

Case Study on Traditional Sustainable Practices in Southeast Asian Cultures

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ABSTRACT

This case study aims to investigate the local sustainable practices in Southeast Asian cultures and how these “green” practices can be cultivated to address the climate crisis. Oftentimes, sustainable solutions based on Western frameworks and perspectives are implemented to improve the climate situation. However, for non-Western regions and communities—in particular, in Southeast Asia (SEA)—some Western approaches in addressing the climate crisis may not be contextualized or feasible enough to be integrated in these said areas. Despite this incompatibility, SEA communities are not necessarily complacent about the climate crisis; in fact, SEA communities may already have sustainable practices embedded in their attitudes and daily life. This paper seeks to explore the following: [a] the possible reasons why some Western approaches of sustainability are not compatible with SEA lifestyle and preferences; [b] eco-friendly practices and initiatives in the SEA region; and [c] ways traditional SEA practices for sustainability can be encouraged and fostered within the local communities’ climate initiatives.

Keywords: Southeast Asia, sustainability, climate action, SDG 13

INTRODUCTION

The climate crisis is a crucial issue on the global stage. With the climate situation labeled as a climate emergency, the effects of climate change are ubiquitously felt. However, the consequences of this crisis are disproportionately impacting communities across the world. Southeast Asia (SEA) is considered an area susceptible to the climate crisis (Sentian et al., 2022). The shifting phenomena of the monsoon seasons in SEA lead to repercussions in the state of health, food security, and natural resources in the region (Sentian et al., 2022).

Prolonged droughts and periods without rainfall increase the risk of forest fires and dry up agricultural/commercial lands. At the same time, SEA experiences heavy typhoons, leading to the destruction of infrastructure and loss of life (Persoon & Minter, 2020). It is expected to suffer from immensely adverse effects of climate change than other regions in the world (Prakash, 2018). In two SEA countries, Indonesia and the Philippines, climate change is severely felt, risking natural resources and population (World Bank Group & Asian Development Bank, 2021a; 2021b).

To solve the climate crisis, initiatives and practices are introduced. One of the United Nations Sustainable Development Goals (UNSDGs) is Goal 13 Climate Action. Some of the activities suggested by UN SDG 13 are composting biodegradable waste, consuming less meat, and buying eco-friendly products (How to Achieve Sustainable Development Goals, n.d.). Similar trends in mainstream climate action are encouraged.

A. Objectives and Significance of the Study

This paper aims to investigate climate action in the Southeast Asian context, particularly in Indonesia and the Philippines. The study includes comparing mainstream practices for sustainability with local practices in SEA. The goal is to assess the applicability of global measures for climate action and identify gaps in these mainstream climate solutions. Also, this study offers to explore sustainable practices in SEA already embedded or recently emerging as part of their day-to-day culture and lifestyle. These specific practices are in the following areas, in the Philippines: [1] repurposing, [2] consumer habits, [3] transportation, [4] traditional housing structures, and [5] house chores; and in Indonesia: [1] waste management, [2] sustainable housing, and [3] natural medicine.

This case study may serve as a basis for future researchers, SEA communities, SEA governments, lawmakers/policymakers, and climate advocates/institutions to recalibrate climate action into becoming more inclusive. By providing more context into Southeast Asian climate-related issues, stakeholders can better understand the limitations of the dominant sustainable practices and empower SEA sustainability efforts.

B. Scope and Delimitations

The researchers probe into sustainable practices in Southeast Asia, specifically the Philippines and Indonesia. The reasons for focusing on these two nations for the case study are climate conditions and a relatively high percentage of environmental concern.

Firstly, The Philippines and Indonesia are archipelagic countries with diverse natural resources that are most vulnerable to climate change. In terms of environmental concern, 64% of Indonesians and 77% of Filipinos find environmental issues “extremely important” (Hicks, 2021).

This paper will not discuss practices in and contexts of other SEA countries. Future researchers may bridge this gap by furthering the same area of study and expanding the scope to other SEA countries or SEA in general.

C. Definition of Terms

To allow a clearer understanding of the study, this part defines some terms to be used in the paper. Sustainability may be defined as a framework requiring “ways of living, working and being that enable all people of the world to lead healthy, fulfilling, and economically secure lives without destroying the environment and without endangering the future welfare of people and the planet” (Johnston et al., 2007). In this study, researchers consider factors of sustainability such as waste management and harnessing and conservation of resources.

