synergised efforts to ensure a multi-perspective approach in addressing the UN's SDGs.

According to the European University Association (2018), the 17 SDGs can be grouped into three broad areas: (1) well-being (i.e. SDG 1 to SDG 6; SDG 10; SDG 11), (2) environment (i.e. SDG 7; SDG 13 to SDG 15) and (3) economy (i.e. SDG 8; SDG 9; SDG 12). European University Association (2018) also identifies SDG 16 and SDG 17 as components that characterise strong institutions. These premises can be subscribed to clarify the SDGs focus of the two cases understudied, which have been mentioned previously in the findings section. The C2 is firmly embedded in SDGs of well-being (i.e. SDG 4; SDG 10), environment (i.e. SDG 15) and strong institution (i.e. SDG 16) areas. In comparison, the C1 focus is confined to the well-being areas incorporating SDG 3, SDG 4, SDG 10 and SDG 11. In this regard, C2 is more diverse regarding its SDGs focus than C1. The C1 teaching hospital is the largest healthcare training centre in the country. Its research centre and the Clinical Investigating Centre (CIC) are world-renowned and have won many awards (Sani, 2018). Hence, it is not surprising to note the comprehensive efforts demonstrated by C1 for the well-being agenda.

The findings of the study also draw a few notable interpretations. First, the SDGs aspiration can be influenced by the university category. As a research-focused university, the sustainability approaches of C1 are evidenced by high-impact ideas and innovative endeavours throughout the 17 SDGs compared to C2, a comprehensive university. Secondly, there needs to be more aspiration framed on the operations of SDG 8, SDG 9 and SDG 12 (economy areas), although some efforts were documented in both sustainability reports. Third, European University Association (2021) highlights that sustainability is a value that must be at the heart of all strategic activities and governance and must be integrated across the whole institution and its ecosystem. The findings apparently denote that the institutional approach for both cases in implementing the SDGs is restricted to individual faculty or centre efforts, thus demonstrating limited cross-departmental and interdisciplinary working groups in addressing the sustainability challenges.

## 6.0 Conclusion and Recommendations

It is important to note that sustainability is a concept that the two Malaysian public universities have already recognised. Nevertheless, there are still areas for improvement that these universities should consider to achieve an effective and strengthened delivery of sustainability aspirations. This requires a transdisciplinary and cross-departmental approach that aligns and embeds sustainability within all institutional strategic priorities, an attempt that needs to be revised in the current sustainability approaches. Therefore, streamlining the internal processes to deliver on the institutions' commitments across all entities for the SDGs should be reckoned. Universities' role in advancing sustainability does not end with curriculum design, research and knowledge transfer; within the communities, universities are major employers and consumers of goods and services; hence their economic behaviour can have a meaningful impact in addressing the sustainability challenge (Bunescu & Estermann, 2021). An institutional strategy to implement sustainable development cannot be restricted to any particular SDGs; instead, it needs to be integrated across the whole SDGs, a welcome sign of a more outward approach to sustainability in the future. Bunescu and Estermann (2021) remark that at the institutional level, there is a plethora of fields where universities can enact sustainability through their learning and teaching activities, research and innovation missions, campus infrastructure, community engagement mission, and strategic and operational management. While the first four were widely indicated in the current approaches, the strategic and operational management remains limited, an indication that there is a need for a more nuanced understanding of also tapping into the area of strategic and operational management to foster a vibrant institutional ecosystem that fulfils the commitment to sustainability endeavours.

This study is confined in scope to the two cases understudied. It solely enlightens some insights regarding the ongoing sustainability initiatives of the two cases based on their respective sustainability reports. Further research may consider gathering more cases (there are 20 Malaysian public universities) and a comparative analysis between the three categories of public universities, i.e. research, comprehensive and focused university, with regards to their sustainability approach.

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## Paper Contribution to Related Field of Study

The study has contributed additional empirical evidence to the current literature for sustainability studies focusing on public universities in Malaysia, where such attempt appears to be few. The findings of this study also help to elucidate the current sustainability approaches of the Malaysian public universities, the two cases specifically, hence signifies a platform to deepen the pursuit of further delivery of more comprehensive sustainability approaches for future endeavours. The study offers an understanding of the sustainability approaches from the perspective of research and a comprehensive university, which is limited in the existing literature.

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