

The Cultural Ecosystem Services From ASEAN Region Perspectives

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ABSTRACT

This study shows how socio-cultural diversity of countries gives benefits to human well-being from ASEAN region perspectives. The relevance of CES to indicate human well-being is based on a few indicators such as emotions, stress, health, and happiness. Previous studies show that there was a significant relationship between the existence of CES and human well-being. However, those studies only provide the knowledge quantitatively. The authors also found that to discuss CES only from quantitative approach is absurd because CES cannot be separated from spiritual and religious services.

KEYWORDS

ASEAN, Cultural Ecosystem Services, Environmental Management, Human Well-Being

CULTURAL ECOSYSTEM SERVICES: AN INTRODUCTION

The concept of ecosystem services has a long history, dating to at least the time of Plato. It has since gained attention in economics and ecology research and conservation applications. Recently, it has gained an increased attention beyond ecology and economics, and becoming increasingly influential in environmental research and decision-making. The advantages and benefits the organisms derive from ecosystem are generally known as ecosystem services. In fact, the process of natural ecosystem and ecosystem services are two sides of the coin, ecosystem. From an anthropological angle, ecosystem services help for successful survival of mankind on this Earth by maintaining biodiversity of micro and macro utilitarian goods and values. Accordingly, "Ecosystem goods (such as food) and services (such as waste assimilation) represent the benefits human populations derive, directly or indirectly, from ecosystem function". Valuing natural resources is a complex, spatial and institutional cross-scale problem. Cultural ecosystem service (CES) are generally described as the "non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences". CES are among the most highly recognized and directly perceived by people, and they may have the most direct links with wellbeing). A significant proportion of CES research has been focused on tourism and recreation in industrialized economies, where the importance of CES is expected to grow. But research has also shown that CES are essential for cultural identity and even survival among many traditional communities, where comparatively little research is focused. Table 1 shows the division, group, class and examples for CES (Ecosystem and human well-being, 2005).

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So many studies have been conducted using the CES framework prepared by The Millennium Ecosystem Assessment, but the problem is epistemologically the framework only touch on the objectivity and abandons the subjective parts of the CES. This study utterly try to investigate whether the measurement for CES that been used from the beginning till now is sufficient with bringing the idea how CES helped the society forming a resilient generation for ASEAN region.

CULTURAL ECOSYSTEM SERVICES MOLDING RESILIENCE CITY

Resilience is the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, and feedbacks, and therefore identity, that is, the capacity to change in order to sustain identity; resilience is a dynamic concept focusing on how to persist with change, how to evolve with change. Adaptability refers to human actions that sustain development on current pathways. Adaptation is a process of deliberate change in anticipation or in reaction to external stimuli and stress. Adaptation and adaptive capacity of people, communities, and societies are concepts in use in global environmental change in general and in climate change in particular with overlap with resilience thinking. The adaptability concept in resilience thinking captures the capacity of people in a social-ecological system to learn, combine experience and knowledge,

Table 1. Cultural ecosystem services division, group, class, and examples

Division	Group	Class	Examples
Physical and intellectual interactions	Physical and experiential interactions	Experiential use of plants, animals, and land-/seascapes in different environmental settings	Snorkeling, diving
		Physical use of land-/seascapes in different environmental settings	Walking, hiking, kayaking, boating, recreational fishing, using urban green spaces
	Intellectual and representative interactions	Scientific	Subject matter for scientific research, e.g., pollen record, genetic patterns
		Educational	Subject matter of educational value, e.g., for school trips; books
		Heritage, cultural	Historic records of a place; cultural heritage preserved in water bodies or soils, e.g., pottery remains, relics
		Aesthetic	Artistic representations of nature
		Entertainment	Ex situ viewing of the natural world through different media, e.g., wildlife television programs
Spiritual and symbolic	Spiritual and/or emblematic	Symbolic	Emblematic plants and animals; national symbols, e.g., Hibiscus rosa-senensis, Thai elephant, Singa the Lion
		Sacred and/or religious	Holy or spiritual places important to spiritual or ritual identity, e.g., Angkor Wat in Cambodia, Dragon Cave in Thailand, sacred forest groves, sacred plants or animals
	Other cultural outputs	Existence	Enjoyment and philosophical perspective provided by the knowledge of, and reflections on, the existence of wild species, wilderness, or land-/seascapes, e.g., presence of the Malaysia's rainforest
		Bequest	Willingness to preserve plants, animals, ecosystems, and land-/seascapes for the experience and use of future generations, e.g., long-term conservation