Mainstream is a term mostly used in the paper. This term might be used interchangeably with “Western” to highlight globally accepted, conventional, and popular concepts. However, to emphasize Southeast Asia as a particular region and culture, “Western” is often used to demonstrate contrast.

The concepts referred to as local or traditional are concepts commonly used in a country. These may be pre-existing concepts or recently emerging ones. However,

the authors of the study neither assume nor imply that SEA practices and cultures are monolithic. Any information about SEA in general may or may not apply to all countries in the region.

MATERIALS AND METHODS

This paper aims to investigate the following: [a] the possible reasons why some mainstream approaches of sustainability are not compatible with SEA lifestyle and preferences; [b] eco-friendly practices and initiatives in the SEA region; and [c] ways local SEA practices for sustainability can be cultivated. To do so, this paper illustrates and describes the findings based on pre-existing literature. The discussion of the case study is dominantly a synthesis of data from available literature. Literature used for the research include government documents, scientific studies, personal accounts online, website articles from non-governmental organizations, and similar sources.

RESULTS AND DISCUSSION

A. Mainstream Sustainability

Despite being promulgated as a global effort towards environmental and social welfare, the core values and principles of sustainability cater mainly to the Western agenda (Blaser et al., 2004). According to Blaser et al., the goal of sustainability, under the Western worldview, merely exacerbates the tension between developed and underdeveloped countries. This position on sustainable development draws its solutions from individual responsibility and autonomy, inextricably linked to ideals of capitalism and colonial expansion. Moreover, recommendations from this position are derived from technological innovations that may not be accessible to less developed countries such as the Philippines and Indonesia.

One notable movement under Western-centric sustainability is transitioning to a “plastic-free” lifestyle. This initiative is an effort to moderate the high volumes of waste production through lessening or eliminating plastic usage. In 2010, the global production of plastic waste was higher than records of previous years (Jambeck et al., 2015). This was counteracted by the Plastic Free July Movement in 2011 in Australia (Plastic Free Foundation, n.d.). Going “plastic-free” entails replacing single-use products with reusable or biodegradable alternatives. Consumers are to opt for eco-friendly products such as bamboo toothbrushes, shampoo bars, and metal straws.

Another way of combating massive plastic waste is recycling. Recycling is the process of gathering and treating materials, which would otherwise be discarded, to manufacture them into new items (United States, Environmental Protection Agency, 2022).

Finally, Western sustainability ideologies suggest home improvements and renovations aimed toward energy conservation. Under these measures, homeowners are to replace their home appliances with energy-saving alternatives. One example is switching from incandescent to LED lights. Fluorescent lights usually spend 95% of their energy as heat and only 5% as light, while LED lights utilize 95% of their energy for light generation and lessen heat emission (Solar Electric Power Company, 2013). Further, the energy source of the house is also taken into consideration. Residential solar power panels are installed on roofs to reduce the homeowner’s carbon footprint

and reliance on fossil fuels. As for modes of transportation, electric cars are becoming increasingly popular vehicles, seeing as how they require lower maintenance, perform more efficiently, and do not emit any pollutants (U.S. Department of Energy, n.d.). Currently, electric cars make up 11% of new car sales worldwide (Carey, 2023).

B. Mainstream Climate Action in the Southeast Asian Context

1. Philippines

Filipinos find it difficult to switch to sustainable products due to inaccessibility and high prices (Lezoraine, 2021) and their inclination to remain loyal to the brands and products they frequently purchase (Guitierrez, 2004).

The Philippines is the 3rd largest contributor to plastic pollution worldwide (McKinsey, 2015). This is because the country receives an abundance of consumer goods that are packaged in single-use plastics like sachets or packets. These products are typically targeted toward lower-income groups in developing countries, claimed to be cost-effective and pro-poor.

However, this reasoning completely disregards the reality that the burden of high volumes of single-use plastics ultimately falls on the communities that consume these products.

In 2019, the Philippines was reported to have a disparity gap of 85% in recycling capabilities when compared to its counterparts, Malaysia and Thailand (World Bank Group, 2021). Some structural challenges contributing to the failure of the recycling market include high electricity costs, lack of incentives for local governments to invest in waste management, and small and medium enterprises (SMEs) not meeting multinational buyers' standards.

Furthermore, the Philippines' National Renewable Energy Program 2020-2040 has set targets for the country to achieve 35% of power generation from renewable sources by 2030 while making solar energy affordable and accessible (NREP, 2022). That said, the shift towards renewables is currently declining as it constituted only 21% of power generation in 2021 compared to its previous rate of 34% in 2008. The Philippine government, to incentivize renewable energy, pushes for legislation and policies to promise incentives such as tax exemptions and reduced income tax (Koty, 2023).

2. Indonesia

According to Fi Asia Indonesia (2022), customers experience challenges in adopting a more sustainable way of living, albeit eager to do so. Forty-nine percent of the respondents of the study find that environmentally sustainable products are too expensive, while 51% find recycling “too difficult.” Moreover, a survey run by Illuminate Asia revealed that 60% of Indonesians claim that they purchase products based on how sustainable they are. However, only 20% of the respondents inspect the product's recyclability, while 60% admit that they do not at all check (Herdman & Rahmanto, 2021).

Almost 7 million tons of plastic waste is produced annually in Indonesia, yet only a mere 10% gets recycled (Nurbaiti, 2021). Waste is then either discarded or burned onto unused land as well as into bodies of water such as rivers, lakes, and oceans. The percentage diminishes even further in rural regions owing to inadequate

collection and sorting facilities. This is because Indonesia is also at the receiving end of a sachet economy (Napitupulu et al., 2021). In response, Indonesia has pledged to decrease marine plastic debris by 70% before 2025 (Shahab, 2021).

The government introduced new legislation on waste management and a ban on single-use plastic at convenience stores. However, the policy has not proven to be effective, seeing as how plastic bags are still commonly used in non-regulated markets.

Being a tropical country, Indonesia has a large potential for solar energy development. Its national government has initiated a goal of garnering 3.61 gigawatts from solar panel installations (Galuh, 2022). However, Indonesia has only reached less than 10% of the established goal. Financial risk and low funding pose a hindrance to solar energy in the country. Moreover, despite Indonesia's potential in solar energy, the state's sole electricity provider PLN cannot immediately utilize it due to contractual obligations with multiple power plant operators that last up to 20 years (Silalahi, 2020).

C. Environmental Awareness in SEA

Environmental issues are important to Indonesians (64% say they're extremely important) and Thais (59%), a global study of 23,000 people published in September found (Hicks, 2021). According to GlobalData, Filipinos are the most concerned about every social and environmental issue in Southeast Asia (2021). Marian Ledesma, a Manila-based campaigner for Greenpeace, said the findings were unsurprising. “Nature is linked to or has implications for our food, livelihoods, health, transportation, and people's overall well-being. As a result, Filipinos' lived experiences and exacerbated hardships as a result of environmental challenges play a significant role in developing Filipino consciousness about environmental conservation,” she explained.

Southeast Asians are relatively more concerned than the global average. For this regional bloc, 56% of the population find environmental issues extremely important compared to 48% internationally. The study also discovered that younger individuals are more likely than older generations to support social and environmental issues.

D. Sustainable Practices in SEA

In this section, we will delve into several sustainability efforts of the people residing in the Philippines and Indonesia. To emphasize people's ongoing dedication to environmental preservation and sustainable living, we will examine a variety of sustainable practices that the two countries have adopted for years.

1. Philippines

Repurposing of Belongings. An article by Edralin (2022) provides a striking account of Filipinos' inventiveness and creativity in repurposing goods. The author emphasizes her Filipino parents' commitment to waste reduction through reusing and repurposing clothing, household objects, and numerous other things. The author recalls seeing how creatively old

biscuit tins were transformed into jewelry storage within the context of the family and how peanut butter jars were utilized as money jars. The article also highlights the

author's parents regularly use balikbayan boxes to move household goods including clothing, furniture, and appliances. Sending balikbayan boxes is a common practice among Filipinos living abroad. The practice serves as a touching way to show love and concern for family members back home while also preserving the usefulness and longevity of goods.

Consumer Habits. Another sustainability practice that is present in the Philippines is the “wala-usik” initiative for sari-sari stores in the country. A sari-sari store, which is a small, neighborhood retail store that meets the unique needs of its community, is an integral element unique in Filipino culture. These stores often stock a variety of everyday necessities for Filipinos. However, the abundance of this type of store in the whole country implies a huge consumption of products in sachets, since the purpose of such stores is to provide daily necessities in retail.