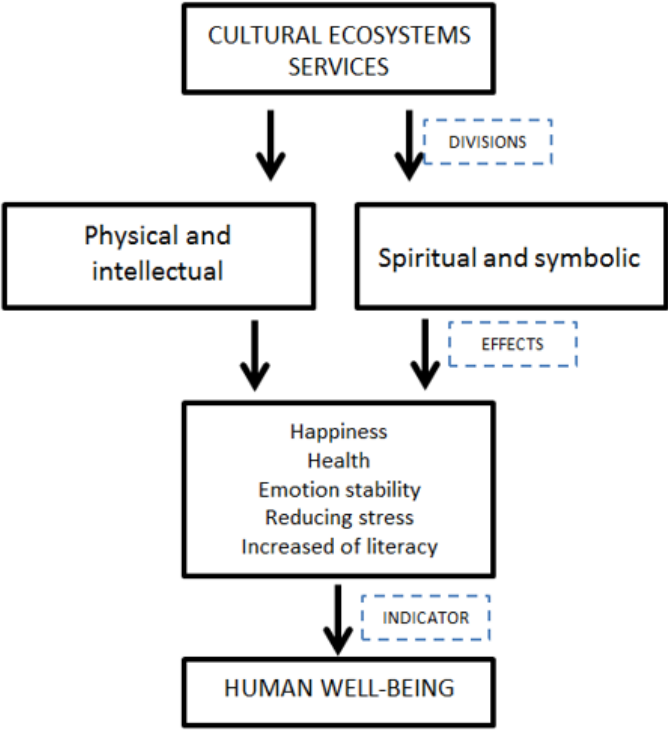
innovate, and adjust responses and institutions to changing external drivers and internal processes. Adaptability has been defined as “the capacity of actors in a system to influence resilience” and is about adapting within critical social-ecological thresholds. Adaptability is central to persistence. It helps turn changes and surprises into opportunities and, hence, is an important part of social-ecological resilience. Transformability is about shifting development into new pathways and even creating novel ones. It is about having the ability to cross thresholds and move social-ecological systems into new basins of attractions, into new, emergent and often unknown development trajectories. Such ability draws on sources of resilience from other levels and scales than the one in focus for the transformation of the existing system. Crises can open up space for transformations, for new ways of thinking and operating. Here, experiences can be revitalized, recombined for novelty, and help in navigating the arising transformative opportunities. Transformability has been defined as “the capacity to create a fundamentally new system when ecological, economic, or social structures make the existing system untenable” (Folke 2016).

In order to form a resilience society, the human well-being must first be taken care of. Human well-being is very much related with the ecosystem services. Human well-being has many components, including many aspects not based in ecosystem services. Moreover, the components of well-being are experienced and perceived differently across cultures and socioeconomic gradients. These components of well-being refer to personal and social functioning, and they express what a person values doing or being (Sen 1999). Well-being also needs to be understood at the supra-individual level, since some aspects of well-being are primarily a collective experience or the property of a community (for example, resilience to ecological shocks or stress). Indeed, the colloquial phrase “wellbeing of nations” reflects this perspective. Nevertheless, research—especially the Voices of the Poor study conducted in 23 countries (Narayan et al. 2000)—has shown that poor people consistently stress that well-being depends primarily on having the “basic material minimum requirements for a good life,” and they attach particular importance to secure and adequate livelihoods that enable them to provide for their children. The well-being of humans, as social beings, requires a society with a sufficient amount of social, human, and natural capital, as well as manufactured (that is, conventional economic) capital. Within ethnically and economically complex human cultures, trade-offs and exchanges occur among these types of capital. For example, the accumulation of manufactured capital is often achieved at the cost of natural capital, and sometimes at the cost of social capital. In the longer term, however, the stocks of all these forms of capital depend on the continuing flow of services from the natural world. In this sense, nature is the true “creator” to whose products human societies seek to add economic and cultural value, so as to suit the needs and purposes of society.

Human well-being is affected by changes in the composition and functioning of ecosystems and the resultant flow of ecosystem services. Often-used terms such as “ecosystem health” or “ecosystem integrity” gain much more focus when defined in terms of the capacity of ecosystems to supply a particular basket of services to users of those services. Worldwide evidence of escalating human impacts on ecosystems raises questions about their capacity to continue to provide the services necessary for an acceptable level of human well-being. Human activity already impairs the flow of many ecosystem services. If current trends continue, humanity will markedly alter virtually all of Earth’s remaining natural ecosystems within a few decades, in most cases in ways that increase the supply of one service (such as food or fiber) at the expense of others (for example, clean water and self-regulation of pests and diseases). Cultural ecosystem services play a major role in determining the wellness of a society. Figure 1 shows how cultural ecosystem services molding the human well-being and eventually forming a resilient society.

As shown in Figure 1, cultural ecosystems services divided into 2 main divisions which are physical and intellectual and spiritual and symbolic. These 2 divisions make effects towards human in various aspects such as happiness, health, emotion stability, stress and literacy. All of the aspects were known as the indicator for human well-being. According to Chan et al. (2012), cultural ecosystems services divided into two main groups that included the physical and intellectual which are stands for

Figure 1. CES framework towards society resilience
Source: Ecosystem and Human Well-Being (2005)



the physical landscape that suits for recreation and outdoor activity such as Minalungao in Philippines, Danum Valley in Malaysia, Bromo Mount in Indonesia and Khao Sok National Park in Thailand. The another group is spiritual and symbolic which bring the mean of religion or nation symbols such as Angkor Wat in Cambodia, Bagan Temple in Myanmar, National Monument in Indonesia, and KLCC Tower in Malaysia. All of these places have their own value depending on the society necessity. Some of the people will feel happy if they can watch a pack of birds flown together, some will get healthier if they can breathe the air from the Danum Valley or National Park, perhaps some will feel much more relieved after a session of sunbathing on the beach of Phuket, Thailand. The services provided by these places are very much depending on what the people needs from it. In Singapore, people feel very happy if the land here allocate for urban parks and nature reserves. In Malaysia, people feel very comfort and at ease if they can see mosque or temple near to their home. Different people, different society needs different services from the ecosystem. According to World Happiness Report, Singapore ranked as top happiest country in Asian neighborhood because of the cultural factors.

Various studies have been made in measuring the emotion, happiness and stress of society towards cultural ecosystems services. People in Hanoi, Vietnam use urban parks generally for relaxing, exercise, street performance and promote local arts, in contrast to Phnom Penh, Cambodia where urban parks not safe for outdoors activities and generally used only for walking and simple hanging out with friends. Appreciation of natural features, experienced benefits, the need for recreational facilities and concerns for general cleanliness and maintenance were found as universally similar attitudes in urban parks. People also tend to pay more to watch views that they wants. Bastian et al. (2015) stated that the tourism sector is prepared to contribute to the funding of nature conservation and landscape management. Use of general tax revenues is favored, but other modes would also

be accepted, e.g. a nature tax. Willingness to pay (WTP) is ranging between €0.75 and €1.36 per guest per night by TSP, or between €1.06 and €2.73 per day by visitors. With respect to landscape preference and WTP they found in some cases significant differences among visitors, depending on region of residence, age and education level. A major part of the annual costs for nature conservation and landscape could be covered by public funds (taxes), if the results of the WTP approach were understood as a sign of societal demand and a call to action. Ozguner et al. (2010) suggested that restoration of derelict land increases the value of such areas for people and enhances their uses for recreational purposes in urban areas. Therefore, it is vital that urban planners and local authorities should encourage restoration of derelict and unused urban areas and preserve them as green spaces to meet the amenity needs of urban people.