With this, the non-profit organization Philippine Reef and Rainforest Conservation Foundation provides for the adoption of zero-waste and circular businesses in the "sachet economy" by promoting the "wala usik economy." This strategy focuses on reducing the use of single-use plastic materials across a range of enterprises, like sari-sari stores. This project, which promotes innovation and the adoption of methods that reduce the production of plastic trash, is consistent with the overarching goal of promoting a sustainable and environmentally friendly economy. Eight sari-sari stores prevented the consumption of more than 45,000 individual sachets over seven months during their initial prototyping cycle (Albao, 2021).

In a survey by Montebon et al., participants exhibit sustainable shopping habits. They plan their travels to the mall, reducing wasteful travel and lowering transportation-related carbon emissions. The reuse of previously owned clothes is also supported through thrift stores or ukay-ukay. The respondents also engage in mindful shopping, purchasing only what is required and maximizing the use of materials. Most of them also favor locally grown produce, supporting local farmers, and lowering carbon emissions linked to long-distance transportation when it comes to sources of produce (2022).

Traditional Housing Structures. Filipino household structures themselves demonstrate sustainability thinking. Montebon et.al (2022) looked into sustainable practices of several Filipino homes, in which they highlighted that the traditional bahay kubo or “nipa hut” in Filipino culture is a robust symbol for adopting sustainable practices unique to the Philippines. It is a tiny house made of local materials with numerous windows to maximize natural lighting and airflow. Notably, Filipino households are constructed in a way that there are many windows and open spaces to manage ventilation and minimize their utility costs. This enables sufficient airflow and cooling, given the intense heat in the Philippines. The study also found that while air conditioners are less common in houses than electric fans, this contrast shows an intentional effort to combine comfort and energy efficiency.

House chores. The same study by Montebon et al. revealed that while most Filipinos wash their clothes in washing machines, a significant number still handwash their clothing. As such, efforts have been undertaken to control clothing washing to ensure efficient use of water and energy. To further reduce water wastage, some Filipinos report to have set up water recycling devices to reuse water from washing

machines (2022).

In terms of food consumption, the responders report using sustainable sourcing and preparation techniques. The majority favor cooking on gas stoves since they use less energy than other types of stoves. Additionally, it is made a point to only cook enough food that the family needs to prevent food waste. Furthermore, some Filipinos reuse and recycle leftover food, coming up with inventive ways to cut down on food waste (Montebon et al., 2022).

The same data, in terms of waste management, reveal that Filipinos have embraced environmentally friendly measures like recycling organic waste in compost pits. They separate recyclable items from non-recyclable ones to ease efficient disposal. Many Filipinos also gather recyclable materials that can be sold, boosting recycling and promoting the circular economy (Montebon et.al, 2022).

Transportation. In terms of transportation, they opt for public transportation, choosing it 80% of the time compared to private cars. A few examples of sustainable transportation practices are short-distance walking and using public transit. Also, using personal vehicles is scheduled and pre-planned to reduce fuel consumption and emissions (Montebon et.al, 2022). These sustainable daily initiatives demonstrate the Filipinos' dedication to limiting waste, preserving resources, and lowering their carbon footprint.

2. Indonesia

Waste Management. At the household level, efforts for waste reduction have been put in place, with additional systems put in place to further incentivize participation from the community. Regarding Solid Waste Management, aside from composting and dumping in landfills, parts of Indonesia have adopted the use of waste banks, wherein recyclables and any inorganic wastes are collected and treated with economic value. Customers of these banks can have savings books and can borrow money from the bank, which is then returned in the form of solid waste with the same value as that of the money borrowed. The deposited waste is weighed and valued and then sold to factories or recycling sites or even upcycled to be processed and repurposed (Bahraini, 2020).

Innovations in technology have also been utilized in initiatives to reduce waste. Applications, such as Gringgo, allows users to take photos of the waste they have, identify the material and its market value, and determine how to maximize their income and efficiency in recycling such materials. Another application, Siklus Refill, lets households order products and have them delivered to their doorstep without plastic packaging to encourage reduced plastic usage (Aprilia, 2021).