Cultural ecosystem services also had effects on human health. Studies have shown significant results on how the cultural ecosystem services correlated with physical and mental health. People living under working pressure, urban noise, and other stressors are driven to frequently seek relief through outdoor recreational settings such as wilderness areas and urban (public) parks (Hartig et al. 2003). In Bangkok Thailand, they are facing increasing of mental health problems because of rapid social changes. The results revealed that 1/3 of the studied population was identified as having anxiety neurosis and depressive neurosis (Suchera et al. 2000). Regarding these problems, Bangkok Metropolitan Administration plans to increase green space in their city for public to exercise and relax because they believe urban parks allow people to gain fresh perspective of life and helping to escape from buildings and crowded streets. They hope with this initiative will help to increase their people's mental health. In Vietnam, the attributable fraction resulting from urban heat island is 0.42% (Dang et al. 2018). From the result, every 1-square-kilometer increase in green space per 1000 people can prevent 7.4 deaths caused by heat because temperature at urban parks can help in cooling effects. Thus, these researches show that cultural ecosystem services give impacts on human health.

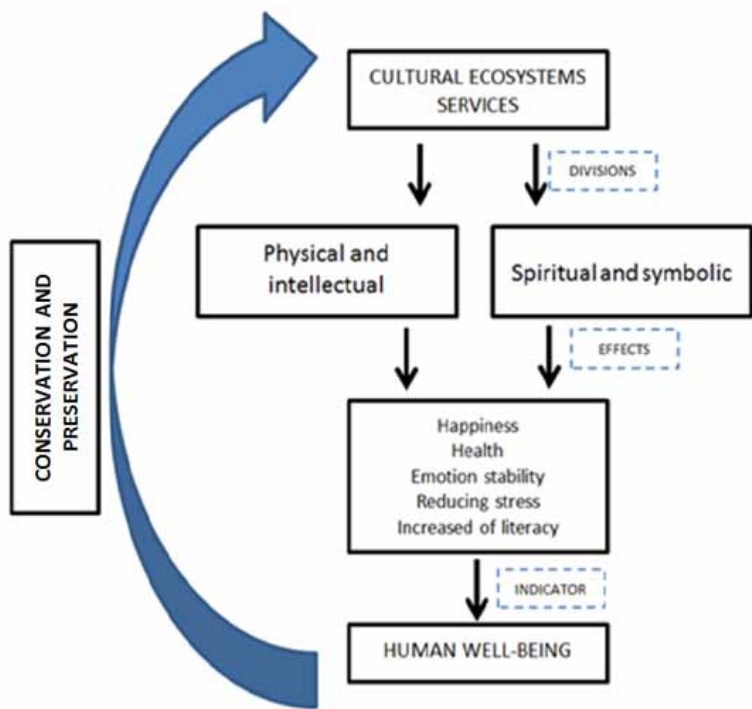
CULTURAL ECOSYSTEM SERVICES VS. POST-MODERNISM PHILOSOPHICAL

There's a big argument been arose now whether we are living in modern era or post-modern era. Is it modernism philosophically still relevant? Or is it post-modernism just another rhetoric played by the scholars? Whatever it is there's a lot of opinions and thoughts crossed all over the world from different perspectives. In this study as mention in the introduction are trying to argue how the social form of a society can determine the demand of their cultural ecosystem services. A modern mind would say that every aspect in the social form can be quantified empirically. If they can't be quantified, then they are very much tending to ignore it. According to Capra (1982), the goal of modern science is to describe reality objectively, with no reference to the subjective observer. As a machine, the world functions according to completely determinate universal mechanical laws and can be explained using mathematics. Modernism has had a significant influence on people's attitudes towards the environment, as its mechanistic view has allowed for the exploitation of nature (Capra, 1982). Capra (1982) also states that in terms of early modernism: "Animals were still [regarded as] machines, although they were much more complicated than mechanical clockworks, involving complex, chemical processes". Nature, as falling into the category of matter, was not seen to have its own purpose and, therefore, the aim of science was to dominate and control it (Capra, 1982). In simple words, anything that can't be quantified is called irrelevant in modernism philosophical. Post-modernism can be characterised by the aspects of modernism that it negates, which include: meta-narratives or totalising discourses; positivism and the myth of the pre-given; the mechanistic and reductionistic view of the world and the dominance of the profit-motive (Gare 1995). The post-modern view of the world is therefore not subject to any type of grand plan and there is no reference to any particular 'larger' truth (Baumann, 1992). Rather the world is comprised of an indefinite number of agencies that generate meaning (e.g. the local community, a specific discipline, a social institution, a particular scientist or the peer group).