Multiple initiatives have also been launched to promote sustainability and target problems with waste management, traffic congestion, and even the effects of tourism as the country begins to emerge as a popular tourist destination. One such project, according to the United Nations Framework Convention on Climate Change, involves the collection of used cooking oil from households, restaurants, and hotels. This prevents waste oil from being added to other wastes, dumped in sewages, or even posing health risks through reusing. The collected waste oil is converted into biodiesel, to be used as an alternative energy source for transportation and electricity.

Another initiative is Urban Compost Bali, a start-up from a group of biologists, which aims to contribute to sustainability by offering composting services. Customers are given bins to put scraps, such as food scraps, garden trimmings, and other organic wastes, which would be collected and replaced with a new bin. Customers may also get fertilizers which they can use in exchange for their wastes (Ditzel, 2022).

The use of biogas has also been proposed in the country’s campaign for a more sustainable future. As Indonesia’s growing population has shown to be heavy consumers of meat, this increasing consumption of animal products would eventually increase livestock populations, such as cows, pigs, goats, chickens, and others (Khalil, 2019). With this comes also an increase in organic wastes produced by this livestock, which then puts the country with a high potential for utilizing such wastes as an alternative source of energy, namely biogas. One initiative encourages families who raise livestock for their livelihood to produce biogas from animal wastes, which can then be used as an energy source by converting animal manure to biogas. The byproduct left after producing biogas can also be used as organic fertilizer for crops. The utilization of these wastes can help prevent improper disposal of animal waste, reduce dependence on fossil fuels, and further help the country’s supply of sustainable non-renewable energy (Sari et al., 2022).

Sustainable Housing. Another initiative is the development of sustainable housing in densely populated areas. Larasati has outlined some attempts to develop sustainable housing in Indonesia, taking into account the resources available, climate, and other factors (Larasati et al. 2006). One of which is the Eco-House developed by the Sepuluh Nopember Institute of Technology (ITS), which utilized a passive solar design to take advantage of the country’s climate for heating, hence reducing energy use. It also utilizes local materials, such as coconut fiber for roofing and insulation, and includes a spring underneath the house, from which used water is then recycled and reused for insulation, as well. Another Eco-House built by Pusat Penelitian Lingkungan Hidup (PPLH), along with utilizing local resources, makes use of nets instead of insect repellent to address the insect attacks that are prevalent in tropical countries. In Banjarsari Village in Cilandak, Jakarta, the community promotes turning paper and bio waste into income, as well as establishing “green kiosks” that sell recycled products, composts, and other products from upcycled wastes. In these initiatives, the climate, diversity, and cultural characteristics of communities in Indonesia greatly influence the notion of sustainable housing. As shown, locally available materials are used for insulation and to minimize energy consumption, and the abundance of natural resources also presents opportunities for alternative energy sources, as well as income generation.

Natural Medicine. In another study in 2023, Astutik et al. documented different systems of obtaining medicinal plants in rural Indonesia. In rural communities, medicinal plants have been relied on not only for medical purposes, but for food, cosmetics, and other purposes. Beyond traditional medical use, locals from rural communities also utilize these plants to generate income by selling manufactured products from these plants. In Indonesia, these medicinal plants are obtained through two major categories of harvesting: through forest gathering, or cultivation. Compared to wild gathering, these two styles of cultivation provide better

quality and higher yield of harvest; however, these are also met with issues such as high capital investment, strong competition with other industries, and generally higher costs compared to forest gathering techniques. With these practices, rural communities can rely less on packaged commercial medicine and utilize their resources more for medicinal purposes. (Astutik et al., 2023).

CONCLUSION

The issue of the climate crisis has escalated to become a global emergency. Given contrasting financial capabilities and geopolitical power, the response to climate change varies worldwide. However, the mainstream approach to sustainability undoubtedly serves the interests of the West alone, which has caused lesser-developed countries such as Southeast Asian nations to fall behind. Despite the efforts to emulate Western beliefs and values, Southeast Asian countries such as the Philippines and Indonesia have not been successful. Contrasting with principles of individual responsibility and consumerism, Southeast Asian sustainable practices derive from traditional practices and community-based approaches. To successfully cater to these nations, both national and local governments must instead allocate their concern and resources on localized knowledge systems and cultural values. This can be done through funding educational programs on environmental conservation according to traditional and indigenous knowledge, creating policies to incentivize households and businesses to adopt such knowledge and practices, and prioritizing research on how to preserve natural resources such as forest and marine biodiversity, rather than transforming and utilizing these ecosystems for technological innovations.

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