In the perspectives of cultural ecosystem services, it's been a norm to discuss it within the post-modernism philosophical but the modernists were never admitting it. For example, how can we relate a society attachment to a building so called mosque or church with scientific approaches? How can we prove scientifically that being inside those buildings can increase human wellness? These questions always rose up whenever a discussion happened about cultural ecosystems services measurement. The attachment of a society towards a cultural element can't be measured scientifically. It's like measuring the good and bad deeds of a person using kilograms. It's absurd to quantify it scientifically. Cultural ecosystem services literally defined as the services provided by the cultural buildings, monument, landscape and etc. to the human. But, in the context of post-modernism philosophical, it is also discussed what the human provided to the ecosystem in order to preserve and sustain the service. Based on Figure 2, edited from Figure 1 which showed earlier in this paper. Figure 2 been illustrated with the addition of the effect of post-modernism in the cultural ecosystem services framework.

From the post-modernism perspectives, we are adding up the human contribution towards the ecosystem by preserving and conserving in any forms. Perhaps, this may in line with the changing of human's ethics towards environment. According to O'Riordan (1981), human's perception and ethics towards environment were changing since the industrial age and still changing rapidly depends on human needs and desire. The ethics changing from anthropocentrism (human centred) to technocentrism (technology centred) in recent years. Technocentrism has its roots in many aspects of modernism. It is, therefore, based on Descartes' fundamental division between the realm of mind and matter (Capra, 1982) in which the human mind aims to achieve control over matter. The natural environment is valued for its use to humans as a resource, rather than for the fact that it exists, independent of its usefulness to humans (i.e. its intrinsic value) (Reid, 1995). Technocentrism is also based on a view of human well-being that is associated with growth, technological progress and

Figure 2. CES framework from post-modernism perspective



economic expansion (Reid, 1995). Benton (1994) points out that this view is typically found in modern capitalist countries, state-socialist countries, as well as developing countries that are 'modernizing'. If problems arise, it is assumed that they can be resolved through technological solutions, based on objective analyses and efficient management (Reid, 1995). Technocentrism sounds like very much to modernism philosophical which only quantitative approaches are relevant to be discussed in term of human-environment relationship. Yet, technocentrism cannot answer how human value natures without any quantified purposes. From tehcnocentrism, it shifts into ecocentrism where human will start preserving nature because of its intrinsic value (Reid 1995). An ecocentric ethics, as described by O'Riordan (1981), centres on the virtues of reverence, humility, responsibility and care. Where the technocentric approaches emphasize processes and techniques for the management of environmental resources, ecocentric approaches focus on the type of relationship that should exist between humans and nature and on questioning the social and economic values that underpin society. Ecocentrism are much more suitable in the framework of post-modernism. Human willing to sacrifice their needs and preserve the nature for its intrinsic value such as spiritual, religious, intellectual, and etc. According to Naess (1988), to discuss econcentrism in the framework of modernism is a mistake, because modernism never discuss about subjective matters whereas ecocentrism is always rely on subjectivity. Hence, to make CES framework much more practical it needed to be discussed in line with post-modernism and ecocentrism.

CONCLUSION

Cultural ecosystem services are very important in sustaining human well-being. Human well-being can indicates based on social emotion, happiness, health and resilience. All of these indicators can be measured from the cultural ecosystem services (CES). But for now, the approach to measure the CES is using quantitative. Based on the finding of this paper, we argue that CES cannot be determined based on empirical view. It also needs to be understood from the non-empirical which is obeying the post-modernism philosophical. In line with that, the ecocentrism point of view can bring the balance in discussing the post-modernism in the CES framework because ecocentric also have the non-empirical stand towards the nature itself. Post-modernism should be more taken into credits when defining and valuing the cultural ecosystem services. It just not because of it stands being as the non-empirical, but also because of the lacking in defining the definition of cultural ecosystem services in term of the measurement. The next from now, there should be a very thorough discussion to implement subjective approach in cultural ecosystem services measurement in order to get the whole picture of cultural ecosystem services framework as proposed by The Millennium Ecosystem Assessment.

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